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E000016855

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Application
Tariff Sheets

Vol. 1 of 3

December 3, 2021

ACC - Docket Control - Received 12/3/2021 10:33 AM
ACC - Docket Control - Docketed 12/6/2021 8:12 AM

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

LEA MARQUEZ PETERSON – Chairwoman
SANDRA KENNEDY
JUSTIN OLSON
ANNA TOVAR
JIM O'CONNOR

In the Matter of the Application of Southwest Gas Corporation for the Establishment of Just and Reasonable Rates and Charges Designed to Realize a Reasonable Rate of Return on the Fair Value of the Properties of Southwest Gas Corporation Devoted to Its Arizona Operations	DOCKET NO. G-01551A-21-0368

APPLICATION

1. Introduction.

Southwest Gas Corporation (Southwest Gas or Company) hereby submits to the Arizona Corporation Commission (Commission) its application requesting approval of an increase in the retail natural gas utility service rates in its Arizona rate jurisdiction due to a revenue deficiency of $90.7 million or approximately 11.4 percent over current revenues. As set forth more fully in the supporting testimony, currently effective rates are based upon the level of operating expenses and capital investments made by the Company prior to August 1, 2019. The Company proposes an increase in revenues to reflect overall changes in the level of operating expenses currently being experienced by the Company and to reflect the significant capital investments the Company has made in its natural gas distribution system since its last rate case, which are not presently included in rates. Additionally, the Company proposes continuation of its currently approved rate design, and requests approval of its proposed tariff modifications which are described in more detail below.

This application is based upon and supported by the material facts, points and authorities, and all other information contained herein, the supporting testimony and schedules submitted herewith, and such other matters as may be presented to the

Commission at the time of any hearing on this application. In support of its application, Southwest Gas further states as follows:

2. Applicant.

2.1 Southwest Gas is a corporation in good standing under the laws of the state of Arizona, and is a corporation duly organized, validly existing, and qualified to transact intrastate business.

2.2 Southwest Gas' corporate offices are located at 8360 South Durango Drive P.O. Box 98510, Las Vegas, Nevada 89113. Communications regarding this application should be addressed to:

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2.3 Southwest Gas is a public utility subject to the jurisdiction of the Commission pursuant to Article XV of the Arizona Constitution and the applicable provisions of Title 40 of the Arizona Revised Statutes (A.R.S.). Southwest Gas is engaged in the retail distribution, transportation and sale of natural gas for domestic, commercial, agricultural and industrial uses. Southwest Gas currently serves approximately 2 million customers in Arizona, California, and Nevada. Approximately 54 percent, or 1.1 million, of the Company's customers are located in the state of Arizona, including portions of Cochise, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pima, Pinal and Yuma counties. For operational purposes, Southwest Gas' central Arizona division is headquartered in Phoenix and its southern Arizona division is headquartered in Tucson.

3. Authority.

Southwest Gas submits this application pursuant to Article XV, Sections 3 and 14, of the Arizona Constitution, Sections 40-250 and 40-251 of the A.R.S., as well as other applicable provisions of A.R.S. Title 40, and Section R14-2-103 of the Arizona Administrative Code (A.A.C.). The Application consists of three volumes, organized as follows: Volume I contains the application, proposed tariff sheets and current tariff sheets; Volume II contains the prepared direct testimony supporting the relief requested herein; and Volume III contains supporting schedules. Southwest Gas is a Class A utility, as defined by A.A.C. R14-2-103. Accordingly, the schedules required by A.A.C. R14-2-103 are included herewith as Volume III of this application.

4. Brief Overview of Application.

4.1 Southwest Gas' requested revenue increase is necessary to maintain and provide safe and reliable natural gas service to its Arizona customers at a level they both expect and are entitled to receive. Southwest Gas' application includes only those proposals it believes necessary to provide safe and reliable service at reasonable rates.

4.2 Southwest Gas requests authorization to increase its retail rates in Arizona to recover its revenue deficiency of approximately $90.7 million.

4.3 Southwest Gas seeks approval to continue its existing Commission-approved rate design.

4.4 Southwest Gas proposes three changes to its Arizona Gas Tariff in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service.

5. Request for Authority to Increase Rates.

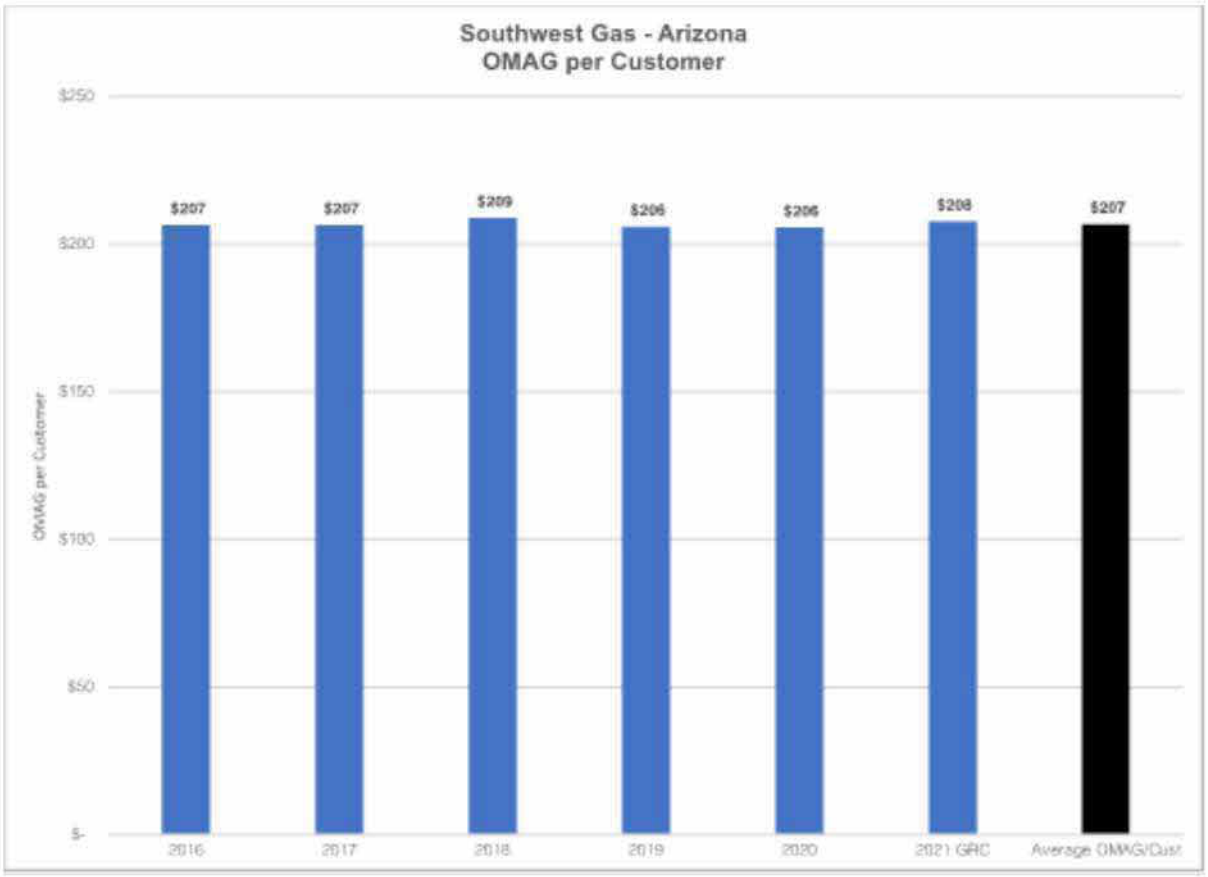
5.1 Southwest Gas' current rates and charges were approved by the Commission in Decision No. 77850, based on a test year ended January 31, 2019.

5.2 As set forth more fully in the supporting testimony, currently effective rates are based upon the level of operating expenses and capital investments made by the Company prior to August 1, 2019 and, although Southwest Gas has effectively managed

operating expenses over the past three years, authorized revenues need to be updated to reflect overall changes in the level of operating expenses currently being experienced by the Company and to reflect the significant capital investments the Company has made in its natural gas distribution system since the end of the test year in its last rate case, which are not presently included in rates.

5.3 The Company's current rates, approved in Decision No. 77850, reflect operating expenses as of January 31, 2019 and capital investment through July 31, 2019. As reflected in this application, since the aforementioned time period the Company has made significant investments to support Arizona's continued economic and customer growth. Since the end of the test year in the Company's 2019 rate case, more than 61,000 customers have come onto the Southwest Gas system, representing customer growth of 5.7%. The Company has made the necessary capital investments to meet this customer growth as well as those necessary to maintain a safe and reliable natural gas distribution system. This investment is reflected in the $711 million increase in rate base, necessary to meet the state's growing economy and maintain safe and reliable natural gas infrastructure.

5.4 The Company has effectively managed its Operations and Maintenance and Administrative and General ("OMAG") expenses in line with customer growth and below the inflation rate as demonstrated in **Figure 1**.



Over the last five years, the Company's customer growth in Arizona has increased approximately 9 percent, the same rate of growth of the Company's OMAG. While the level of OMAG has increased, the increases are in line with customer growth and are reasonable to recover in the cost of service.

5.5 Southwest Gas' request is based upon a test period ended August 31, 2021, adjusted for changes in revenues and expenses, including its cost of capital, that are known and measurable with reasonable accuracy at the time of filing. Southwest Gas requests authority to increase rates to achieve an increase in total revenues of approximately $90.7 million to produce the Company's requested 5.48 percent fair value rate of return.

5.6 Southwest Gas also proposes certain post test year adjustments related to known and measurable events that have occurred, or will occur, after the end of the test period. By including these proposed adjustments in its application, the Company is able to reduce regulatory lag and present a more accurate level of costs and expenses that will be

incurred once the rates approved in this proceeding become effective. The Company's post test year plant adjustment is for non-revenue generating plant and examples include, but are not limited to, pipe replacements including replacements under the Company's integrity management programs, franchise-related replacements, pressure reinforcements, measuring and regulating station equipment, and intangible and general plant.

5.7 Southwest Gas' requested revenue increase is based upon a 9.90 percent cost of common equity capital relative to the Company's actual capital structure at the end of the test period, consisting of a common equity ratio of 51 percent. To simplify the cost of capital in this case, the Company is not seeking a positive return on Fair Value Increment. The Company is proposing that rates be set based on a Fair Value Rate Base and Fair Value Rate of Return. Southwest Gas submits that the recommended cost of common equity capital represents a conservative estimate of investor expectations given recent financial market conditions.

5.8 The proposed increase in revenue sought by Southwest Gas herein is necessary to provide the Company a reasonable opportunity to earn a fair and reasonable rate of return on the fair value of its Arizona investments in order to attract the capital necessary to ensure that it can continue to provide reliable service to present and future Arizona customers at reasonable rates. Additional information regarding Southwest Gas' proposed rate increase is provided in the supporting testimony and schedules accompanying this application.

6. Miscellaneous Items.

Bill Impact

6.1 Southwest Gas is very mindful of the impact rate increases have on its customers and as discussed above, the Company has effectively managed its costs in line with customer growth, and below inflation, since its last general rate case filing in 2019.

6.2 If the Company's application is accepted as filed, the proposed average monthly single family residential bill would increase by $5.12 a month to approximately $49.40.

Rate Design

6.3 Southwest Gas proposes the same rate design approved by the Commission in the Company's last general rate case – consisting of a monthly basic service charge, a volumetric rate and for its large customers a demand rate that captures both delivery charges and gas costs. Southwest Gas' proposed rate design strives to accomplish the following objectives: 1) recover the overall cost of providing service to customers, 2) establish fair and equitable rates; 3) minimize customer bill impacts, particularly to low-use customers; 4) ensure rates are understandable to customers and easy to administer; and 5) remove the Company's financial disincentive to promote energy efficiency and conservation efforts and address customer bill impact concerns among low use customers. Moreover, the revenue stability offered by the Company's decoupled rate structure affords it the opportunity to recover its revenue deficiency in variable charges. As a result, Southwest Gas' proposed rate design maintains basic service charges at their current levels – for example, the single family residential basic service charge is proposed to remain at $10.70.

Tariff Changes

6.4 Southwest Gas proposes three changes to its Arizona Gas Tariff in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service. The Company's proposed modifications include: 1) inclusion of the Company's proposed voluntary program that will provide the Company's Arizona sales customers the ability to offset combustion-related greenhouse gas emissions associated with their natural gas usage through the Company's purchase and retirement of certified carbon offset credits; 2) inclusion of a soft off process that would allow the Company to maintain an active meter for no more than 30 calendar days before the meter is turned off to the premises; and 3) modification of the income qualifications, timeframe for the discount, and regulatory reporting associated with the Company's Low Income Ratepayer Assistance (LIRA) Program which provides reduced energy rates to qualifying low-income customers.

Witnesses – Prepared Direct Testimony

6.5 Southwest Gas' application and the requests made herein are supported by the prepared direct testimony and exhibits of the following Company witnesses, all of which are included in Volume II of the application:

- **Matthew D. Derr** provides a summary of the Company's application for rate relief, testimony supporting the acquisition of Graham County Utilities, Inc.'s natural gas assets, and the Company's proposed tariff modifications.
- **Carla D. Ayala** provides testimony supporting the methodology used by the Company to develop billing determinants for the test period under present rates, and the Company's proposed adjustments to test year bills and volumes, including its proposed weather normalization adjustment. Ms. Ayala sponsors schedules and work papers supporting the Company's billing determinants for the test year.
- **Frederica Harvey** provides testimony supporting the Company's compensation and benefit programs, including base pay, incentive pay, non-cash compensation benefits, and the Board of Directors' compensation.
- **Timothy S. Lyons** sponsors the Company's embedded class cost of service study and supports the Company's proposed rate design.
- **John R. Olenick** provides testimony supporting the Company's request for approval of its Move2Zero voluntary program that would offer the Company's Arizona customers the ability to participate in reducing greenhouse gas emissions through purchasing carbon offset credits. Additionally, Mr. Olenick supports the reasonableness and prudence of the Company's gas procurement activities during the test year.
- **Nick Y. Liu** sponsors the Company's proposed Post Test Year Plant adjustment from a ratemaking perspective. Mr. Liu also addresses the Company's adjustment to the revenue requirement for the rate base and operating expenses related to the Graham County Utilities, Inc. asset acquisition, and the proposed amortization of the acquisition premium associated with the purchase.

- **Randi L. Cunningham** provides testimony supporting the overall results of operations in Southwest Gas' Arizona rate jurisdiction, including the determination of revenue deficiency. Ms. Cunningham identifies and explains the primary factors contributing to the revenue deficiency and sponsors various schedules and work papers supporting the Company's requested revenue requirement, as well as various revenue requirement schedules. Ms. Cunningham also provides testimony supporting the Company's methodology for determining cost responsibility and allocation and sponsors various schedules and work papers supporting the Company's operating expense and rate base adjustments, as well as certain financial and statistical statements and projections.
- **Michelle L. Ansani** provides an overview of the Company's focus on its customers and the related initiatives to improve customer engagement and interactions with Southwest Gas, including the support and assistance offered in response to the COVID-19 Pandemic and the benefits associated with the Company's Customer Data Modernization Initiative.
- **Ann E. Bulkley** is a Senior Vice President of Concentric and was engaged by Southwest Gas to perform an analysis and provide a recommendation concerning the Company's cost of common equity, an analysis of the methodology used by the Company to calculate fair value rate base, and a recommendation concerning the Company's calculation of the fair value rate of return. Additionally, Ms. Bulkley provides testimony supporting the overall rate of return requested in this proceeding. and testifies in support of the requested capital structure and embedded cost of long-term debt used for determining the appropriate cost of capital, including various schedules and work papers supporting the Company's request. Ms. Bulkley also discusses the importance of the Company's overall rate of return on the Company's bond ratings and financial profile.

7. Conclusion.

7.1 Southwest Gas believes that Commission approval of the proposed rate increase, the proposed continuation of the existing rate design, and the proposed tariff modifications, is in the public interest and will result in just and reasonable rates.

7.2 Southwest Gas further submits that approval of this application as proposed will provide the Company with an opportunity to earn a reasonable rate of return on the fair value of its Arizona properties commensurate with other similarly situated natural gas utilities.

WHEREFORE, Southwest Gas respectfully requests that the Commission issue a special order pursuant to A.A.C. R14-3-101.C, to establish notice, filing, discovery and hearing procedures, and that upon conclusion of the hearing, the Commission issue a final order:

1. Authorizing a retail natural gas service rate increase in Southwest Gas' Arizona rate jurisdiction of $90.7 million annually, based upon the fair value of the Company's Arizona properties and a test year ended August 31, 2021;

2. Approving the Company's proposed rate design and the revisions to its Arizona Gas Tariff; and

3. For any other relief the Commission deems just and reasonable.

Dated this 3rd day of December 2021.

Respectfully submitted,

SOUTHWEST GAS CORPORATION

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STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-5 – Single-Family Residential Gas Service							
Basic Service Charge per Month	$ 10.70					$ 10.70	
Commodity Charge per Therm:							
All Usage	$ 1.10224	$ .12887	$ .00304	$ .00000	$ .37836	$ 1.61251	I
G-6 – Multi-Family Residential Gas Service							
Basic Service Charge per Month	$ 9.70					$ 9.70	
Commodity Charge per Therm:							
All Usage	$ 1.30601	$ .12887	$ .00304	$ .00000	$ .37836	$ 1.81628	I
G-10 – Single-Family Low Income Residential Gas Service							
Basic Service Charge per Month	$ 7.50					$ 7.50	
Commodity Charge per Therm:							D
All Usage	$ .61007	$ .11208	$ .00304	$ .00000	$ .37836	$ 1.10355	R/I D
G-11 – Multi-Family Low Income Residential Gas Service							
Basic Service Charge per Month	$ 7.50					$ 7.50	
Commodity Charge per Therm:							D
All Usage	$ .59832	$ .11208	$ .00304	$ .00000	$ .37836	$ 1.09180	R/I D
G-15 – Special Residential Gas Service for Air Conditioning							
Basic Service Charge per Month	$ 10.70					$ 10.70	
Commodity Charge per Therm:							
Summer (May–October):							
First 15 Therms	$ 1.10224	$ .11549	$ .00304	n/a	$ .37836	$ 1.59913	I
Over 15 Therms	$ .16952	$ .11549	$ .00304	n/a	$ .37836	$ .66641	I
Winter (November–April):							
All Usage	$ 1.10224	$ .11549	$ .00304	n/a	$ .37836	$ 1.59913	I
G-20 – Master-Metered Mobile Home Park Gas Service							
Basic Service Charge per Month	$ 66.00					$ 66.00	
Commodity Charge per Therm:							
All Usage	$ .57076	$ .12887	$ .00304	n/a	$ .37836	$ 1.08103	I

STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/
(Continued)

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-25– General Gas Service							
Basic Service Charge per Month:							
Small	$ 27.50					$ 27.50	
Medium	43.50					43.50	
Large-1	80.00					80.00	
Large-2	470.00					470.00	
Transportation Eligible	950.00					950.00	
Commodity Charge per Therm:							
Small, All Usage	$ 1.48314	$ .11549	$ .00304	$ .00000	$ .37836	$ 1.98003	I
Medium, All Usage	.63165	.11549	.00304	.00000	.37836	1.12854	I
Large-1, All Usage	.49928	.11549	.00304	.00000	.37836	.99617	I
Large-2, All Usage	.37829	.11549	.00304	.00000	.37836	.87518	I
Transportation Eligible	.12773	.11549	.00304	n/a	.37836	.62462	I
Demand Charge per Month– Transportation Eligible:							
Demand Charge 4/	$ .102445					$ .102445	I
G-30– Optional Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 27.						
Commodity Charge per Therm:							
All Usage	As specified on A.C.C. Sheet No. 28.		$ .00304	n/a			
G-40– Air Conditioning Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 32.						
Commodity Charge per Therm:							
All Usage	$ .16952	$ .11549	$ .00304	n/a	$ .37836	$ .66641	I
G-45– Street Lighting Gas Service							
Commodity Charge per Therm of Rated Capacity:							
All Usage	$ 1.05805	$ .11549	$ .00304	n/a	$ .37836	$ 1.55494	I
G-55– Gas Service for Compression 5/ on Customer's Premises							
Basic Service Charge per Month:							
Small	$ 27.50					$ 27.50	
Large	250.00					250.00	
Residential	10.70					10.70	
Commodity Charge per Therm:							
All Usage	$ .26023	$ .11549	$ .00304	n/a	$ .37836	$ .75712	I
G-60– Electric Generation Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 40.						
Commodity Charge per Therm:							
All Usage	$ .19175	$ .11549	$ .00304	n/a	$ .37836	$ .68864	I
G-65– Biogas and Renewable Natural Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 41A.						
Commodity Charge per Therm:							
All Usage	As specified on A.C.C. Sheet No. 41A.		$ .00304	n/a	n/a		

STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/
(Continued)

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-75– Small Essential Agricultural User Gas Service							
Basic Service Charge per Month	$ 120.00					$ 120.00	
Commodity Charge per Therm:							
All Usage	$ .32721	$ .11549	$ .00304	n/a	$ .37836	$ .82410	I
G-80 – Natural Gas Engine 6/ Water Pumping Gas Service							
Basic Service Charge per Month:							
Off-Peak Season (October–March)	$ .00					$ .00	
Peak Season (April–September)	$ 125.00					$ 125.00	
Commodity Charge per Therm:							
All Usage	$ .24458	$ .02549	$ .00304	n/a	$ .43302	$ .70613	I

1/ All charges are subject to adjustment for any applicable taxes or governmental impositions.

2/ Customers taking transportation service will pay the Basic Service Charge, the Commodity Charge per Therm less the Monthly Gas Cost, and Demand Charge, if applicable, of the Currently Effective Tariff Rate for each meter included in the transportation service agreement, plus an amount of $0.00488 per therm for distribution shrinkage as defined in Rule No. 1 of this Arizona Gas Tariff. The shrinkage charge shall be updated annually effective May 1. For customers converting from sales service, an additional amount equal to the currently effective Gas Cost Balancing Account Adjustment will be assessed for a period of 12 months.

Schedule No. G-10

SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-5 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 250 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-5, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-10

SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-5 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 2~~0~~50 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. ~~The first 150 therms per month during the Winter Season~~All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-5, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-11

MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-6 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 250 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-6, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-11

MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-6 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 2~~5~~0 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. ~~The first 150 therms per month~~All ~~usage during the Winter Season~~ All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-6, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area. ~~T/D~~ D

Schedule No. G-20

MASTER-METERED MOBILE HOME PARK GAS SERVICE

APPLICABILITY

Applicable to gas service for cooking, water heating, space heating and other usages supplied to a master-metered mobile home park and its tenants within the park through one meter on a single premise. This schedule is closed to new installations.

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge and commodity charge are set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and are incorporated herein by reference.

LOW INCOME DISCOUNT

If an individual tenant of a mobile home park served under this schedule meets the low income criteria specified on the Utility's "Application for Low Income Ratepayer Assistance" form the mobile home park customer shall be eligible for the Low Income Ratepayer Assistance (LIRA) discount for that tenant's account. The LIRA program entitles customers served under this schedule to a reduction in the commodity charge under Schedule No. G-20 equivalent to the differential in the commodity charge under Schedule Nos. G-5 and G-10. Such rate reduction will be applicable for all usage consumed by each eligible tenant per month. C

Customers taking service under this schedule will receive the LIRA discount on their metered volumes in proportion to the percentage of mobile home park tenants that qualify under the LIRA program criteria. Customers served under this schedule must have an approved application form on file with the Utility for each tenant eligible for the LIRA discount. Recertification will be required every two years and the customer must notify the Utility within 30 days of any changes in the eligibility status of the customer's tenants. It is the responsibility of master-metered customers to pass through a proportionate share of the low income discount to each eligible low income tenant. If the Utility ascertains that a master-metered customer has failed to appropriately pass through the LIRA discount to eligible tenants, an adjusted bill may be rendered to the customer.

Schedule No. G-20

MASTER-METERED MOBILE HOME PARK GAS SERVICE

APPLICABILITY

Applicable to gas service for cooking, water heating, space heating and other usages supplied to a master-metered mobile home park and its tenants within the park through one meter on a single premise. This schedule is closed to new installations.

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge and commodity charge are set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and are incorporated herein by reference.

LOW INCOME DISCOUNT

If an individual tenant of a mobile home park served under this schedule meets the low income criteria specified on the Utility's "Application for Low Income Ratepayer Assistance" form the mobile home park customer shall be eligible for the Low Income Ratepayer Assistance (LIRA) discount for that tenant's account. The LIRA program entitles customers served under this schedule to a reduction in the commodity charge under Schedule No. G-20 equivalent to the differential in the commodity charge under Schedule Nos. G-5 and G-10. Such rate reduction will be applicable for ~~the first 150 therms~~all usage consumed by each eligible tenant per month ~~during the Winter Season~~. C

Customers taking service under this schedule will receive the LIRA discount on their metered volumes in proportion to the percentage of mobile home park tenants that qualify under the LIRA program criteria. Customers served under this schedule must have an approved application form on file with the Utility for each tenant eligible for the LIRA discount. Recertification will be required every two years and the customer must notify the Utility within 30 days of any changes in the eligibility status of the customer's tenants. It is the responsibility of master-metered customers to pass through a proportionate share of the low income discount to each eligible low income tenant. If the Utility ascertains that a master-metered customer has failed to appropriately pass through the LIRA discount to eligible tenants, an adjusted bill may be rendered to the customer.

SPECIAL SUPPLEMENTARY TARIFF
LOW INCOME RATEPAYER ASSISTANCE (LIRA) RATE ADJUSTMENT PROVISION

APPLICABILITY

Applicable to all gas delivered by the Utility to all customers served under Rate Schedule Nos. G-5, G-6 and G-20.

RATES

The unit LIRA rate adjustment is set forth in the currently effective Statement of Rates, Footnote 3, of Sheet No. 14 of this Arizona Gas Tariff and is incorporated herein by reference.

CHANGES IN RATES

Rates applicable to each schedule of this Arizona Gas Tariff subject to this provision shall be adjusted for changes in the LIRA Balancing Account's balance in accordance with the rate adjustment provisions hereof such that the Utility will be reimbursed for all LIRA discounts, plus interest and administrative expenses.

ADJUSTMENT DATE

The LIRA rate adjustment shall be updated annually effective May 1.

RATE ADJUSTMENT PROVISIONS

Calculation of the LIRA rate adjustment shall include:

1. The LIRA program benefits. C
2. Incremental administrative and general expenses associated with the LIRA program.
3. The amounts accumulated in the LIRA Balancing Account as described below at the end of the latest available recorded month prior to the applicable Adjustment Date.
4. The sum of paragraphs (1), (2), and (3) above divided by the most recent 12 month's applicable sales volumes shall be the LIRA rate adjustment amount.

SPECIAL SUPPLEMENTARY TARIFF
LOW INCOME RATEPAYER ASSISTANCE (LIRA) RATE ADJUSTMENT PROVISION

APPLICABILITY

Applicable to all gas delivered by the Utility to all customers served under Rate Schedule Nos. G-5, G-6 and G-20.

RATES

The unit LIRA rate adjustment is set forth in the currently effective Statement of Rates, Footnote 3, of Sheet No. 14 of this Arizona Gas Tariff and is incorporated herein by reference.

CHANGES IN RATES

Rates applicable to each schedule of this Arizona Gas Tariff subject to this provision shall be adjusted for changes in the LIRA Balancing Account's balance in accordance with the rate adjustment provisions hereof such that the Utility will be reimbursed for all LIRA discounts, plus interest and administrative expenses.

ADJUSTMENT DATE

The LIRA rate adjustment shall be updated annually effective May 1.

RATE ADJUSTMENT PROVISIONS

Calculation of the LIRA rate adjustment shall include:

1. The LIRA program benefits ~~provided during the prior Winter Season~~. C T
2. Incremental administrative and general expenses associated with the LIRA program.
3. The amounts accumulated in the LIRA Balancing Account as described below at the end of the latest available recorded month prior to the applicable Adjustment Date.
4. The sum of paragraphs (1), (2), and (3) above divided by the most recent 12 month's applicable sales volumes shall be the LIRA rate adjustment amount.

SPECIAL SUPPLEMENTARY TARIFF
DELIVERY CHARGE ADJUSTMENT

APPLICABILITY

The Delivery Charge Adjustment (DCA) applies to residential Rate Schedule Nos. G-5, G-6, G-10 and G-11 and to General Service Schedule Nos. G-25(Small), G-25(Medium), G-25(Large-1) and G-25(Large-2) included in this Arizona Gas Tariff. The DCA specifies the accounting procedures and rate setting adjustments necessary to assure the Utility neither over-recovers, nor under-recovers, the margin-per-customer amounts authorized in its most recent general rate case proceeding.

CHANGE IN RATES

Annually, the DCA surcharge will adjust to recover or refund any differences between the Utility's billed margin and the margin amounts authorized in its most recent general rate case proceeding. The process is set forth below.

1) BALANCING ACCOUNT

The Utility shall maintain accounting records that accumulate the difference between authorized and actual billed margin. Entries shall be recorded to the DCA Balancing Account (DCABA) each month as follows:

A. A debit or credit entry equal to the difference between authorized margin and actual billed margin for each rate schedule subject to this provision. Authorized margin is the product of the monthly margin-per-customer authorized in the Utility's last general rate case, as stated below, and the actual number of customers billed during the month.

	G-5	G-6	G-10	G-11
January	$63.94	$38.32	$61.00	$43.59
February	$56.43	$35.52	$54.65	$39.95
March	$46.64	$31.47	$43.83	$34.16
April	$35.45	$27.34	$33.20	$28.65
May	$29.19	$24.82	$27.03	$25.48
June	$28.39	$24.45	$26.24	$25.32
July	$26.51	$23.11	$24.57	$23.76
August	$25.55	$22.47	$23.70	$23.02
September	$26.06	$22.81	$24.04	$23.29
October	$27.09	$23.21	$24.84	$23.63
November	$29.42	$24.59	$27.65	$25.25
December	$48.19	$32.32	$46.23	$35.43

SPECIAL SUPPLEMENTARY TARIFF
DELIVERY CHARGE ADJUSTMENT
(Continued)

	G-25(S)	G-25(M)	G-25(L1)	G-25(L2)	
January	$81.39	$269.10	$991.91	$4,093.35	I
February	$73.19	$253.67	$928.78	$3,846.23	I
March	$63.01	$223.24	$816.15	$3,776.56	I
April	$50.14	$194.23	$732.16	$3,309.25	I
May	$45.61	$174.04	$642.73	$2,959.54	I
June	$45.31	$169.12	$604.78	$2,804.91	I
July	$43.74	$156.02	$529.38	$2,378.23	I
August	$43.11	$152.41	$506.19	$2,289.21	I
September	$43.41	$157.07	$523.95	$2,368.31	I
October	$43.90	$163.99	$566.22	$2,546.32	I
November	$45.89	$177.93	$645.87	$3,003.61	I
December	$62.85	$231.15	$861.75	$3,689.77	I

B. A debit or credit entry equal to the therms billed during the month under the schedules subject to this provision multiplied by the DCA surcharge rate.

C. A debit or credit entry for interest to be applied to over- and under-collected bank balances based on the monthly one-year nominal Treasury constant maturities rate.

2) RATE ADJUSTMENT

The DCA Rate Adjustment applicable to each schedule subject to this provision shall be revised annually to reflect the difference between the margin-per-customer authorized in the Utility's last general rate case and the margin billed. The DCA Rate Adjustment will be calculated by dividing the balance in the DCABA by the most recent 12-month volume of natural gas for the applicable rate schedules.

3) AMOUNTS RECOVERED AND REFUNDED

Over-collected or under-collected balances in the DCABA will be refunded over the next amortization period.

4) TIMING AND MANNER OF FILING

The Utility shall file its DCA Rate Adjustment revisions with the Commission in accordance with all statutory and regulatory requirements. The DCA Rate Adjustment shall be effective on the date of the first bill cycle in the month following the Commission's approval unless otherwise provided for by the Commission.

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SPECIAL SUPPLEMENTARY TARIFF
MOVE2ZERO CARBON OFFSET (M2Z) PROGRAM

APPLICABILITY

The Move2Zero Carbon Offset Program ("M2Z Program") is available to all schedules except for Rate Schedule Nos. G-30, G-65, T-1, and SB-1, to Customers who choose to participate in the M2Z Program.

RATES

A Customer electing to participate in the M2Z Program shall be responsible for all charges and rates specified in the Customer's otherwise applicable rate schedule. In addition, the Customer shall be responsible for the monthly premium charge associated with the Customer's selected amount of carbon offsets, or "blocks," that the Company will purchase on behalf of that Customer. For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, one block will cost $5.00 per month and will offset 10 therms of combustion-related natural gas usage per month. The number of blocks that a Customer may purchase is to be determined by the Customer. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different block pricing.

The minimum charge per month shall be the sum of the minimum charge specified in the Customer's otherwise applicable rate schedule, plus the product of the $5.00 per block charge multiplied by the number of blocks the Customer elects to purchase.

TERM

For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, the Customer or the Company may terminate the Customer's participation in the M2Z Program by giving at least thirty (30) days prior written notice of such termination. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different term lengths.

LATE CHARGE

No late payment charge will be assessed to amounts not paid by the Customer under this Program. However, Late Charges for the Customer's otherwise applicable rate schedule are applicable. Failure of a Customer to pay any amounts due pursuant to the M2Z Program shall not result in disconnection of service to the Customer.

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HELD FOR FUTURE USESPECIAL SUPPLEMENTARY TARIFF
MOVE2ZERO CARBON OFFSET (M2Z) PROGRAM

APPLICABILITY

The Move2Zero Carbon Offset Program ("M2Z Program") is available to all schedules except for Rate Schedule Nos. G-30, G-65, T-1, and SB-1, to Customers who choose to participate in the M2Z Program.

RATES

A Customer electing to participate in the M2Z Program shall be responsible for all charges and rates specified in the Customer's otherwise applicable rate schedule. In addition, the Customer shall be responsible for the monthly premium charge associated with the Customer's selected amount of carbon offsets, or "blocks," that the Company will purchase on behalf of that Customer. For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, Oone block will cost $5.00 per month and will offset 10 therms of combustion-related natural gas usage per month. The number of blocks that a Customer may purchase is to be determined by the Customer. Customers who participate inthe M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different block pricing.

The minimum charge per month shall be the sum of the minimum charge specified in the Customer's otherwise applicable rate schedule, plus the product of the $5.00 per block charge multiplied by the number of blocks the Customer elects to purchase.

TERM

For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, the Customer or the Company may terminate the Customer's participation in the M2Z Program by giving at least thirty (30) days prior written notice of such termination. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different term lengths.

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No late payment charge will be assessed to amounts not paid by the Customer under this Program. However, Late Charges for the Customer's otherwise applicable rate schedule are applicable. Failure of a Customer to pay any amounts due pursuant to the M2Z Program shall not result in disconnection of service to the Customer.

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HELD FOR FUTURE USE

HELD FOR FUTURE USE

RULE NO. 1

DEFINITIONS
(Continued)

Service Establishment Charge:	A charge as specified in the Utility's tariffs for establishing a new account.
Service Line:	A natural gas pipe that transports gas from a common source of supply (normally a distribution main) to the point of delivery.
Service Line Extension:	Consists of a service line provided for a new customer at a premise not heretofore served, in accordance with the service line extension rule.
Service Line Shut-Off Valve:	A curb valve or other manually operated valve located near the service that is safely accessible to Company personnel or other personnel authorized by the Company to manually shut off gas flow to the service.
Service Reconnect Charge:	A charge as specified in the Utility's tariffs which must be paid by the customer prior to reconnection of natural gas service each time the service is disconnected for nonpayment or whenever service is discontinued for failure to comply with the Utility's tariffs.
Service Reestablishment Charge:	A charge as specified in the Utility's tariffs for service at the same location where the same customer had ordered a service disconnection within the preceding 12-month period.
Shrinkage:	The cost of the gas volumes lost, unaccounted for, or used as company fuel in the transportation process and represented by the differential between the cost of gas on a sales basis and the cost of gas on a purchased basis.
Shrinkage Rate:	The rate used to recover the cost of shrinkage from non-exempt transportation customers.
Single-Family Residential:	A permanent residential dwelling, excluding multi-family residential structures.
Soft Off:	A meter read that occurs upon the discontinuance of service to a customer under this Arizona Gas Tariff where the supply of gas is not turned off, and there is no new customer at the premises. T T
Southwest Vista:	A fully integrated website that allows for the Utility's Transportation customers and designated agents the ability to submit Transportation nominations to the interstate pipelines. Users may also have the ability to view monthly volume statements, master detail reports, Transportation pipeline charges allocated to them from the Utility, and informational reports.

RULE NO. 1

DEFINITIONS
(Continued)

Service Establishment Charge:	A charge as specified in the Utility's tariffs for establishing a new account.
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Shrinkage Rate:	The rate used to recover the cost of shrinkage from non-exempt transportation customers.
Single-Family Residential:	A permanent residential dwelling, excluding multi-family residential structures.
Soft Off:	A meter read that occurs upon the discontinuance of service to a customer under this Arizona Gas Tariff where the supply of gas is not turned off, and there is no new customer at the premises. T | T
Southwest Vista:	A fully integrated website that allows for the Utility's Transportation customers and designated agents the ability to submit Transportation nominations to the interstate pipelines. Users may also have the ability to view monthly volume statements, master detail reports, Transportation pipeline charges allocated to them from the Utility, and informational reports.

RULE NO. 10

TERMINATION OF SERVICE
(Continued)

E. TIMING OF TERMINATIONS WITH NOTICE

1. The Utility shall be required to give at least five days' advance written notice prior to the termination date.

2. Such notice shall be considered to be given to the customer when a copy thereof is left with the customer or posted first class in the United States mail, addressed to the customer's last known address.

3. If after the period of time allowed by the notice has elapsed and the delinquent account has not been paid or arrangements have not been made with the Utility for the payment thereof or in the case of a violation of the Utility's rules the customer has not satisfied the Utility that such violation has ceased, the Utility may then terminate service on or after the day specified in the notice without giving further notice.

4. To discontinue service, the Utility will either read the meter for a new customer, turn off the supply of gas, or perform a soft off. Soft offs will only be performed at residential dwellings. The Utility will turn off the supply of gas no more than 30 calendar days after the soft off. If the soft off or turn off date falls on a Saturday, Sunday, or state or federal holiday, the date may be continued to the next business day, and in all events, the Utility may extend the dates on account of weather conditions. C C

F. LANDLORD/TENANT RULE

In situations where service is rendered at an address different from the mailing address of the bill or where the Utility knows that a landlord/ tenant relationship exists and that the landlord is the customer of the Utility, and where the landlord as customer would otherwise be subject to disconnection of service, the Utility may not disconnect service until the following actions have been taken:

1. Where it is feasible to provide service, the Utility, after providing notice as required in this rule, shall offer the occupant the opportunity to subscribe for service in his or her name. If the occupant then declines to so subscribe, the Utility may disconnect service pursuant to this rule.

2. The Utility shall not attempt to recover from a tenant or condition service to a tenant with the payment of any outstanding bills or other charges due upon the outstanding account of the landlord.

RULE NO. 10

TERMINATION OF SERVICE
(Continued)

E. TIMING OF TERMINATIONS WITH NOTICE

1. The Utility shall be required to give at least five days' advance written notice prior to the termination date.

2. Such notice shall be considered to be given to the customer when a copy thereof is left with the customer or posted first class in the United States mail, addressed to the customer's last known address.

3. If after the period of time allowed by the notice has elapsed and the delinquent account has not been paid or arrangements have not been made with the Utility for the payment thereof or in the case of a violation of the Utility's rules the customer has not satisfied the Utility that such violation has ceased, the Utility may then terminate service on or after the day specified in the notice without giving further notice.

4. To discontinue service, the Utility will either read the meter for a new customer, turn off the supply of gas, or perform a soft off. Soft offs will only be performed at residential dwellings. The Utility will turn off the supply of gas no more than 30 calendar days after the soft off. If the soft off or turn off date falls on a Saturday, Sunday, or state or federal holiday, the date may be continued to the next business day, and in all events, the Utility may extend the dates on account of weather conditions.~~Service may only be disconnected in conjunction with a personal visit to the premises by an authorized representative of the Utility.~~

F. LANDLORD/TENANT RULE

In situations where service is rendered at an address different from the mailing address of the bill or where the Utility knows that a landlord/ tenant relationship exists and that the landlord is the customer of the Utility, and where the landlord as customer would otherwise be subject to disconnection of service, the Utility may not disconnect service until the following actions have been taken:

1. Where it is feasible to provide service, the Utility, after providing notice as required in this rule, shall offer the occupant the opportunity to subscribe for service in his or her name. If the occupant then declines to so subscribe, the Utility may disconnect service pursuant to this rule.

2. The Utility shall not attempt to recover from a tenant or condition service to a tenant with the payment of any outstanding bills or other charges due upon the outstanding account of the landlord.

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Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Application
Tariff Sheets

Vol. 1 of 3

December 3, 2021

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

LEA MARQUEZ PETERSON – Chairwoman
SANDRA KENNEDY
JUSTIN OLSON
ANNA TOVAR
JIM O'CONNOR

In the Matter of the Application of Southwest Gas Corporation for the Establishment of Just and Reasonable Rates and Charges Designed to Realize a Reasonable Rate of Return on the Fair Value of the Properties of Southwest Gas Corporation Devoted to Its Arizona Operations	DOCKET NO. G-01551A-21-0368

APPLICATION

1. Introduction.

Southwest Gas Corporation (Southwest Gas or Company) hereby submits to the Arizona Corporation Commission (Commission) its application requesting approval of an increase in the retail natural gas utility service rates in its Arizona rate jurisdiction due to a revenue deficiency of $90.7 million or approximately 11.4 percent over current revenues. As set forth more fully in the supporting testimony, currently effective rates are based upon the level of operating expenses and capital investments made by the Company prior to August 1, 2019. The Company proposes an increase in revenues to reflect overall changes in the level of operating expenses currently being experienced by the Company and to reflect the significant capital investments the Company has made in its natural gas distribution system since its last rate case, which are not presently included in rates. Additionally, the Company proposes continuation of its currently approved rate design, and requests approval of its proposed tariff modifications which are described in more detail below.

This application is based upon and supported by the material facts, points and authorities, and all other information contained herein, the supporting testimony and schedules submitted herewith, and such other matters as may be presented to the

Commission at the time of any hearing on this application. In support of its application, Southwest Gas further states as follows:

2. Applicant.

2.1 Southwest Gas is a corporation in good standing under the laws of the state of Arizona, and is a corporation duly organized, validly existing, and qualified to transact intrastate business.

2.2 Southwest Gas' corporate offices are located at 8360 South Durango Drive P.O. Box 98510, Las Vegas, Nevada 89113. Communications regarding this application should be addressed to:

Catherine M. Mazzeo, Esq.
Managing Counsel
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, Nevada 89193-8510
Telephone: (702) 876-7250
Email: catherine.mazzeo@swgas.com

With a copy to: regserve@swgas.com

Matthew D. Derr
Director of Regulation & Energy Efficiency, Arizona
Southwest Gas Corporation
1600 E. Northern Avenue
Phoenix, Arizona 85020
Telephone: (602) 395-4058
Email: matt.derr@swgas.com

2.3 Southwest Gas is a public utility subject to the jurisdiction of the Commission pursuant to Article XV of the Arizona Constitution and the applicable provisions of Title 40 of the Arizona Revised Statutes (A.R.S.). Southwest Gas is engaged in the retail distribution, transportation and sale of natural gas for domestic, commercial, agricultural and industrial uses. Southwest Gas currently serves approximately 2 million customers in Arizona, California, and Nevada. Approximately 54 percent, or 1.1 million, of the Company's customers are located in the state of Arizona, including portions of Cochise, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pima, Pinal and Yuma counties. For operational purposes, Southwest Gas' central Arizona division is headquartered in Phoenix and its southern Arizona division is headquartered in Tucson.

3. Authority.

Southwest Gas submits this application pursuant to Article XV, Sections 3 and 14, of the Arizona Constitution, Sections 40-250 and 40-251 of the A.R.S., as well as other applicable provisions of A.R.S. Title 40, and Section R14-2-103 of the Arizona Administrative Code (A.A.C.). The Application consists of three volumes, organized as follows: Volume I contains the application, proposed tariff sheets and current tariff sheets; Volume II contains the prepared direct testimony supporting the relief requested herein; and Volume III contains supporting schedules. Southwest Gas is a Class A utility, as defined by A.A.C. R14-2-103. Accordingly, the schedules required by A.A.C. R14-2-103 are included herewith as Volume III of this application.

4. Brief Overview of Application.

4.1 Southwest Gas' requested revenue increase is necessary to maintain and provide safe and reliable natural gas service to its Arizona customers at a level they both expect and are entitled to receive. Southwest Gas' application includes only those proposals it believes necessary to provide safe and reliable service at reasonable rates.

4.2 Southwest Gas requests authorization to increase its retail rates in Arizona to recover its revenue deficiency of approximately $90.7 million.

4.3 Southwest Gas seeks approval to continue its existing Commission-approved rate design.

4.4 Southwest Gas proposes three changes to its Arizona Gas Tariff in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service.

5. Request for Authority to Increase Rates.

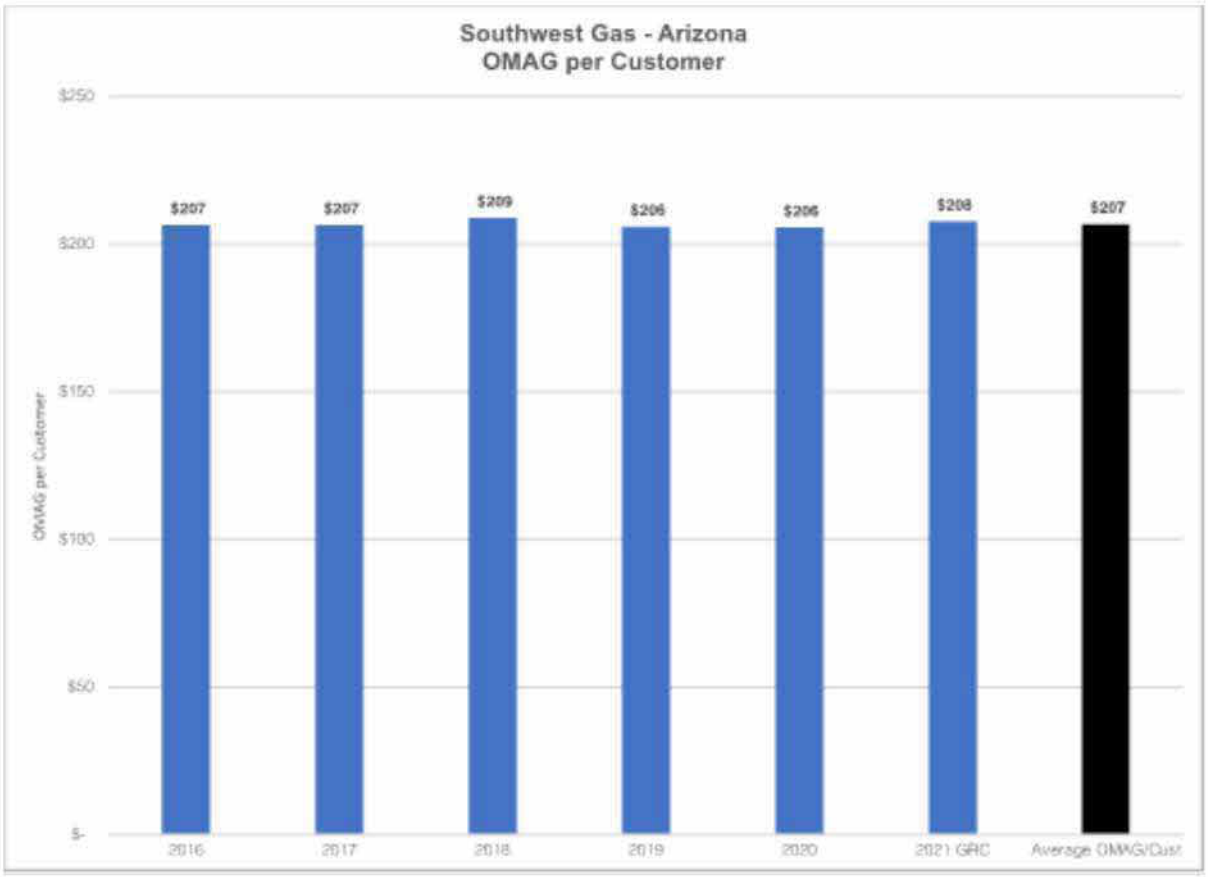
5.1 Southwest Gas' current rates and charges were approved by the Commission in Decision No. 77850, based on a test year ended January 31, 2019.

5.2 As set forth more fully in the supporting testimony, currently effective rates are based upon the level of operating expenses and capital investments made by the Company prior to August 1, 2019 and, although Southwest Gas has effectively managed

operating expenses over the past three years, authorized revenues need to be updated to reflect overall changes in the level of operating expenses currently being experienced by the Company and to reflect the significant capital investments the Company has made in its natural gas distribution system since the end of the test year in its last rate case, which are not presently included in rates.

5.3 The Company's current rates, approved in Decision No. 77850, reflect operating expenses as of January 31, 2019 and capital investment through July 31, 2019. As reflected in this application, since the aforementioned time period the Company has made significant investments to support Arizona's continued economic and customer growth. Since the end of the test year in the Company's 2019 rate case, more than 61,000 customers have come onto the Southwest Gas system, representing customer growth of 5.7%. The Company has made the necessary capital investments to meet this customer growth as well as those necessary to maintain a safe and reliable natural gas distribution system. This investment is reflected in the $711 million increase in rate base, necessary to meet the state's growing economy and maintain safe and reliable natural gas infrastructure.

5.4 The Company has effectively managed its Operations and Maintenance and Administrative and General ("OMAG") expenses in line with customer growth and below the inflation rate as demonstrated in **Figure 1**.



Over the last five years, the Company's customer growth in Arizona has increased approximately 9 percent, the same rate of growth of the Company's OMAG. While the level of OMAG has increased, the increases are in line with customer growth and are reasonable to recover in the cost of service.

5.5 Southwest Gas' request is based upon a test period ended August 31, 2021, adjusted for changes in revenues and expenses, including its cost of capital, that are known and measurable with reasonable accuracy at the time of filing. Southwest Gas requests authority to increase rates to achieve an increase in total revenues of approximately $90.7 million to produce the Company's requested 5.48 percent fair value rate of return.

5.6 Southwest Gas also proposes certain post test year adjustments related to known and measurable events that have occurred, or will occur, after the end of the test period. By including these proposed adjustments in its application, the Company is able to reduce regulatory lag and present a more accurate level of costs and expenses that will be

incurred once the rates approved in this proceeding become effective. The Company's post test year plant adjustment is for non-revenue generating plant and examples include, but are not limited to, pipe replacements including replacements under the Company's integrity management programs, franchise-related replacements, pressure reinforcements, measuring and regulating station equipment, and intangible and general plant.

5.7 Southwest Gas' requested revenue increase is based upon a 9.90 percent cost of common equity capital relative to the Company's actual capital structure at the end of the test period, consisting of a common equity ratio of 51 percent. To simplify the cost of capital in this case, the Company is not seeking a positive return on Fair Value Increment. The Company is proposing that rates be set based on a Fair Value Rate Base and Fair Value Rate of Return. Southwest Gas submits that the recommended cost of common equity capital represents a conservative estimate of investor expectations given recent financial market conditions.

5.8 The proposed increase in revenue sought by Southwest Gas herein is necessary to provide the Company a reasonable opportunity to earn a fair and reasonable rate of return on the fair value of its Arizona investments in order to attract the capital necessary to ensure that it can continue to provide reliable service to present and future Arizona customers at reasonable rates. Additional information regarding Southwest Gas' proposed rate increase is provided in the supporting testimony and schedules accompanying this application.

6. Miscellaneous Items.

Bill Impact

6.1 Southwest Gas is very mindful of the impact rate increases have on its customers and as discussed above, the Company has effectively managed its costs in line with customer growth, and below inflation, since its last general rate case filing in 2019.

6.2 If the Company's application is accepted as filed, the proposed average monthly single family residential bill would increase by $5.12 a month to approximately $49.40.

Rate Design

6.3 Southwest Gas proposes the same rate design approved by the Commission in the Company's last general rate case – consisting of a monthly basic service charge, a volumetric rate and for its large customers a demand rate that captures both delivery charges and gas costs. Southwest Gas' proposed rate design strives to accomplish the following objectives: 1) recover the overall cost of providing service to customers, 2) establish fair and equitable rates; 3) minimize customer bill impacts, particularly to low-use customers; 4) ensure rates are understandable to customers and easy to administer; and 5) remove the Company's financial disincentive to promote energy efficiency and conservation efforts and address customer bill impact concerns among low use customers. Moreover, the revenue stability offered by the Company's decoupled rate structure affords it the opportunity to recover its revenue deficiency in variable charges. As a result, Southwest Gas' proposed rate design maintains basic service charges at their current levels – for example, the single family residential basic service charge is proposed to remain at $10.70.

Tariff Changes

6.4 Southwest Gas proposes three changes to its Arizona Gas Tariff in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service. The Company's proposed modifications include: 1) inclusion of the Company's proposed voluntary program that will provide the Company's Arizona sales customers the ability to offset combustion-related greenhouse gas emissions associated with their natural gas usage through the Company's purchase and retirement of certified carbon offset credits; 2) inclusion of a soft off process that would allow the Company to maintain an active meter for no more than 30 calendar days before the meter is turned off to the premises; and 3) modification of the income qualifications, timeframe for the discount, and regulatory reporting associated with the Company's Low Income Ratepayer Assistance (LIRA) Program which provides reduced energy rates to qualifying low-income customers.

Witnesses – Prepared Direct Testimony

6.5 Southwest Gas' application and the requests made herein are supported by the prepared direct testimony and exhibits of the following Company witnesses, all of which are included in Volume II of the application:

- **Matthew D. Derr** provides a summary of the Company's application for rate relief, testimony supporting the acquisition of Graham County Utilities, Inc.'s natural gas assets, and the Company's proposed tariff modifications.
- **Carla D. Ayala** provides testimony supporting the methodology used by the Company to develop billing determinants for the test period under present rates, and the Company's proposed adjustments to test year bills and volumes, including its proposed weather normalization adjustment. Ms. Ayala sponsors schedules and work papers supporting the Company's billing determinants for the test year.
- **Frederica Harvey** provides testimony supporting the Company's compensation and benefit programs, including base pay, incentive pay, non-cash compensation benefits, and the Board of Directors' compensation.
- **Timothy S. Lyons** sponsors the Company's embedded class cost of service study and supports the Company's proposed rate design.
- **John R. Olenick** provides testimony supporting the Company's request for approval of its Move2Zero voluntary program that would offer the Company's Arizona customers the ability to participate in reducing greenhouse gas emissions through purchasing carbon offset credits. Additionally, Mr. Olenick supports the reasonableness and prudence of the Company's gas procurement activities during the test year.
- **Nick Y. Liu** sponsors the Company's proposed Post Test Year Plant adjustment from a ratemaking perspective. Mr. Liu also addresses the Company's adjustment to the revenue requirement for the rate base and operating expenses related to the Graham County Utilities, Inc. asset acquisition, and the proposed amortization of the acquisition premium associated with the purchase.

- **Randi L. Cunningham** provides testimony supporting the overall results of operations in Southwest Gas' Arizona rate jurisdiction, including the determination of revenue deficiency. Ms. Cunningham identifies and explains the primary factors contributing to the revenue deficiency and sponsors various schedules and work papers supporting the Company's requested revenue requirement, as well as various revenue requirement schedules. Ms. Cunningham also provides testimony supporting the Company's methodology for determining cost responsibility and allocation and sponsors various schedules and work papers supporting the Company's operating expense and rate base adjustments, as well as certain financial and statistical statements and projections.
- **Michelle L. Ansani** provides an overview of the Company's focus on its customers and the related initiatives to improve customer engagement and interactions with Southwest Gas, including the support and assistance offered in response to the COVID-19 Pandemic and the benefits associated with the Company's Customer Data Modernization Initiative.
- **Ann E. Bulkley** is a Senior Vice President of Concentric and was engaged by Southwest Gas to perform an analysis and provide a recommendation concerning the Company's cost of common equity, an analysis of the methodology used by the Company to calculate fair value rate base, and a recommendation concerning the Company's calculation of the fair value rate of return. Additionally, Ms. Bulkley provides testimony supporting the overall rate of return requested in this proceeding. and testifies in support of the requested capital structure and embedded cost of long-term debt used for determining the appropriate cost of capital, including various schedules and work papers supporting the Company's request. Ms. Bulkley also discusses the importance of the Company's overall rate of return on the Company's bond ratings and financial profile.

7. Conclusion.

7.1 Southwest Gas believes that Commission approval of the proposed rate increase, the proposed continuation of the existing rate design, and the proposed tariff modifications, is in the public interest and will result in just and reasonable rates.

7.2 Southwest Gas further submits that approval of this application as proposed will provide the Company with an opportunity to earn a reasonable rate of return on the fair value of its Arizona properties commensurate with other similarly situated natural gas utilities.

WHEREFORE, Southwest Gas respectfully requests that the Commission issue a special order pursuant to A.A.C. R14-3-101.C, to establish notice, filing, discovery and hearing procedures, and that upon conclusion of the hearing, the Commission issue a final order:

1. Authorizing a retail natural gas service rate increase in Southwest Gas' Arizona rate jurisdiction of $90.7 million annually, based upon the fair value of the Company's Arizona properties and a test year ended August 31, 2021;

2. Approving the Company's proposed rate design and the revisions to its Arizona Gas Tariff; and

3. For any other relief the Commission deems just and reasonable.

Dated this 3rd day of December 2021.

Respectfully submitted,

SOUTHWEST GAS CORPORATION

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An Original and 8 copies of the foregoing
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Copies of the foregoing were served
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STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-5 – Single-Family Residential Gas Service							
Basic Service Charge per Month	$ 10.70					$ 10.70	
Commodity Charge per Therm:							
All Usage	$ 1.10224	$ .12887	$ .00304	$ .00000	$ .37836	$ 1.61251	I
G-6 – Multi-Family Residential Gas Service							
Basic Service Charge per Month	$ 9.70					$ 9.70	
Commodity Charge per Therm:							
All Usage	$ 1.30601	$ .12887	$ .00304	$ .00000	$ .37836	$ 1.81628	I
G-10 – Single-Family Low Income Residential Gas Service							
Basic Service Charge per Month	$ 7.50					$ 7.50	
Commodity Charge per Therm:							D
All Usage	$ .61007	$ .11208	$ .00304	$ .00000	$ .37836	$ 1.10355	R/I D
G-11 – Multi-Family Low Income Residential Gas Service							
Basic Service Charge per Month	$ 7.50					$ 7.50	
Commodity Charge per Therm:							D
All Usage	$ .59832	$ .11208	$ .00304	$ .00000	$ .37836	$ 1.09180	R/I D
G-15 – Special Residential Gas Service for Air Conditioning							
Basic Service Charge per Month	$ 10.70					$ 10.70	
Commodity Charge per Therm:							
Summer (May–October):							
First 15 Therms	$ 1.10224	$ .11549	$ .00304	n/a	$ .37836	$ 1.59913	I
Over 15 Therms	$ .16952	$ .11549	$ .00304	n/a	$ .37836	$ .66641	I
Winter (November–April):							
All Usage	$ 1.10224	$ .11549	$ .00304	n/a	$ .37836	$ 1.59913	I
G-20 – Master-Metered Mobile Home Park Gas Service							
Basic Service Charge per Month	$ 66.00					$ 66.00	
Commodity Charge per Therm:							
All Usage	$ .57076	$ .12887	$ .00304	n/a	$ .37836	$ 1.08103	I

STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/
(Continued)

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-25– General Gas Service							
Basic Service Charge per Month:							
Small	$ 27.50					$ 27.50	
Medium	43.50					43.50	
Large-1	80.00					80.00	
Large-2	470.00					470.00	
Transportation Eligible	950.00					950.00	
Commodity Charge per Therm:							
Small, All Usage	$ 1.48314	$ .11549	$ .00304	$ .00000	$ .37836	$ 1.98003	I
Medium, All Usage	.63165	.11549	.00304	.00000	.37836	1.12854	I
Large-1, All Usage	.49928	.11549	.00304	.00000	.37836	.99617	I
Large-2, All Usage	.37829	.11549	.00304	.00000	.37836	.87518	I
Transportation Eligible	.12773	.11549	.00304	n/a	.37836	.62462	I
Demand Charge per Month– Transportation Eligible:							
Demand Charge 4/	$ .102445					$ .102445	I
G-30– Optional Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 27.						
Commodity Charge per Therm:							
All Usage	As specified on A.C.C. Sheet No. 28.		$ .00304	n/a			
G-40– Air Conditioning Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 32.						
Commodity Charge per Therm:							
All Usage	$ .16952	$ .11549	$ .00304	n/a	$ .37836	$ .66641	I
G-45– Street Lighting Gas Service							
Commodity Charge per Therm of Rated Capacity:							
All Usage	$ 1.05805	$ .11549	$ .00304	n/a	$ .37836	$ 1.55494	I
G-55– Gas Service for Compression 5/ on Customer's Premises							
Basic Service Charge per Month:							
Small	$ 27.50					$ 27.50	
Large	250.00					250.00	
Residential	10.70					10.70	
Commodity Charge per Therm:							
All Usage	$ .26023	$ .11549	$ .00304	n/a	$ .37836	$ .75712	I
G-60– Electric Generation Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 40.						
Commodity Charge per Therm:							
All Usage	$ .19175	$ .11549	$ .00304	n/a	$ .37836	$ .68864	I
G-65– Biogas and Renewable Natural Gas Service							
Basic Service Charge per Month	As specified on A.C.C. Sheet No. 41A.						
Commodity Charge per Therm:							
All Usage	As specified on A.C.C. Sheet No. 41A.		$ .00304	n/a	n/a		

STATEMENT OF RATES
EFFECTIVE SALES RATES APPLICABLE TO ARIZONA SCHEDULES 1/ 2/
(Continued)

Description	Delivery Charge	3/ Rate Adjustment	DOT	DCA	Monthly Gas Cost	Currently Effective Tariff Rate	
G-75– Small Essential Agricultural User Gas Service							
Basic Service Charge per Month	$ 120.00					$ 120.00	
Commodity Charge per Therm:							
All Usage	$ .32721	$ .11549	$ .00304	n/a	$ .37836	$ .82410	I
G-80 – Natural Gas Engine 6/ Water Pumping Gas Service							
Basic Service Charge per Month:							
Off-Peak Season (October–March)	$ .00					$ .00	
Peak Season (April–September)	$ 125.00					$ 125.00	
Commodity Charge per Therm:							
All Usage	$ .24458	$ .02549	$ .00304	n/a	$ .43302	$ .70613	I

1/ All charges are subject to adjustment for any applicable taxes or governmental impositions.

2/ Customers taking transportation service will pay the Basic Service Charge, the Commodity Charge per Therm less the Monthly Gas Cost, and Demand Charge, if applicable, of the Currently Effective Tariff Rate for each meter included in the transportation service agreement, plus an amount of $0.00488 per therm for distribution shrinkage as defined in Rule No. 1 of this Arizona Gas Tariff. The shrinkage charge shall be updated annually effective May 1. For customers converting from sales service, an additional amount equal to the currently effective Gas Cost Balancing Account Adjustment will be assessed for a period of 12 months.

Schedule No. G-10

SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-5 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 250 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-5, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-10

SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-5 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 2~~0~~50 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. ~~The first 150 therms per month during the Winter Season~~All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-5, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-11

MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-6 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 250 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-6, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area.

Schedule No. G-11

MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

APPLICABILITY

Applicable to gas service to the primary residences of low income residential customers who would otherwise be provided service under Schedule No. G-6 and who meet the criterion which establishes that a qualifying customer's household income must not exceed 2~~5~~0 percent of the Federal poverty level. C

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge is set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and is incorporated herein by reference. ~~The first 150 therms per month~~All ~~usage during the Winter Season~~ All usage shall receive a 30 percent reduction from the commodity charge applicable to Schedule No. G-6, the customer's otherwise applicable gas sales tariff schedule. C

MINIMUM CHARGE

The minimum charge per meter per month is the basic service charge.

SPECIAL CONDITIONS

1. Eligibility requirements for the Low Income Residential Gas Service are set forth on the Utility's Application for Low Income Ratepayer Assistance (LIRA) form. Customers must have an approved application form on file with the Utility. Recertification will be required every two years and whenever a customer moves to a new residence within the Utility's service area. ~~T/D~~ D

Schedule No. G-20

MASTER-METERED MOBILE HOME PARK GAS SERVICE

APPLICABILITY

Applicable to gas service for cooking, water heating, space heating and other usages supplied to a master-metered mobile home park and its tenants within the park through one meter on a single premise. This schedule is closed to new installations.

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge and commodity charge are set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and are incorporated herein by reference.

LOW INCOME DISCOUNT

If an individual tenant of a mobile home park served under this schedule meets the low income criteria specified on the Utility's "Application for Low Income Ratepayer Assistance" form the mobile home park customer shall be eligible for the Low Income Ratepayer Assistance (LIRA) discount for that tenant's account. The LIRA program entitles customers served under this schedule to a reduction in the commodity charge under Schedule No. G-20 equivalent to the differential in the commodity charge under Schedule Nos. G-5 and G-10. Such rate reduction will be applicable for all usage consumed by each eligible tenant per month. C

Customers taking service under this schedule will receive the LIRA discount on their metered volumes in proportion to the percentage of mobile home park tenants that qualify under the LIRA program criteria. Customers served under this schedule must have an approved application form on file with the Utility for each tenant eligible for the LIRA discount. Recertification will be required every two years and the customer must notify the Utility within 30 days of any changes in the eligibility status of the customer's tenants. It is the responsibility of master-metered customers to pass through a proportionate share of the low income discount to each eligible low income tenant. If the Utility ascertains that a master-metered customer has failed to appropriately pass through the LIRA discount to eligible tenants, an adjusted bill may be rendered to the customer.

Schedule No. G-20

MASTER-METERED MOBILE HOME PARK GAS SERVICE

APPLICABILITY

Applicable to gas service for cooking, water heating, space heating and other usages supplied to a master-metered mobile home park and its tenants within the park through one meter on a single premise. This schedule is closed to new installations.

TERRITORY

Throughout the certificated area served by the Utility in the communities as set forth on A.C.C. Sheet No. 8 of this Arizona Gas Tariff.

RATES

The basic service charge and commodity charge are set forth in the currently effective Statement of Rates of this Arizona Gas Tariff and are incorporated herein by reference.

LOW INCOME DISCOUNT

If an individual tenant of a mobile home park served under this schedule meets the low income criteria specified on the Utility's "Application for Low Income Ratepayer Assistance" form the mobile home park customer shall be eligible for the Low Income Ratepayer Assistance (LIRA) discount for that tenant's account. The LIRA program entitles customers served under this schedule to a reduction in the commodity charge under Schedule No. G-20 equivalent to the differential in the commodity charge under Schedule Nos. G-5 and G-10. Such rate reduction will be applicable for ~~the first 150 therms~~all usage consumed by each eligible tenant per month ~~during the Winter Season~~. C

Customers taking service under this schedule will receive the LIRA discount on their metered volumes in proportion to the percentage of mobile home park tenants that qualify under the LIRA program criteria. Customers served under this schedule must have an approved application form on file with the Utility for each tenant eligible for the LIRA discount. Recertification will be required every two years and the customer must notify the Utility within 30 days of any changes in the eligibility status of the customer's tenants. It is the responsibility of master-metered customers to pass through a proportionate share of the low income discount to each eligible low income tenant. If the Utility ascertains that a master-metered customer has failed to appropriately pass through the LIRA discount to eligible tenants, an adjusted bill may be rendered to the customer.

SPECIAL SUPPLEMENTARY TARIFF
LOW INCOME RATEPAYER ASSISTANCE (LIRA) RATE ADJUSTMENT PROVISION

APPLICABILITY

Applicable to all gas delivered by the Utility to all customers served under Rate Schedule Nos. G-5, G-6 and G-20.

RATES

The unit LIRA rate adjustment is set forth in the currently effective Statement of Rates, Footnote 3, of Sheet No. 14 of this Arizona Gas Tariff and is incorporated herein by reference.

CHANGES IN RATES

Rates applicable to each schedule of this Arizona Gas Tariff subject to this provision shall be adjusted for changes in the LIRA Balancing Account's balance in accordance with the rate adjustment provisions hereof such that the Utility will be reimbursed for all LIRA discounts, plus interest and administrative expenses.

ADJUSTMENT DATE

The LIRA rate adjustment shall be updated annually effective May 1.

RATE ADJUSTMENT PROVISIONS

Calculation of the LIRA rate adjustment shall include:

1. The LIRA program benefits. C
2. Incremental administrative and general expenses associated with the LIRA program.
3. The amounts accumulated in the LIRA Balancing Account as described below at the end of the latest available recorded month prior to the applicable Adjustment Date.
4. The sum of paragraphs (1), (2), and (3) above divided by the most recent 12 month's applicable sales volumes shall be the LIRA rate adjustment amount.

SPECIAL SUPPLEMENTARY TARIFF
LOW INCOME RATEPAYER ASSISTANCE (LIRA) RATE ADJUSTMENT PROVISION

APPLICABILITY

Applicable to all gas delivered by the Utility to all customers served under Rate Schedule Nos. G-5, G-6 and G-20.

RATES

The unit LIRA rate adjustment is set forth in the currently effective Statement of Rates, Footnote 3, of Sheet No. 14 of this Arizona Gas Tariff and is incorporated herein by reference.

CHANGES IN RATES

Rates applicable to each schedule of this Arizona Gas Tariff subject to this provision shall be adjusted for changes in the LIRA Balancing Account's balance in accordance with the rate adjustment provisions hereof such that the Utility will be reimbursed for all LIRA discounts, plus interest and administrative expenses.

ADJUSTMENT DATE

The LIRA rate adjustment shall be updated annually effective May 1.

RATE ADJUSTMENT PROVISIONS

Calculation of the LIRA rate adjustment shall include:

1. The LIRA program benefits ~~provided during the prior Winter Season~~. C T
2. Incremental administrative and general expenses associated with the LIRA program.
3. The amounts accumulated in the LIRA Balancing Account as described below at the end of the latest available recorded month prior to the applicable Adjustment Date.
4. The sum of paragraphs (1), (2), and (3) above divided by the most recent 12 month's applicable sales volumes shall be the LIRA rate adjustment amount.

SPECIAL SUPPLEMENTARY TARIFF
DELIVERY CHARGE ADJUSTMENT

APPLICABILITY

The Delivery Charge Adjustment (DCA) applies to residential Rate Schedule Nos. G-5, G-6, G-10 and G-11 and to General Service Schedule Nos. G-25(Small), G-25(Medium), G-25(Large-1) and G-25(Large-2) included in this Arizona Gas Tariff. The DCA specifies the accounting procedures and rate setting adjustments necessary to assure the Utility neither over-recovers, nor under-recovers, the margin-per-customer amounts authorized in its most recent general rate case proceeding.

CHANGE IN RATES

Annually, the DCA surcharge will adjust to recover or refund any differences between the Utility's billed margin and the margin amounts authorized in its most recent general rate case proceeding. The process is set forth below.

1) BALANCING ACCOUNT

The Utility shall maintain accounting records that accumulate the difference between authorized and actual billed margin. Entries shall be recorded to the DCA Balancing Account (DCABA) each month as follows:

A. A debit or credit entry equal to the difference between authorized margin and actual billed margin for each rate schedule subject to this provision. Authorized margin is the product of the monthly margin-per-customer authorized in the Utility's last general rate case, as stated below, and the actual number of customers billed during the month.

	G-5	G-6	G-10	G-11
January	$63.94	$38.32	$61.00	$43.59
February	$56.43	$35.52	$54.65	$39.95
March	$46.64	$31.47	$43.83	$34.16
April	$35.45	$27.34	$33.20	$28.65
May	$29.19	$24.82	$27.03	$25.48
June	$28.39	$24.45	$26.24	$25.32
July	$26.51	$23.11	$24.57	$23.76
August	$25.55	$22.47	$23.70	$23.02
September	$26.06	$22.81	$24.04	$23.29
October	$27.09	$23.21	$24.84	$23.63
November	$29.42	$24.59	$27.65	$25.25
December	$48.19	$32.32	$46.23	$35.43

SPECIAL SUPPLEMENTARY TARIFF
DELIVERY CHARGE ADJUSTMENT
(Continued)

	G-25(S)	G-25(M)	G-25(L1)	G-25(L2)	
January	$81.39	$269.10	$991.91	$4,093.35	I
February	$73.19	$253.67	$928.78	$3,846.23	I
March	$63.01	$223.24	$816.15	$3,776.56	I
April	$50.14	$194.23	$732.16	$3,309.25	I
May	$45.61	$174.04	$642.73	$2,959.54	I
June	$45.31	$169.12	$604.78	$2,804.91	I
July	$43.74	$156.02	$529.38	$2,378.23	I
August	$43.11	$152.41	$506.19	$2,289.21	I
September	$43.41	$157.07	$523.95	$2,368.31	I
October	$43.90	$163.99	$566.22	$2,546.32	I
November	$45.89	$177.93	$645.87	$3,003.61	I
December	$62.85	$231.15	$861.75	$3,689.77	I

B. A debit or credit entry equal to the therms billed during the month under the schedules subject to this provision multiplied by the DCA surcharge rate.

C. A debit or credit entry for interest to be applied to over- and under-collected bank balances based on the monthly one-year nominal Treasury constant maturities rate.

2) RATE ADJUSTMENT

The DCA Rate Adjustment applicable to each schedule subject to this provision shall be revised annually to reflect the difference between the margin-per-customer authorized in the Utility's last general rate case and the margin billed. The DCA Rate Adjustment will be calculated by dividing the balance in the DCABA by the most recent 12-month volume of natural gas for the applicable rate schedules.

3) AMOUNTS RECOVERED AND REFUNDED

Over-collected or under-collected balances in the DCABA will be refunded over the next amortization period.

4) TIMING AND MANNER OF FILING

The Utility shall file its DCA Rate Adjustment revisions with the Commission in accordance with all statutory and regulatory requirements. The DCA Rate Adjustment shall be effective on the date of the first bill cycle in the month following the Commission's approval unless otherwise provided for by the Commission.

N

SPECIAL SUPPLEMENTARY TARIFF
MOVE2ZERO CARBON OFFSET (M2Z) PROGRAM

APPLICABILITY

The Move2Zero Carbon Offset Program ("M2Z Program") is available to all schedules except for Rate Schedule Nos. G-30, G-65, T-1, and SB-1, to Customers who choose to participate in the M2Z Program.

RATES

A Customer electing to participate in the M2Z Program shall be responsible for all charges and rates specified in the Customer's otherwise applicable rate schedule. In addition, the Customer shall be responsible for the monthly premium charge associated with the Customer's selected amount of carbon offsets, or "blocks," that the Company will purchase on behalf of that Customer. For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, one block will cost $5.00 per month and will offset 10 therms of combustion-related natural gas usage per month. The number of blocks that a Customer may purchase is to be determined by the Customer. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different block pricing.

The minimum charge per month shall be the sum of the minimum charge specified in the Customer's otherwise applicable rate schedule, plus the product of the $5.00 per block charge multiplied by the number of blocks the Customer elects to purchase.

TERM

For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, the Customer or the Company may terminate the Customer's participation in the M2Z Program by giving at least thirty (30) days prior written notice of such termination. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different term lengths.

LATE CHARGE

No late payment charge will be assessed to amounts not paid by the Customer under this Program. However, Late Charges for the Customer's otherwise applicable rate schedule are applicable. Failure of a Customer to pay any amounts due pursuant to the M2Z Program shall not result in disconnection of service to the Customer.

N

HELD FOR FUTURE USESPECIAL SUPPLEMENTARY TARIFF
MOVE2ZERO CARBON OFFSET (M2Z) PROGRAM

APPLICABILITY

The Move2Zero Carbon Offset Program ("M2Z Program") is available to all schedules except for Rate Schedule Nos. G-30, G-65, T-1, and SB-1, to Customers who choose to participate in the M2Z Program.

RATES

A Customer electing to participate in the M2Z Program shall be responsible for all charges and rates specified in the Customer's otherwise applicable rate schedule. In addition, the Customer shall be responsible for the monthly premium charge associated with the Customer's selected amount of carbon offsets, or "blocks," that the Company will purchase on behalf of that Customer. For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, Oone block will cost $5.00 per month and will offset 10 therms of combustion-related natural gas usage per month. The number of blocks that a Customer may purchase is to be determined by the Customer. Customers who participate inthe M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different block pricing.

The minimum charge per month shall be the sum of the minimum charge specified in the Customer's otherwise applicable rate schedule, plus the product of the $5.00 per block charge multiplied by the number of blocks the Customer elects to purchase.

TERM

For customers who participate in the M2Z Program and who receive service under the Company's G-5, G-6, or G-25 S rate schedules, the Customer or the Company may terminate the Customer's participation in the M2Z Program by giving at least thirty (30) days prior written notice of such termination. Customers who participate in the M2Z Program and who receive service under one of the Company's other sales rate schedules may, at the Company's discretion, require different term lengths.

LATE CHARGE

No late payment charge will be assessed to amounts not paid by the Customer under this Program. However, Late Charges for the Customer's otherwise applicable rate schedule are applicable. Failure of a Customer to pay any amounts due pursuant to the M2Z Program shall not result in disconnection of service to the Customer.

N

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HELD FOR FUTURE USE

HELD FOR FUTURE USE

RULE NO. 1

DEFINITIONS
(Continued)

Service Establishment Charge:	A charge as specified in the Utility's tariffs for establishing a new account.
Service Line:	A natural gas pipe that transports gas from a common source of supply (normally a distribution main) to the point of delivery.
Service Line Extension:	Consists of a service line provided for a new customer at a premise not heretofore served, in accordance with the service line extension rule.
Service Line Shut-Off Valve:	A curb valve or other manually operated valve located near the service that is safely accessible to Company personnel or other personnel authorized by the Company to manually shut off gas flow to the service.
Service Reconnect Charge:	A charge as specified in the Utility's tariffs which must be paid by the customer prior to reconnection of natural gas service each time the service is disconnected for nonpayment or whenever service is discontinued for failure to comply with the Utility's tariffs.
Service Reestablishment Charge:	A charge as specified in the Utility's tariffs for service at the same location where the same customer had ordered a service disconnection within the preceding 12-month period.
Shrinkage:	The cost of the gas volumes lost, unaccounted for, or used as company fuel in the transportation process and represented by the differential between the cost of gas on a sales basis and the cost of gas on a purchased basis.
Shrinkage Rate:	The rate used to recover the cost of shrinkage from non-exempt transportation customers.
Single-Family Residential:	A permanent residential dwelling, excluding multi-family residential structures.
Soft Off:	A meter read that occurs upon the discontinuance of service to a customer under this Arizona Gas Tariff where the supply of gas is not turned off, and there is no new customer at the premises. T T
Southwest Vista:	A fully integrated website that allows for the Utility's Transportation customers and designated agents the ability to submit Transportation nominations to the interstate pipelines. Users may also have the ability to view monthly volume statements, master detail reports, Transportation pipeline charges allocated to them from the Utility, and informational reports.

RULE NO. 1

DEFINITIONS
(Continued)

Service Establishment Charge:	A charge as specified in the Utility's tariffs for establishing a new account.
Service Line:	A natural gas pipe that transports gas from a common source of supply (normally a distribution main) to the point of delivery.
Service Line Extension:	Consists of a service line provided for a new customer at a premise not heretofore served, in accordance with the service line extension rule.
Service Line Shut-Off Valve:	A curb valve or other manually operated valve located near the service that is safely accessible to Company personnel or other personnel authorized by the Company to manually shut off gas flow to the service. N
Service Reconnect Charge:	A charge as specified in the Utility's tariffs which must be paid by the customer prior to reconnection of natural gas service each time the service is disconnected for nonpayment or whenever service is discontinued for failure to comply with the Utility's tariffs. N
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Single-Family Residential:	A permanent residential dwelling, excluding multi-family residential structures.
Soft Off:	A meter read that occurs upon the discontinuance of service to a customer under this Arizona Gas Tariff where the supply of gas is not turned off, and there is no new customer at the premises. T | T
Southwest Vista:	A fully integrated website that allows for the Utility's Transportation customers and designated agents the ability to submit Transportation nominations to the interstate pipelines. Users may also have the ability to view monthly volume statements, master detail reports, Transportation pipeline charges allocated to them from the Utility, and informational reports.

RULE NO. 10

TERMINATION OF SERVICE
(Continued)

E. TIMING OF TERMINATIONS WITH NOTICE

1. The Utility shall be required to give at least five days' advance written notice prior to the termination date.

2. Such notice shall be considered to be given to the customer when a copy thereof is left with the customer or posted first class in the United States mail, addressed to the customer's last known address.

3. If after the period of time allowed by the notice has elapsed and the delinquent account has not been paid or arrangements have not been made with the Utility for the payment thereof or in the case of a violation of the Utility's rules the customer has not satisfied the Utility that such violation has ceased, the Utility may then terminate service on or after the day specified in the notice without giving further notice.

4. To discontinue service, the Utility will either read the meter for a new customer, turn off the supply of gas, or perform a soft off. Soft offs will only be performed at residential dwellings. The Utility will turn off the supply of gas no more than 30 calendar days after the soft off. If the soft off or turn off date falls on a Saturday, Sunday, or state or federal holiday, the date may be continued to the next business day, and in all events, the Utility may extend the dates on account of weather conditions. C C

F. LANDLORD/TENANT RULE

In situations where service is rendered at an address different from the mailing address of the bill or where the Utility knows that a landlord/ tenant relationship exists and that the landlord is the customer of the Utility, and where the landlord as customer would otherwise be subject to disconnection of service, the Utility may not disconnect service until the following actions have been taken:

1. Where it is feasible to provide service, the Utility, after providing notice as required in this rule, shall offer the occupant the opportunity to subscribe for service in his or her name. If the occupant then declines to so subscribe, the Utility may disconnect service pursuant to this rule.

2. The Utility shall not attempt to recover from a tenant or condition service to a tenant with the payment of any outstanding bills or other charges due upon the outstanding account of the landlord.

RULE NO. 10

TERMINATION OF SERVICE
(Continued)

E. TIMING OF TERMINATIONS WITH NOTICE

1. The Utility shall be required to give at least five days' advance written notice prior to the termination date.

2. Such notice shall be considered to be given to the customer when a copy thereof is left with the customer or posted first class in the United States mail, addressed to the customer's last known address.

3. If after the period of time allowed by the notice has elapsed and the delinquent account has not been paid or arrangements have not been made with the Utility for the payment thereof or in the case of a violation of the Utility's rules the customer has not satisfied the Utility that such violation has ceased, the Utility may then terminate service on or after the day specified in the notice without giving further notice.

4. To discontinue service, the Utility will either read the meter for a new customer, turn off the supply of gas, or perform a soft off. Soft offs will only be performed at residential dwellings. The Utility will turn off the supply of gas no more than 30 calendar days after the soft off. If the soft off or turn off date falls on a Saturday, Sunday, or state or federal holiday, the date may be continued to the next business day, and in all events, the Utility may extend the dates on account of weather conditions.~~Service may only be disconnected in conjunction with a personal visit to the premises by an authorized representative of the Utility.~~

F. LANDLORD/TENANT RULE

In situations where service is rendered at an address different from the mailing address of the bill or where the Utility knows that a landlord/ tenant relationship exists and that the landlord is the customer of the Utility, and where the landlord as customer would otherwise be subject to disconnection of service, the Utility may not disconnect service until the following actions have been taken:

1. Where it is feasible to provide service, the Utility, after providing notice as required in this rule, shall offer the occupant the opportunity to subscribe for service in his or her name. If the occupant then declines to so subscribe, the Utility may disconnect service pursuant to this rule.

2. The Utility shall not attempt to recover from a tenant or condition service to a tenant with the payment of any outstanding bills or other charges due upon the outstanding account of the landlord.

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Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Testimony

Vol. 2 of 3

December 3, 2021

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368
2021 General Rate Case

Volume 2

TAB	WITNESS
A	Matthew D. Derr
B	Carla Ayala
C	Frederica Harvey
D	Timothy S. Lyons
E	John R. Olenick
F	Nick Liu
G	Randi L. Cunningham
H	Michelle L. Asani
I	Ann Bulkley

December 3, 2021

Tab A

Direct Testimony
of
Matthew D. Derr

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
MATTHEW D. DERR

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Matthew D. Derr

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V. CONCLUSION 11

Appendix A – Summary of Qualifications of Matthew D. Derr

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Matthew D. Derr

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Matthew D. Derr. My business address is 1600 E. Northern Avenue, Phoenix, Arizona 85020.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation & Energy Efficiency department. My title is Director/Regulation & Energy Efficiency.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously testified before the Arizona Corporation Commission (Commission).

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I provide an overview of the Company's requested rate relief as well as an overview and support of the Company's acquisition of the Graham County Utilities (GCU) natural gas assets, and its proposed tariff changes.

. . .

. . .

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- An overview of the Company's application, including discussion of the Company's investment in Arizona and the associated customer bill impact;
- The acquisition of GCU assets; and
- The Company's proposed tariff modifications.

II. OVERVIEW OF FILING

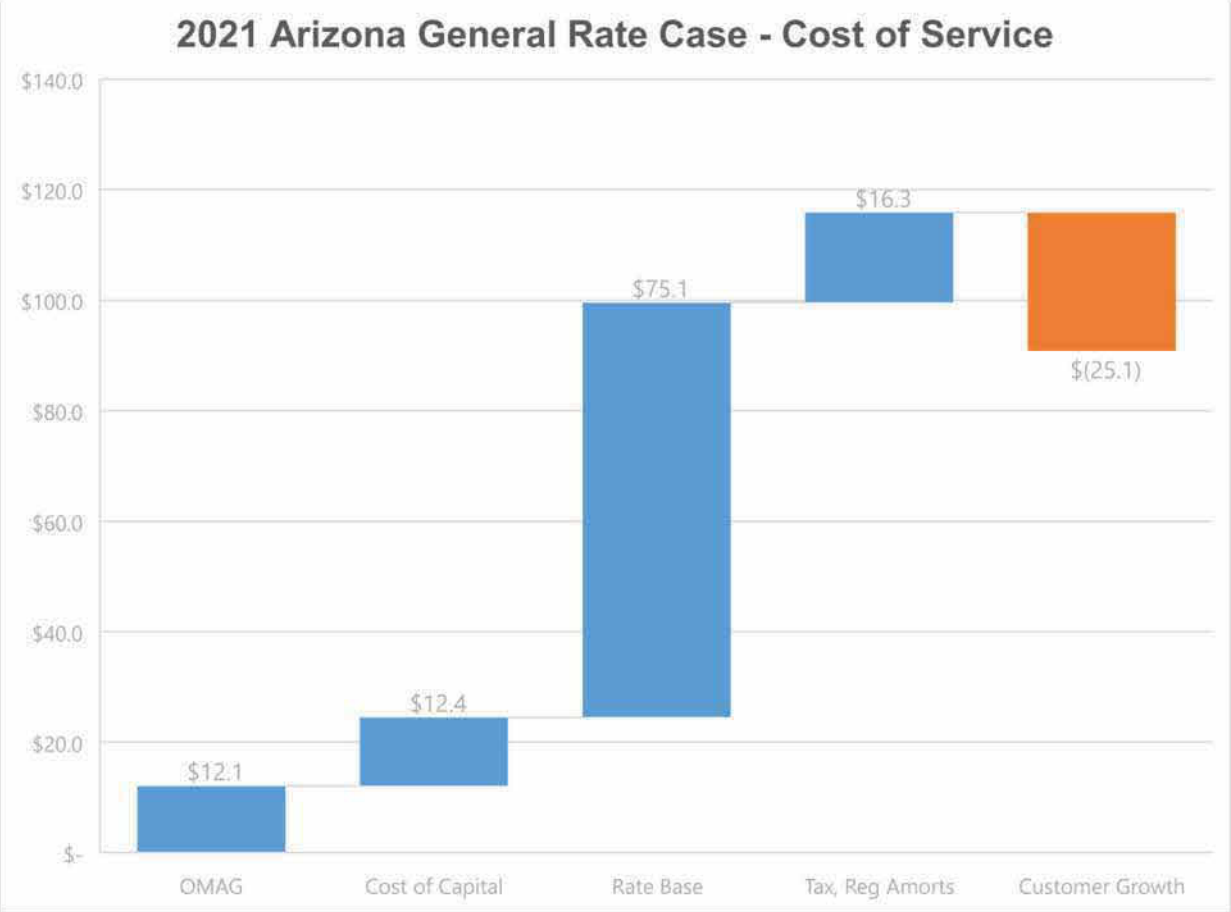
Q. 7 Why is the Company filing this rate case?

A. 7 This case is driven by the Company's investment in Arizona. The Company has made significant financial investments in the State to support the economic growth in Arizona, and the maintenance of a safe and reliable natural gas distribution system. As discussed in the prepared direct testimony of Company witness Randi L. Cunningham, the rate base increase since the Company's last General Rate Case (GRC) is approximately $711 million. The amount of time that has lapsed since the end of the last test year – just over two years - combined with the Company's investment in Arizona, necessitates the Company filing for rate relief at this time.

As demonstrated below, and as discussed by Ms. Cunningham, increases in Operations and Maintenance and Administrative and General (OMAG) as well as increases in Regulatory Amortizations and Income Tax expense are contributors of the Company's deficiency.

Figure 1 demonstrates the components of the cost of service.

Figure 1 – Components of Cost of Service



Q. 8 Has the Company been able to effectively manage its Operation and Maintenance Costs?

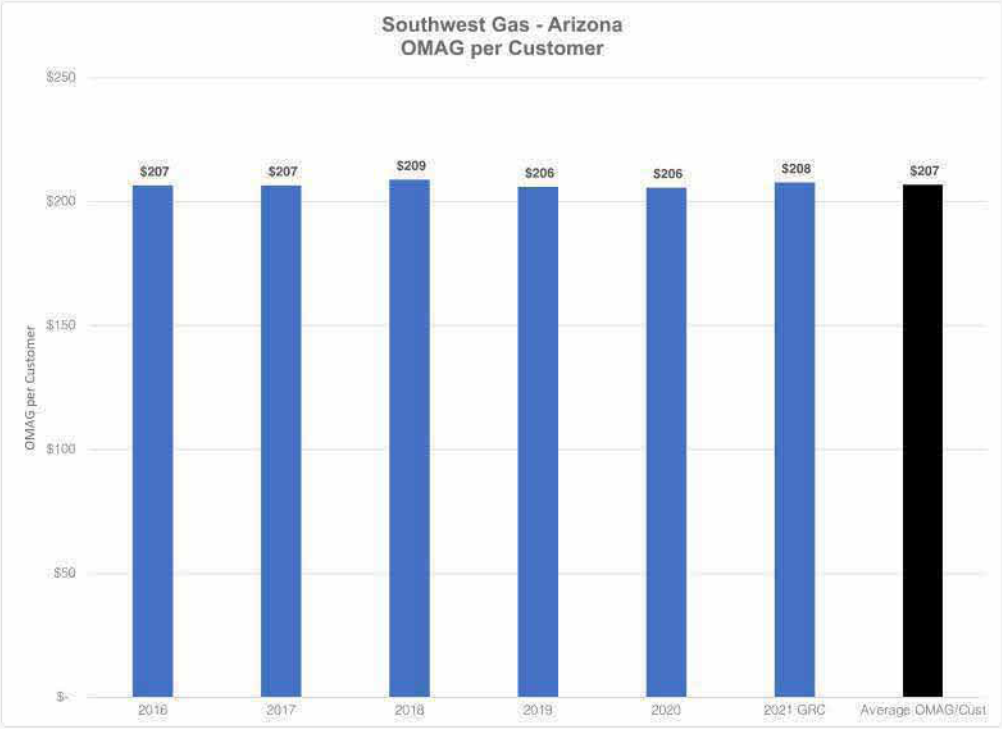
A. 8 Yes. The Company has managed OMAG spend in line with customer growth, and below the rate of inflation as demonstrated in Figure 2 below. Over the last five years, the Company's customer growth in Arizona has increased approximately 9 percent, the same rate of growth of the Company's OMAG. While OMAG has increased, the increases are in line with customer growth and are reasonable to recover in the cost of service. The Company has implemented strategies in its Arizona operating divisions to maintain an efficient level of O&M growth, in line with customer growth. Some examples of this include:

1. The use of data analytics for after hour and weekend coverage, to improve emergency response.

2. Process improvements to reduce leak survey workload management through enhanced scheduling of leak survey activities.

3. Improve damage prevention, by improving damages per 1,000 tickets, while seeing an increase in ticket count. Damage prevention initiatives increase public health and safety, and work to decrease emergency response and repair costs.

Figure 2 – OMAG per Customer



Q. 9 What is the customer bill impact from the Company's proposed cost of service?

A. 9 The most significant component of the cost of service is the return on and return of rate base, or the inclusion of the Company's approximate $710 million in capital investments in rates. For this investment, the Company is proposing that the delivery charge (or margin) rate increase approximately 22 cents, or approximately $5 per month. This is further demonstrated on Schedule No. H-4 and the Prepared Direct Testimony of Company witness Timothy S. Lyons.

With this proposed increase, average bills for natural gas service in Arizona would be approximately $50 a month, still among the lowest bills customers have for the provision of utility service. Additionally, as further discussed below, the Company is proposing to increase eligibility for the Company's Low Income Ratepayer Assistance (LIRA) program and expand its offering year-round, rather than the six months currently offered. Finally, as described by Mr. Lyons, the Company is proposing to maintain its Commission-approved rate design and the current basic service charge.

Q. 10 Please discuss the Company's proposed return on fair value.

A. 10 As described in the Prepared Direct Testimony of Company witness Ann Bulkley, the Company is not seeking a positive return on the fair value increment (FVI) above the original cost rate base (OCRB). Per the Arizona Constitution and the Arizona Administrative Code filing requirements, the Company is providing the Commission with a finding of fair value rate base and fair value rate of return. However, to simplify the Company's request in this case, the Company is not seeking a positive return on FVI.

The Company believes that a zero return on FVI is consistent with the Arizona Constitution, Article 15 Section 14, as well as the memorandum decision from

the Arizona Court of Appeals.[1] The Company is requesting to set rates based on a Fair Value Rate Base of $3.414 billion and a Fair Value Rate of Return of 5.48 percent. Further, the Company's request is within the range of FVI supported by parties to the Company's last rate case, where Commission Staff and RUCO both supported a return on FVI ranging from zero percent to 0.6 percent.

III. GRAHAM COUNTY UTILITIES

Q. 11 Please discuss the Company's acquisition of the assets of GCU.

A. 11 On April 21, 2021, in Docket Nos. G-01551A-21-0092 and G-02527A-21-0092, the Company and Graham County Utilities, Inc. (GCU) filed a joint application with the Commission requesting: (1) authorization to extend the Company's Certificate of Convenience and Necessity and (2) approval of the asset purchase agreement for the GCU assets. A hearing was held on November 1, 2021 and approval is expected in December 2021. Upon Commission approval, Southwest Gas will extend its service territory to include the approximate 5,300 GCU customers. GCU customers will be moved to Southwest Gas rate schedules that reflect their current GCU rates until a decision in this case. As discussed in the Prepared Direct Testimony of Company witness Timothy Lyons, the Company's application includes a proposal that moves GCU customers to Southwest Gas' tariff rates. Company witness Nick Liu supports the adjustments to the Company's cost of service to reflect the GCU rate base and O&M expense for GCU.

IV. TARIFF MODIFICATIONS

[1] Chaparral City Water Co. v. Ariz. Corp. Comm'n, 1 CA-CC 05-0002.

Q. 12 Is the Company proposing any modifications to its Arizona Tariff No. 7?

A. 12 Yes. The Company is proposing four changes to its tariff, in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service. A clean, and redline, version of the tariff changes is provided for in Volume I of the application.

The tariff changes are summarized below.

Tariff Name	Description
Move2Zero	Voluntary program whereby customers can sign up purchase a block of carbon offsets.
Soft Off	Incorporate a soft off process used upon the discontinuance of service to residential accounts
LIRA	Enhancements to the LIRA program to expand eligibility and the length of the discount.

Q. 13 Please describe the Company's proposed Move2Zero Program.

A. 13 The Move2Zero Program is a voluntary program that will provide the Company's Arizona sales customers the ability to offset combustion-related greenhouse gas ~~(~~GHG~~)~~ emissions associated with natural gas usage through the Company's purchase and retirement of certified carbon offset credits. Company witness John R. Olenick further discusses the Move2Zero Program in his Prepared Direct Testimony.

The Move2Zero Program is incorporated into the Company's Arizona Gas Tariff No. 7 as a Special Supplementary Provision on Sheet No. 94.

Q. 14 How does the Company intend to account for Move2Zero Program-related costs and revenues?

A. 14 Similar to other Commission-approved programs, the Company proposes to establish a balancing account to track all Move2Zero Program costs and revenues. This accounting treatment is similar to the Company's Demand Side

Management Balancing Account, Delivery Charge Adjustment Balancing Account, Low Income Ratepayer Assistance, Department of Transportation and Gas Cost Balancing Account. Each of these Commission-approved programs accounts for revenues (through surcharges) and expenses in balancing accounts. The Company will seek to contract for carbon offsets up to the level of customer participation in the Move2Zero Program.

Q. 15 How does the Company propose to adjust the proposed block cost, or equivalent therms offset, or both?

A. 15 The Company proposes to adjust the block cost, or equivalent therm offset, as part of the annual compliance filing, as described by Mr. Olenick.

Q. 16 Will customers who elect not to participate in the Move2Zero Program pay any costs associated with the Move2Zero Program?

A. 16 No. Any costs will be accounted for in the balancing account and taken into consideration for the price per block, as part of the Move2Zero Program. For customers who elect not to participate, there will be no incremental cost, or bill impact.

Q. 17 Please describe the Company's Soft Off proposal.

A. 17 A soft off is a meter read that occurs upon the discontinuance of service under the Company's Tariff, but the meter is not turned off. The use of a soft off provides the Company the ability to temporarily leave the meter on where a residential service account is discontinued by one customer and service later established by another customer at the same premise. The Soft Off tariff changes are incorporated into the Company's Arizona Gas Tariff No. 7 in Rule No. 10.E.4, Sheet 238.

Q. 18 Please describe the Soft Off Process.

A. 18 The soft off process would allow the Company to maintain an active meter for no more than 30 calendar days before the meter is turned off to the premises. During a soft off period, the Company can more quickly and conveniently establish service, since it would not require a service technician to enter the premises to perform a turn-on service order. The Company's current average turn around time between disconnecting service for an existing customer and establishing service for a new applicant at the same residence is approximately 20 days. The soft off process is expected to reduce that turnaround time since the supply of gas will already be on at the time the applicant requests service enabling the Company to initiate service by performing meter reads without entering the customers' premises to perform a turn-on service order. By saving time and the need to enter the premise, the soft off process will result in enhanced customer experience and anticipated expense savings over time.

Q. 19 Please describe the Company's LIRA Program.

A. 19 The LIRA Program provides reduced energy rates to qualifying low-income customers.

Q. 20 Please describe how the Company's LIRA Program is structured.

A. 20 Customers qualify for the LIRA Program by meeting an annual household income threshold based on the Federal Poverty Income Guidelines. Qualifying customers receive a yearly 30 percent reduction in their monthly basic service charge and a per therm discount. The reduced basic service charge benefits customers year-round while the per therm discount is applied to the first 150 therms of natural gas used each month from November 1 through April 30 (use greater than 150 therms in these months is priced at the full tariff rate).

Q. 21 Is the Company proposing any modifications to its LIRA Program?

A. 21 Yes. While the LIRA Program has performed as intended by allowing low-income customers to receive discounts on their Southwest Gas' energy bills, the Company seeks to make revisions to enhance the Program. The Company proposes to modify the Program's income qualifications, timeframe for the discount, and regulatory reporting. The income qualifications and timeframe for discount tariff changes are found on Sheet Nos. 19, 20A, 23, and 90.

Q. 22 Why is Southwest Gas requesting to modify its LIRA Program's income qualifications?

A. 22 Currently, customers are eligible for the LIRA Program if their incomes are less than or equal to 200 percent of the Federal Poverty Income Guidelines. Decision No. 78316 issued on November 9, 2021 modified the definition of "limited income" from a residential customer with an annual household income at or below 200 percent of the Federal Poverty Level to 250 percent of the Federal Poverty Level.[2] To align with this modification, Southwest Gas proposes to increase its LIRA Program eligibility to incomes less than or equal to 250 percent of the Federal Poverty Income Guidelines. This proposed increase will allow the Company to better support low-income customers.

Q. 23 Why is Southwest Gas proposing to extend the LIRA discount year-round?

A. 23 Currently, the LIRA program helps eligible customers save on their natural gas bills by providing a 30 percent reduction in the monthly basic service charge and volumetric rate on the first 150 therms of natural gas consumed from November 1 to April 30. The Company proposes to enhance the program by providing the 30 percent reduction in year-round, instead of only the winter months. It is

[2] Decision in Docket No. RU-00000A-19-0132, page 789.

expected that this enhancement will cause the LIRA adjustment to increase by approximately $1.6 million per year.

Q. 24 What are the Company's proposed modifications to the LIRA Program's regulatory reporting?

A. 24 Currently, Southwest Gas submits reports on its LIRA Program to the Commission on a quarterly basis. Southwest Gas proposes to modify its reporting frequency to annually, every March 1, and to provide additional data in the report. Southwest Gas proposes adding a monthly therm usage comparison between LIRA and non-LIRA participants. The data will showcase if LIRA participants are using less or more natural gas than non-LIRA participants and provide insight if LIRA participants need to be encouraged to enroll in the Company's low-income weatherization program or other energy conservation programs.

V. CONCLUSION

Q. 25 Does this conclude your prepared direct testimony?

A. 25 Yes.

SUMMARY OF QUALIFICATIONS
MATTHEW D. DERR

Matthew D. Derr is the Director/Regulation and Energy Efficiency for Southwest Gas Corporation (Southwest Gas). He provides strategic leadership, guidance, and direction in the alignment of the Company's regulatory strategy, ensures technical accuracy, and regulatory compliance, as well as ensuring the Company has positive relationships with all regulatory stakeholders.

Mr. Derr joined Southwest Gas in 2012 as an Administrator in the Corporate Public Affairs Department in Phoenix. He was subsequently promoted to Regulatory Manager/Arizona in 2015 and his current role in May 2018.

Prior to joining Southwest Gas, Mr. Derr worked in several senior positions in state government, including as a Policy Advisor at the Arizona Corporation Commission. He holds a Bachelor of Arts Degree in Economics from Arizona State University.

Tab B

Direct Testimony
of
Carla D. Ayala

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
CARLA AYALA

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Carla Ayala

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IV. CONCLUSION 9

Appendix A – Summary of Qualifications of Carla Ayala

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Carla Ayala

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Carla Ayala. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Systems Planning department. My title is Sr Economist.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission), the California Public Utilities Commission and the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor the Company's adjustments to the recorded test year bills and volumes, to derive the test period billing determinants for both Southwest Gas and the Graham County Utilities (GCU) properties.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- *The methodology used to develop test period billing determinants; and*
- *The Company's proposed adjustments to test year bills and volumes, including its proposed weather normalization adjustment.*

II. METHODOLOGY USED TO DEVELOP BILLING DETERMINANTS

Q. 7 Please describe the methodology utilized to develop the test period billing determinants.

A. 7 The development of the billing determinants commenced with the compilation of the monthly recorded number of bills and volumes by rate schedule for the test year – the 12 months ended August 31, 2021.

After compiling the recorded number of bills and volumes for the test year, I made the following adjustments to derive the adjusted test period billing determinants for Southwest Gas: (1) billing adjustments; (2) customer-specific volume annualizations; (3) customer reclassifications; (4) weather normalizations; and (5) customer annualizations. Due to the lack of detailed billing data, the GCU properties were weather normalized and customer annualization adjustments were made. The details supporting these adjustments are set forth below and are shown in the Schedule H-2 Workpapers.

Q. 8 Why are adjustments made to the recorded test year number of bills and volumes?

A. 8 Adjustments are made to recorded bills and volumes to more accurately reflect the billing determinants that Southwest Gas would expect to experience during the rate effective period under normal weather conditions.

Q. 9 Has Southwest Gas made any changes to the general methodology for developing the billing determinants for the test period?

A. 9 No. In fact, Southwest Gas utilized the same general methodology to develop the billing determinants in each of its general rate cases (GRC) in Arizona since 2000 and this methodology was approved in each of the respective Decisions.[1]

III. ADJUSTMENTS TO RECORDED NUMBER OF BILLS AND VOLUMES

Q. 10 Please explain Southwest Gas' proposed billing adjustments.

A. 10 After compiling recorded test year billing determinants, significant billing anomalies are investigated to ensure that the correct consumption level is reflected for each month in the test year. The majority of the corrections for the billing adjustments involve restating the monthly consumption levels for customer bills to reflect actual monthly usage. These adjustments are typically adjustments between months and do not impact the total test year sales. This adjustment is necessary to ensure that the monthly adjusted volumes accurately reflect actual test year consumption. Otherwise, distorted monthly values would reduce the reliability of the regression analysis associated with the weather normalization adjustments.

Q. 11 Please explain Southwest Gas' proposed volume annualization adjustments.

A. 11 After completing the corrections for billing adjustments, customer-specific volume annualization adjustments are performed to reflect a full year of consumption for each active customer (excluding residential and small commercial customers) billed during August 2021. The process involves

[1] See Docket Nos. G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107, G-015551A-19-0055 and Decision Nos. 64172, 68487, 70665, 72723, 76069 and 77850 respectively.

estimating additional consumption for months during the test year where a new customer was not on-line or was clearly in a start-up phase, as well as removing consumption attributable to specific customers who discontinued service during the test year.

Q. 12 Please explain Southwest Gas' proposed customer reclassification adjustments.

A. 12 Customer reclassification adjustments move customers and their associated consumption volumes between rate schedules. Reclassification adjustments are required when a customer changes rate schedules during the test year. For example, a general service customer whose consumption increases or decreases may qualify for a different rate schedule. These adjustments are performed to ensure that customer-specific consumption reflects a full 12-months of usage under the correct rate schedule at the end of the test year. Reclassification adjustments do not impact the overall number of bills or volumes for the test year.

Q. 13 Please explain Southwest Gas' proposed weather normalization adjustments.

A. 13 Weather normalization adjustments are made to address warmer or colder than normal weather during the test year and provide a more accurate depiction of test period volumes under normal (average) weather conditions. To the extent that weather for the test year deviates from normal weather conditions, heat-sensitive consumption per customer should be adjusted to represent monthly test year volumes under normal weather conditions.

For the test year in this case, actual billing cycle heating degree days were approximately 5.8 percent colder than normal in Tucson and approximately 14.5

percent colder than normal in Phoenix. As a result of these deviations from normal weather, adjustments to test period volumes were computed to reflect anticipated volumes under normal weather conditions.

Weather normalization adjustments were completed for the following rate schedules: G-5 Single Family Residential; G-6 Multi-Family Residential; G-10 Single Family Low Income Residential; G-11 Multi-Family Low Income Residential; G-15 Special Residential; G-20 Master-Metered Mobile Home Park; G-25 Master-Metered Apartments; G-25 Small Commercial; G-25 Large Commercial; and G-25 Armed Forces.

Q. 14 What heating degree day normal did Southwest Gas use to weather normalize the heat-sensitive volumes for the test period?

A. 14 Southwest Gas used a ten-year average (120 months ended August 2021) of heating degree days, to represent normal weather conditions for the test period.

Q. 15 Is the use of ten-year average heating degree days to weather normalize the heat-sensitive volumes consistent with Southwest Gas' prior practices for general rate cases in Arizona?

A. 15 Yes. Southwest Gas has utilized, and the Commission has accepted, ten-year average heating degree days to weather normalize test period volumes in every GRC filed in Arizona since 1986.[2] Southwest Gas believes the use of a 10-year weather normalization to establish billing determinants remains in the public interest.

[2] See Docket Nos. U-1551-86-300, U-1551-86-301, U-1551-89-102, U-1551-89-103, U-1551-90-322, U-1551-92-253, U-1551-93-272, U-1551-96-596, G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107 G-015551A-19-0055 and Decision Nos. 60352, 64172, 68487, 70665, 72723, 76069 and 77850, respectively.

Q. 16 Please explain Southwest Gas' procedure for calculating the weather normalization adjustments.

A. 16 Southwest Gas conducts regression analysis to quantify the historical relationships between actual monthly consumption per customer and heating degree days for each heat-sensitive customer class. The monthly consumption per heating degree day factors (regression coefficients) quantified in the regression analysis are then applied to monthly heating degree day deviations from normal to quantify the corresponding adjustments to consumption per customer.

Q. 17 What was the impact of the weather normalization adjustments upon the test year volumes?

A. 17 The net result of the weather normalization adjustments was a decrease in test year volumes of 21,733,004 for Southwest Gas and a decrease of 103,314 in test year volumes for GCU.

Q. 18 Please explain Southwest Gas' proposed customer annualization adjustments.

A. 18 Customer annualization adjustments were computed for the following rate schedules: G-5 Single Family Residential; G-6 Multi-Family Residential; G-10 Single Family Low Income Residential; G-11 Multi-Family Low Income Residential; and G-25 Small Master Metered Apartments and Small Commercial. G-25 Medium Master Metered Apartments and Small Commercial. G-25 Large I Master Metered Apartments, Small Commercial and Large Commercial. As well as G-25 Large II Small Commercial and Large Commercial.

Q. 19 What method was used to develop the customer annualization adjustments?

A. 19 Southwest Gas utilized the same methodology adopted by the Commission in Southwest Gas' last five general rate cases.[3] This method captures the seasonal nature of test year customer growth by comparing the number of customers in the last month of the test year, August 2021, to the same month of the prior year, August 2020. The growth in customers is then prorated across the test year in declining intervals with 11/12ths of the adjustment in the first month of the test year (September 2020), 10/12ths in the second month (October 2020) and so forth. Adjustments to annualize volumes are made by multiplying the monthly customer additions by the respective monthly weather-adjusted average use per customer. Customer and volume adjustments are then added to the weather-normalized monthly bills and volumes to produce annualized test period monthly bills and volumes.

Q. 20 Why were the customer annualization adjustments only performed for the residential and small commercial customer classes?

A. 20 All rate schedules other than residential and small commercial, were annualized by individual customers, based upon customer-specific information. These customer-specific annualization adjustments are covered under the volume annualization adjustments discussed in Q&A 11. Because of the sheer magnitude of the number of customers in the residential and small commercial customer classes, which includes thousands of billing records, tracking each

[3] See Docket Nos. U-1551-96-596, G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107 G-015551A-19-0055 and Decision Nos. 60352, 64172, 68487, 70665, 72723, 76069 and 77850, respectively.

customer's billing history to perform customer-specific billing or annualization adjustments is impractical. Accordingly, customer annualization adjustments are performed using the outlined methodology for the residential and small commercial customer classes.

Q. 21 Please summarize the impact of the adjustments performed for the preparation of the annualized number of bills and volumes for the test period.

A. 21 The impacts of each of the adjustments upon the number of bills and volumes included in the test year are indicated by rate schedule in the table below as well as in the H-2 Workpapers. All the adjustments (billing adjustments, customer-specific volume annualizations, customer reclassifications, weather normalization and customer annualizations) were conducted to ensure the accuracy and propriety of the number of bills and volumes used to establish rates.

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Rate Schedule	Description	AZ Recorded Annual U/C	AZ Adjusted Annual U/C	GCU Recorded Annual U/C	GCU Adjusted Annual U/C
AZ_G5	Single Family Residential	300.5	285.3	363.8	348.5
AZ_G6	Multi-Family Residential	169.5	164.1		
AZ_G10	Low Income Residential	271.8	262.9		
AZ_G11	Multi-Family Low Income Residential	185.9	180.6		
AZ_G15	Special Residential	1,133.7	1,111.6		
AZ_G20	Master Metered Mobile Home Parks	14,110.3	12,946.9		
AZ_G25S	General Gas Service - Small	220.2	210.7	236.9	227.4
AZ_G25M	General Gas Service - Medium	2,946.3	2,850.8	2176.2	2093.3
AZ_G25L1	General Gas Service - Large 1	15,072.1	14,715.5	14128.6	13745.6
AZ_G25L2	General Gas Service - Large 2	82,478.7	80,697.5	95037.3	92798.0
AZ_G25TE	General Gas Service - TE	355,639.0	373,493.5		
AZ_G30	Optional Gas Service	6,436,018.4	6,290,323.0		
AZ_G40	Air-Conditioning	13,493.4	12,993.7		
AZ_G45	Street & Outdoor Lighting	2,286.1	2,331.0		
AZ_G50	Compression Gas Service	174,011.7	183,276.2		
AZ_G60	Small Electric Generation	85,460.5	87,045.2		
AZ_G75	Small Essential Agriculture	45,756.6	45,882.0		
AZ_G80	Natural Gas Engine	41,613.7	41,717.0	2137.0	2137.0

IV. CONCLUSION

Q. 22 Does this conclude your prepared direct testimony?

A. 22 Yes.

SUMMARY OF QUALIFICATIONS
CARLA AYALA

I graduated from New Mexico State University, Las Cruces, New Mexico, with a Bachelor of Arts degree in Economics in 2003. In December 2004, I graduated from New Mexico State University, Las Cruces, New Mexico with a Master of Arts degree in Economics, with a specialization in Public Utility Regulation.

In 2005, I joined Southwest Gas Corporation as an Analyst in the Demand Planning Department. In December 2009, I was promoted to Analyst III, in November 2013, I was promoted to Economist and in November 2018, I was promoted to Sr Economist. I am responsible for performing bill frequency analysis for general rate case filings. I am also responsible for the development of weather normalized billing determinants for rate cases, the development of short- and long-range demand forecasts for rate cases and systems planning, analysis and monitoring of the regional economy in each of Southwest Gas' rate jurisdictions and assorted load research activities.

Tab C

Direct Testimony
of
Frederica Harvey

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
FREDERICA HARVEY

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Frederica Harvey

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Appendix A – Summary of Qualifications of Frederica Harvey

Exhibit No.___(FH- 1)

Confidential Exhibit No.___(FH- 2)

Exhibit No.___(FH- 3)

Confidential Exhibit No.___(FH- 4)

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Frederica Harvey

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Frederica Harvey. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Human Resources department. My title is Director/Compensation & Benefits.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes, I previously testified before the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My prepared direct testimony supports the Company's reasonable and prudent compensation and benefit programs, including base pay and incentive pay. I also support the Company's non-cash compensation benefits and the reasonableness of the Board of Directors' compensation.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- An overview and discussion of the Company's compensation philosophy and the determination of its base pay;
- An overview and discussion of the Company's incentive compensation;
- An overview and discussion of the Company's non-cash compensation;
- Southwest Gas' Pension Plan and Other Post-Employment Benefits (OPEB);
- An overview of the administration of the Company's base pay compensation;
- Reasonableness of the Company's Board of Directors' compensation; and
- Voluntary Retirement Incentive Program.

II. SOUTHWEST GAS' COMPENSATION PHILOSOPHY AND DETERMINATION OF BASE PAY

Q. 7 Please describe Southwest Gas' overall compensation philosophy.

A. 7 Southwest Gas recognizes the need to attract and retain top industry-specific talent to ensure continued safe and reliable natural gas service for its customers. As such, Southwest Gas strives to maintain a median market position compared to its peers and competitors for its total rewards program, which includes cash and non-cash benefits provided to employees in return for their services. The Company offers total rewards that include a market competitive base pay,

competitive incentive pay, a competitive package of employee benefits (including medical/dental/vision, wellness, life insurance, disability insurance, and accidental death and dismemberment insurance, and post-employment benefits).

Q. 8 How does Southwest Gas determine the appropriate levels of total compensation?

A. 8 Southwest Gas is committed to fairly compensating employees for the value of work provided. Without a balanced compensation program, recruitment, retention, motivation, and productivity are jeopardized. To ensure competitive total compensation, Southwest Gas evaluates the current market value of its positions based on the knowledge, skills and talents required of a fully competent incumbent.

The Company reviews incentive programs and executive retirement programs relative to those of its peers. In addition to reviewing peer group data, Southwest Gas reviews numerous compensation surveys, which typically include surveys prepared by Willis Towers Watson, American Gas Association, Mercer, and/or Hay Group. A primary source for comparison of Senior Executives is the compensation paid by companies within the Southwest Gas public-company peer group, which is comprised of utilities deemed to be of comparable size and similar operational complexity to the Company. The Company periodically works with an outside compensation consultant in performing its executive compensation review, which involves the use of national, regional, and industry-specific benchmarking data. In addition to base salary, the survey data includes Target Total Cash Compensation (TTC) and Target Total Direct Compensation (TDC) values to gage the compensation

reasonableness of each position and to ensure that the salary ranges for these positions are within the competitive range of the 50th percentile (+/- 10% base salary, +/- 15% TTC/TDC).

Q. 9 How does Southwest Gas determine its base salaries?

A. 9 Southwest Gas generally benchmarks base pay at the median of the market – or the 50th percentile. The Company believes that targeting the median is a reasonable and prudent approach to offering competitive base pay. I discuss the benchmarking process that the Company undertakes to ensure it offers compensation at a level that attracts and retains a talented workforce in further detail later in my testimony.

Q. 10 Please provide an overview of the Company's base pay compensation.

A. 10 As discussed above, Southwest Gas generally targets the 50th percentile for the base pay offered to its employees. Base pay is provided to all employees in the form of either an hourly rate (nonexempt) or weekly salary (exempt).

Q. 11 How is the Company's employee population categorized with respect to administering base pay?

A. 11 Southwest Gas categorizes its employees into four populations for purposes of administering base pay. The four populations and a compensation practice narrative are provided below:

- **Nonexempt –** Jobs for nonexempt employees are assigned to a pay structure with assigned wage steps that have been matched to market. A percentage adjustment is applied to the structure once a year to reflect the change in market conditions. This percentage is determined by annual increase projections published by nationally recognized compensation salary

surveys as outlined on page 10 of Exhibit No.___(FH-1). All employees in this category receive the same percentage increase and pay rates outlined on the wage steps.

- **Exempt –** Positions for nonexecutive, exempt employees have salary ranges (structures) that were established using the Korn Ferry (formerly Hay Group) point evaluation method. The ranges reflect the minimum, midpoint, and maximum salaries for the job. A percentage adjustment may be applied to the midpoint of the range (structure adjustment) each year to reflect the change in market conditions. This percentage is determined by annual structure increase projections published by nationally recognized compensation salary surveys as outlined on page 9 of Exhibit No.__(FH-1).

  The annual increase process for exempt employees is similar to that of nonexempt employees with the exception that once the percentage increase is determined, it is used to establish a "pool" of dollars that is allocated to management, who considers each employee's work performance and placement in salary range in determining the employee's specific increase amount. This percentage is determined by annual increase projections published by nationally recognized compensation salary surveys as outlined on page 10 of Exhibit No.__(FH-1).

- **Officers** – Officers are executive-level employees that have a comprehensive salary analysis completed by an outside executive compensation consulting firm, every other year. Based on the recommendations of the consulting firm, adjustments are made and approved by the CEO using the same methodology as the exempt

population. Officers are eligible for standard increases based on market conditions during the years when the analysis is not performed.

- **Named Executive Officers (NEOs)** – NEOs are the top five, highest paid positions within the Company. Compensation for these employees is reviewed annually by an outside executive compensation consulting firm that completes salary analyses and recommendations based on a proxy analysis of the Company's peer group. The Board of Directors must approve all compensation changes for NEOs.

Q. 12 Please explain how the Company determines appropriate salary ranges for exempt positions.

A. 12 The current salary structure was put in place several years ago and is based on the Korn Ferry Job Evaluation methodology, which maps out job roles in the context of the organizational structure. Each exempt job was evaluated using its point-factor system that assigns points to jobs based on three primary components: know-how, problem solving, and accountability. Once the points were assigned, the jobs were compared to benchmark positions within the Hay Compensation Database. The 50th percentile of each benchmark position was established as the midpoint of the salary range for the point total. As stated previously, each year, the midpoints may be adjusted based on projected salary structure movement.

Q. 13 Does this process occur annually?

A. 13 No, nor does it need to. Once the internal hierarchy is established, there are typically not significant changes in the organization from one year to the next to warrant an annual reevaluation for all exempt positions. However, the Company

does perform, or request from its consultants, market reviews for specific positions. This is done on an as needed basis to ensure that the evaluation results are in line with the skill sets, responsibility and base salary observed in the market.

Q. 14 Have there been any significant changes to the internal hierarchy since the Company's last general rate case?

A. 14 No.

Q. 15 Please explain how the Company determines appropriate wage structures for non-exempt positions.

A. 15 The current wage structure has been in place since 2010, and annual adjustments occur in accordance with projected wage movement in the market. As the need for new jobs have occurred, the jobs are market priced to the 50th percentile for non-industry jobs and the 75th percentile for industry specific jobs, which are more specialized and can be difficult to recruit. The new jobs are then slotted into the appropriate existing wage rates. Additionally, the Non-Exempt Audit and Review (NEXAR) process, which is outlined below, is used to ensure the appropriateness of the wage structure.

Q. 16 Does this process occur annually?

A. 16 No, nor does it need to. Like the process for the exempt positions, once the internal hierarchy for non-exempt jobs is established, there are typically not significant changes in the organization from one year to the next to perform this evaluation for all non-exempt positions. The Company does, however, perform NEXAR, which is a job evaluation process that was established in 1996. The process involves a detailed review of each non-exempt job classification within a 5-cycle basis or approximately 20 percent per cycle. The five key components

of this process are to: 1) obtain information related to the functions performed within a job classification; 2) ensure internal equity, (i.e., is the internal hierarchy correct); 3) compare the current wages to the market; 4) revise job descriptions as necessary; and 5) provide the results of the process to senior management for approval.

Q. 17 Have there been any significant changes to non-exempt wage structure since the Company's last general rate case?

A. 17 No.

Q. 18 Please provide an overview of the analysis conducted to administer the Company's base pay.

A. 18 Each year, Southwest Gas conducts an analysis to determine its recommended percentage adjustments for the nonexempt pay structures, exempt (non-officer/NEO) salary ranges, and salary increase budgets. Generally, the analysis conducted each year by the Company includes four steps:

- First, the Company reviews the prior year's actual salary increases granted and salary structure adjustments applied to what was projected to occur in the market. For example, in 2021, Southwest Gas reviewed the Company's actual 2020 salary increases and salary structure adjustments and compared them to the actual market increases and adjustments that occurred in the market.[1] This review allowed the Company to validate that its actions did in fact align with what the market experienced and its wages aligned with the market for that given period. A comparison of the 2020 projected versus

[1] See Exhibit__(FH-1).

actual adjustments for salary increases and structures are shown in the tables below:

Salary Increase Budgets 2020 Projected Versus Actual					
National Survey Source	Scope	Projected		Actual	
		Exempt	Non-Exempt	Exempt	Non-Exempt
AON Hewitt	Energy	3.0%	3.0%	3.2%	3.0%
Conference Board	Utilities	3.0%	3.0%	3.0%	3.0%
Korn Ferry	Utilities	3.0%	3.0%	3.0%	3.0%
Mercer	Utilities	3.0%	3.0%	2.8%	2.8%
Towers Watson	Utilities	3.0%	2.9%	3.1%	3.0%
World@Work	Utilities	2.9%	2.8%	2.9%	2.8%
PayFactors	Utilities	3.1%	3.0%	3.4%	3.2%
Survey Average		**3.0%**	**3.0%**	**3.1%**	**3.0%**
Southwest Gas		**3.0%**	**2.0%**	**2.0%**	**2.0%**

Structure Adjustments 2020 Projected Versus Actual			
National Survey Source	Scope	Projected	Actual
		Exempt	Exempt
AON Hewitt	Energy	2.0%	2.1%
Conference Board	Utilities	2.0%	2.0%
Korn Ferry	Utilities	2.0%	2.0%
Mercer	Utilities	2.2%	2.3%
Towers Watson	Utilities	1.7%	2.3%
World@Work	Utilities	2.0%	2.2%
PayFactors	Utilities	1.5%	1.7%
Survey Average		**2.0%**	**2.1%**
Southwest Gas		**2.0%**	**0.0%**

- Second, the Company evaluates multiple national salary surveys to assess projected market activity for the current year. The surveys are used to assess potential wage and salary adjustments, as well as any structure movement that may be necessary. The Company relies more on utility projections rather than national projections due to the unique jobs and skills associated with the utility and gas industries. The surveys serve as a guide for reasonable movement in both salaries and structure to ensure the

Company is continuing to align with the market and maintaining competitive pay levels.

- Third, the Company evaluates internal compensation data such as the current pay levels for exempt employees compared to where they fall within the salary range for their positions (compa-ratios),[2] as well as historical salary adjustments.
- Finally, this information is compiled, and the recommended wage and salary adjustments are presented to the Employee Resource Committee (ERC), which is comprised of senior level executives from within the Company. The ERC reviews and approves proposed annual salary increase budgets and structure adjustments.

III. REASONABLENESS OF THE WAGE AND SALARY ADJUSTMENTS GRANTED IN THE TEST YEAR.

Q. 19 Did the Company grant wage and salary adjustments in the test year in the instant docket?

A. 19 Yes. In July 2021, the Company granted a wage increase for nonexempt employees of 3.02%, comprised of a 2.3% base wage increase and a step increase amount of 0.72%. For exempt employees, the Company granted a salary increase budget of 3.5%, comprised of 2.3% base salary adjustment and 1.2% discretionary. As previously described, exempt salary increases are awarded based on individual work performance.

[2] A compa-ratio represents an employee's pay relative to the midpoint of the salary range of the position. Generally, an employee with a low compa-ratio is new to the position or role, whereas an individual with a high compa-ratio is more tenured in that position or role.

Officers and NEOs also received increases during the test year. The Company contracted with Korn Ferry consultants to conduct a competitive compensation assessment of the seven top executives, which included five NEOs. A copy of the report is attached as Confidential Exhibit No.___(FH-2). The proxy analysis matches the top executives/NEOs by function and pay rank to the Southwest Gas Proxy Peer Group, which is comprised of 20 like companies. The analysis indicated that in aggregate, target TDC for the top executives tracks at market median (3% above). Non-NEO officers received an average increase of 5% based on market conditions and survey benchmarks. The below table includes the market projected 2021 salary structure and wage adjustments.

Salary Increase Budgets (2021 Projected)			
National Survey Source	**Scope**	**Exempt**	**Non-Exempt**
Aon Hewitt	Energy	3.2%	3.0%
Conference Board	Utilities	3.0%	2.9%
Korn Ferry	Utilities	3.0%	3.0%
Mercer	Utilities	2.8%	2.8%
PayFactors	Utilities	3.1%	3.0%
Towers Watson	Utilities	3.0%	3.0%
World@Work	Utilities	3.1%	3.1%
Survey Average		**3.0%**	**3.0%**

Structure Adjustment Budgets (2021 Projected)		
National Survey Source	**Scope**	**Exempt**
Aon Hewitt	Energy	2.0%
Conference Board	Utilities	2.0%
Korn Ferry	Utilities	2.0%
Mercer	Utilities	2.2%
PayFactors	Utilities	1.7%
Towers Watson	Utilities	2.3%
World@Work	Utilities	2.1%
Survey Average		**2.0%**

Q. 20 Does the Company plan to grant wage and salary adjustments in 2022?

A. 20 Yes. The Company has made an adjustment to the revenue requirement to reflect a planned wage and salary adjustment in 2022. Please refer to the prepared direct testimony of Company witness Randi L. Cunningham for the impact on the revenue requirement of this known and measurable adjustment.

IV. INCENTIVE COMPENSATION

Q. 21 Please identify the incentive compensation programs offered by Southwest Gas.

A. 21 Southwest Gas offers incentive compensation through its Management Incentive Plan (MIP) and its Restricted Stock Unit Plan (RSUP). As discussed more fully below, the RSUP includes two types of awards – Performance Share Units (PSU) and Restricted Stock Units (RSU). The Company also offers Service Planning Incentives (SPI) to certain employees.

Q. 22 Please describe the MIP.

A. 22 The MIP is an annual incentive program that provides executives and other participating management employees with an opportunity to receive variable, at-risk pay based upon the achievement of specific benchmarks that are critical to

the short-term and long-term success of the Company and that reward superior performance for the benefit of the Company's customers. For each participating employee, the MIP includes the following five performance metrics:

(i) Net Income (40% of target MIP weighting).

Given that Southwest Gas' customer rates are subject to review and approval, the inclusion of a Net Income metric focuses participating employees on prudent management of utility expenses to maximize net income in a given year, a benefit to both shareholders and customers. The Net Income metric, combined with the Customer Satisfaction and Safety metrics, help to ensure that expenses are managed in a sustainable manner that results in an efficient operation of the Company that delivers superior customer service and does so safely.

(ii) Operations & Maintenance (O&M) Expense Per Customer (20% of target MIP weighting);

This metric incentivizes efficient operations and requires participating employees to manage Operations & Maintenance expenses while providing superior customer performance. Managing O&M expenses benefits the customer as lower expenses help Southwest Gas maintain lower customer rates.

(iii) Customer Satisfaction (20% of target MIP weighting);

This metric is explicitly tied to customer satisfaction and benefits the Company's customers. If the Company's management chose to delay investment in infrastructure to improve its performance on the Net Income metric (weighted at 40% in the MIP), management would risk diminished performance over time with respect to the Customer

Satisfaction metric and Safety metrics, in which case the MIP payouts with respect to those factors would decline. The Customer Satisfaction metric (as well as the Safety metrics), therefore, works with the Net Income and O&M metrics to ensure that management focuses on customer welfare and customer satisfaction regarding the Company's financial performance. Put another way, if management chooses to emphasize the Company's financial performance to the detriment of its customers, the MIP is designed to penalize management through lower performance on Customer Satisfaction and Safety metrics.

(iv) Safety – Damage Per 1,000 Tickets (10% of target MIP weighting);

This metric provides a direct benefit to customers and the public in general by focusing on the Company's damages per 1,000 tickets in providing services. The MIP's focus on the Company's gas distribution system helps ensure that safety is a priority throughout the organization.

(v) Safety – Incident Response Time within 30 minutes (10% of target MIP weighting).

This metric is designed to reward improvement on incident response times; as with the other Safety metric within the MIP, this metric provides a direct benefit to customers and the public in general.

Q. 23 Has the MIP design changed since the Company's last general rate case?

A. 23 No.

Q 24 How are the MIP performance metrics designed?

A. 24 The five MIP performance metrics are designed to reward participants as outlined below:

1. Net Income. Designed to reward the efficient operation and performance of the entire organization structured under Southwest Gas Holdings, Inc., for the Corporate Strategy Executives, and the efficient operation and performance of Southwest Gas Corporation (gas segment only) for the remaining participants.
2. O&M per Customer. Designed to reward efficient operations.
3. Customer Satisfaction. Designed to reward success in achieving a predetermined customer satisfaction percentage.
4. Safety – Damage per 1,000 Tickets. Designed to reward success in minimizing damages per 1,000 tickets.
5. Safety – Incident Response Time within 30 Minutes. Designed to reward improvement on incident response times.

Q. 25 Who are the Corporate Strategy Executives and what adjustment to incentive compensation has been made for these executives?

A. 25 The Corporate Strategy Executives are the President/CEO, Executive Vice President, Chief Financial Officer, and Vice President/Strategy & Corporate Development. The Company has made an adjustment in the revenue requirement to remove a portion of the incentive compensation (MIP, PSU, and RSUP) awarded to the Strategy Executives for the portion of their incentive compensation related to Centuri Group (Centuri).

Q. 26 Are there other design considerations for the MIP?

A. 26 Yes. The Net Income metric is calculated on a consolidated basis for the Corporate Strategy Executives; for the remaining Executives, Net Income is calculated with respect to the organization's gas segment by backing out Net Income allocable to Centuri. For all participants, the Net Income metric is

measured without regard to Company-Owned Life Insurance (COLI) returns. In addition, for each metric, actual performance may vary from 70% to 140% of the target incentive opportunity based on performance relative to the target. No MIP award is paid in any year unless the Company achieves a minimum 80% of the Company's targeted earnings for the performance year.

Q. 27 How many Company employees were eligible for the MIP in plan years 2018, 2019 and 2020?

A. 27 The table below reflects the number of employees eligible for the MIP in plan years 2018, 2019 and 2020.

Eligible Employees -- by Division	MIP Plan Year 2018	MIP Plan Year 2019	MIP Plan Year 2020
Corporate	104	99	142
Arizona	11	13	25
Other Divisions	17	16	26
Total	**132**	**128**	**193**

Q. 28 Please provide the five MIP metric targets for plan years 2018, 2019, 2020 and the actual results achieved each year.

A. 28 The tables below reflect the targets and actual results for each MIP metric in plan years 2018, 2019 and 2020.

Table 1: Utility Net Income

Plan Year	Actual	Minimum	Target	Maximum
2018	134,632	119,970	129,000	138,030
2019	145,771	131,130	141,000	150,870
2020	149,918	144,615	155,500	166,385

Table 2: O&M Per Customer

Plan Year	Actual	Minimum	Target	Maximum
2018	$211.04	$216.00	$213.00	$210.00
2019	$213.18	$218.00	$215.00	$212.00
2020	$203.92	$215.00	$211.00	$208.00

Table 3: Customer Service Satisfaction

Plan Year	Actual	Minimum	Target	Maximum
2018	95.10%	88%	92%	95%
2019	95.92%	90%	93%	96%
2020	95.50%	91%	94%	97%

Table 4: Safety - Incident Response within 30 Minutes

Plan Year	Actual	Minimum	Target	Maximum
2018	70.10%	67%	70%	73%
2019	74.60%	67%	71%	74%
2020	75.80%	70%	74%	77%

Table 5: Safety - Damages Per 1,000 Tickets

Plan Year	Actual	Minimum	Target	Maximum
2018	1.43	1.80	1.50	1.20
2019	1.11	1.60	1.40	1.20
2020	1.14	1.40	1.15	1.00

Q. 29 Is there a "reasonable range" or industry standard that sets performance expectations?

A. 29 Yes. Both safety measures are well understood in our industry. These targets are benchmarked against AGA peer companies and set the expectation for performance Company-wide. Similarly, the Customer Satisfaction metric is also a measure of focus in our industry. Performance is measured monthly by an independent third party. The O&M per Customer metric is calculated as total utility operations and maintenance expenses divided by average billed

customers during the year. This metric focuses on efficient operations that benefit the customer. The Utility net income is a comprehensive measure of gas segment performance. Targeted and actual results exclude COLI returns. With a 40% weighting, overall short-term payout ratio will be highly influenced by this "bottom-line" result again focusing on financial results that benefit our customers. Each of the targets for MIP measures are revisited annually to ensure their reasonableness

Q. 30 Are the MIP costs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 30 Yes. The MIP is in-line with peer group incentive plans and includes market-competitive terms. The MIP incentivizes management to operate the Company in an efficient manner that minimizes customer rates while maximizing customer satisfaction and safety.

Moreover, it is appropriate to include MIP costs in the rates approved through this proceeding because the MIP is part of the total compensation that keeps MIP-level employee positions competitive with the market. As discussed above, Southwest Gas benchmarks total compensation to the 50th percentile. If the Company did not offer the MIP, these positions would fall below the 50th percentile and would no longer be competitive. Consequently, the Company would have difficulty attracting and retaining the talent necessary to provide customers safe and reliable natural gas service. MIP costs are therefore a reasonable and prudently incurred expense that should be authorized for recovery through customer rates in this proceeding.

Q. 31 Please describe the Restricted Stock Unit Plan (RSUP).

A. 31 The RSUP plan is a long-term incentive (LTI) plan designed to reward sustained performance over a three-year period with each grant made under the plan. Plan Year 2016 was the last year the RSUP awards were made; beginning with Plan Year 2017, RSUP was replaced by Time Lapse Restricted Stock Units (RSU) and Performance Shares Units (PSU).

Since 2017, the Company has granted two forms of award – the PSUs and the RSUs. Executives are eligible to receive PSU awards and both Executives and Director-level employees are eligible to receive RSU awards. PSU and RSU awards are granted annually.

PSU awards granted to the Corporate Strategy Executives include two financial measures: (i) 3-Year Consolidated Earnings Per Share (EPS), weighted at 60% of the target award, and (ii) 3-Year Utility Return on Equity (ROE), weighted at 40% of the target award. As discussed above, the revenue requirement for Corporate Strategy Officers awards is adjusted to exclude awards related to Centuri.

PSU awards granted to the remaining executives do not include an EPS metric but instead include 3-Year Utility Net Income, weighted at 60% of the target award. Each PSU award is subject to a modifier based on performance of the Company over the performance period (PSUP), relative to a peer group of public companies. If the Company's 3-year PSUP is at or above the 75th percentile relative to the peer group, the PSU award amount will be adjusted upward by 30%; if Company performance falls between the 25th and 75th percentiles, there is no adjustment to the PSU award amount.

In November 2020, the Compensation Committee of the Board of Directors approved a modification wherein if Company performance falls below the 25th percentile relative to the peer group, the PSU award would be adjusted downward by 30% rather than the previous downward adjustment of 15%. This change allowed for a symmetrical payout, i.e., 30% downward adjustment for a bottom quartile ranking and a 30% upward adjustment for a top quartile ranking. Additionally, the Committee added a below-maximum cap on payout in years where the Company's Total Shareholder Return (TSR) is negative. The level of the cap will depend on the Company's Relative Total Shareholder Return (RSTR), which is a measure of Company performance relative to the peer group. When the Company's RTSR performance is between the 50th and 75th percentiles, the cap is 115% of target; when it is at or below the 50th percentile, the cap is 100% of target.

RSUs are time-vested awards that vest over a three-year period from the date of grant (40% at the end of the first year and 30% at the end of the second- and third years following grant, respectively). RSUs are a form of long-term incentive based on time. They are provided to employees at the Director level and above and are not tied to any performance criteria. The awards are calculated based on a percentage of salary that is converted to shares. As the shares vest over a three-year period, they are considered a long-term retention tool.

For both the PSUs and RSUs, dividend equivalents are payable upon vesting in the applicable award to reflect dividends paid during the performance/service period, as applicable.

Q. 32 Are the RSUP costs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 32 Yes. As a component of the long-term incentive (LTI) plan which is designed to reward sustained performance over a three-year period, these costs are reasonable and prudent. Moreover, it is appropriate to include these costs in the rates approved through this proceeding because the RSUs and PSUs are part of the total compensation that keeps eligible employee positions competitive with the market. As discussed above, Southwest Gas benchmarks total compensation to the 50th percentile. If the Company did not offer an LTI plan, these positions would fall well below the 50th percentile and would no longer be competitive. Consequently, the Company would have difficulty attracting and retaining the talent necessary to provide customers safe and reliable natural gas service. These costs are therefore a reasonable and prudently incurred business expense that should be authorized for recovery through customer rates in this proceeding.

Q. 33 Please describe the SPI.

A. 33 SPI is a performance incentive provided to Southwest Gas' Energy Solutions group (formerly referred to as Key Account Management). The objective of the SPI is to incent the group to achieve exceptional performance in the areas of customer service, project development, project management and contract negotiations related to maintaining or improving the Company's margin.

Q. 34 Are the SPI costs reasonable and prudent and appropriate for inclusion in the rates authorized in this proceeding?

A. 34 Yes. The SPI is designed to incentivize eligible employees to maximize the use of the Company's distribution system by larger customers which benefits and

protects residential customers by spreading fixed cost recovery over a greater number of customers/volumes. Employees achieve this by:

1. Maintaining and increasing margin from qualified new and existing customers through installations of new, additional, or incrementally larger natural gas equipment.
2. Ensuring that Company facility investments meet required criteria and that security/risk concerns are appropriately addressed.
3. Maximizing annual margin collection from customers that can demonstrate the ability to use an alternate energy source.

V. NON-CASH COMPENSATION PROGRAMS

Q. 35 Please identify the non-cash component of the Company's compensation program.

A. 35 Exhibit No.__(FH-3) lists the Company's non-cash compensation programs.

Q. 36 Are the non-cash compensation costs reasonable?

A. 36 Yes. Southwest Gas regularly reviews its plans to carefully manage its benefits program costs. These benefits are reasonable, in the public interest, and the Company should recover these costs in customer rates established in this proceeding.

VI. PENSION PROGRAM AND OTHER POST-EMPLOYMENT BENEFITS (OPEB)

Q. 37 Please generally describe the Pension and OPEB programs that are available to Southwest Gas employees.

A. 37 The Company provides the following Pension and OPEB programs:

- **Pension:** The Company maintains a tax-qualified defined benefit retirement plan (Retirement Plan), which is available to all Company employees and under which

benefits are based on an employee's years of service, up to a maximum of 30 years, and the 12-month average of the employee's highest five consecutive years' salaries, excluding bonuses, within the final 10 years of service. The Internal Revenue Code (IRC) places a limit on the annual compensation that may be paid under the plan, which may be increased periodically to reflect cost-of-living increases. Base salary amounts deferred by Executives under the Executive Deferral Plan (EDP) are not included for purposes of determining pensionable benefits under the Retirement Plan.

- **Supplemental Executive Retirement Plan (SERP):** The SERP is designed to supplement the Retirement Plan for participating executives by providing an opportunity for executives to receive a comparable retirement benefit at a level of 50% to 60% of base salary without regard to the IRC limits that apply to the Retirement Plan. To qualify for a normal retirement benefit under the SERP, an Executive must have reached age 55 with 20 years of service or age 65 with 10 years of service.

  The SERP also provides a limited retirement benefit for Executives who defer base salary under the EDP but who do not qualify for a normal retirement benefit under the plan. The limited benefit in the SERP accounts for base salary amounts that are deferred under the EDP that are not included in calculating pensionable benefits under the Retirement Plan. The SERP is a non-qualified plan under which participating executives are general unsecured creditors of the Company with respect to benefits payable under the plan. Benefits payable under the SERP are offset by benefits payable under the Retirement Plan to

avoid double payment of benefits to Executives.

- **Employees Investment Plan (EIP):** The Southwest Gas Corporation Employees' Investment Plan (EIP) is a tax-qualified defined contribution (401(k)) plan that is available to all its employees. The EIP permits participants to contribute between 2 and 60 percent of their base salaries to the plan and receive a corresponding Company matching contribution up to 3.5% of a participant's annual salary. Participant contributions to the EIP are subject to annual IRC limits that apply to the plan. Executives are not eligible to receive Company matching contributions under the EIP.
- **Executive Deferral Plan (EDP):** The EDP provides salary deferral opportunities for executives by permitting them to annually defer up to 100% of base salary and non-equity incentive compensation. To address the ineligibility of Executives to receive Company matching contributions under the EIP, Southwest Gas provides matching contributions under the EDP that parallel the contributions it makes to participants under the EIP, which is up to 3.5% of the Executive's base salary. Deferred contribution amounts and Company matching contributions bear interest at 150% of the Moody's Seasoned Corporate Bond Rate. The EDP is a non-qualified plan under which participating Executives are general unsecured creditors of the Company with respect to benefits payable under the plan. Additionally, base salary deferred under the EDP is not included in the formula used to calculate an Executive's pensionable benefit under the Company's tax-qualified defined benefit retirement plan.

Q. 38 Has the design of any of these programs changed since the Company's last general rate case?

A. 38 No.

Q. 39 Are the costs for these programs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 39 Yes. These programs are essential to the Company efforts to attract and retain high performing individuals by providing supplemental retirement benefits as part of a competitive compensation package. This continuity of service benefits the Company's customers and the EDP and SERP, which constitute part of the Company's reasonable compensation program for its Executives, should be recoverable through customer rates.

Q. 40 Is the Company requesting full recovery of SERP?

A. 40 No. Notwithstanding that SERP is a reasonable retirement benefit for Executives, the Company is only seeking to recover the restorative amount of its SERP expenses in this proceeding.

VII. BOARD OF DIRECTORS' COMPENSATION

Q. 41 Does the Company provide compensation to its Board of Directors?

A. 41 Yes. The Company compensates the members of its independent Board of Directors (at the holding company level). This compensation is intended to recruit and retain highly qualified Directors and express the importance of these roles as a representation of the Company's attitudes towards corporate governance.

Q. 42 Please explain how the Company determines appropriate salary ranges for Board of Director compensation.

A. 42 The Compensation Committee is responsible for periodically reviewing the compensation of the independent Directors and recommends changes to the Board where appropriate. The Committee's compensation consultant, Korn Ferry, completed a review of the Director's compensation in August 2021 (Confidential Exhibit No. FH-4) where the level of director compensation was assessed relative to companies.

Q. 43 Are the Board compensation expenses allocated to Southwest Gas reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 43 Yes. The Securities Exchange Commission (SEC) requires Southwest Gas Holdings, as a publicly traded company, to have a Board of Directors comprised of mostly independent members. The Board provides guidance and oversight to ensure that the Company provides safe and reliable service to its customers, which helps facilitate the Company's ability to access capital markets at reasonable rates. Moreover, the Company reviews its Board compensation to ensure that it is set at levels that are reasonable compared to market.

Q. 44 What is D&O insurance and why should it be recoverable?

A. 44 D&O liability insurance covers the Board of Directors and officers of the Company against lawsuits alleging a breach of fiduciary duty. This coverage is provided so that executives can serve confidently as leaders of the organization without fear of personal financial loss. Board members and officers are not only responsible to the employees and shareholders but are also responsible to the Company's customers in carrying out their responsibilities in a judicious manner.

D&O insurance provides protection to the assets of the organization and therefore benefits its customers. These costs should be fully recoverable.

VIII. VOLUNTARY RETIREMENT INCENTIVE PROGRAM

Q. 45 Please describe the Voluntary Retirement Incentive Program (VRIP).

A. 45 The Voluntary Retirement Incentive Program (VRIP) was a program offered to Information Services (IS) department employees who met program-established eligibility criteria. To participate in the VRIP, at the time of offer the IS employee must have been at least 55 years of age with at least 10 years of service with the Company.

The monetary incentive offered through the VRIP was a one-time, lump sum cash payment calculated at one week of the employee's current salary for every year of service with the Company. The program also offered an additional one-time separation bonus in the amount of $10,000. In order to receive these payments, the employee was required to execute a severance agreement and separation bonus agreement.

The Company offered the VRIP at two different times, once in October 2020 and again in May 2021. The first offering excluded IS Project Horizon employees due to project criticality. Once the Project Horizon stabilization period concluded, IS employees working on Project Horizon were given the same opportunity to participate in the VRIP if they met the same established criteria. Employees that elected to participate in the October 2020 VRIP offering separated from the Company no later than January 29, 2021. Employees that elected to participate in the May 2021 VRIP offering separated no later than July 30, 2021.

Q. 46 Why were IS employees offered the VRIP?

A. 46 Changes in technology have accelerated the shift in required workforce skills and the Company needed to make changes to stay competitive. By offering the VRIP, retirement-eligible employees could choose to develop new skills and stay with the Company or could proceed with retirement.

Q. 47 Did the employees who accepted the severance receive any enhanced retirement benefits?

A. 47 No. The employees who elected to participate in the transformational offering only received the retirement benefits afforded to them under the Company's retirement plan.

Q. 48 Is it a common practice for Companies to offer severance?

A. 48 Yes, more employers are offering severance benefits to workers, which is considered indicative of a trend toward designing an improved employee experience that includes separation. In a 2019 survey conducted by career transition services firm RiseSmart, 44% of 1,500 HR respondents offered severance benefits to all workers, which represented a six percent increase over 2017. The amount and type of severance benefits varies, but generally all of them require a minimum years of company service in order to be eligible.

IX. CONCLUSION

Q. 49 Does this conclude your prepared direct testimony?

A. 49 Yes.

SUMMARY OF QUALIFICATIONS
FREDERICA HARVEY

I am a graduate of University of Nevada, Las Vegas having received a Bachelor of Science degree in Business Administration. I also hold the Certified Compensation Professional (CCP) designation from WorldatWork and the Senior Certified Professional designation from the Society of Human Resources Management (SHRM-SCP).

I have over 25 years of compensation and human resources experience. Prior to joining Southwest Gas, I've developed, implemented, and maintained compensation programs within the government, utilities, healthcare, and hospitality industries. The size of the organizations has ranged from approximately 2,000 to over 70,000 employees. In July 2019, I joined Southwest Gas as Director/Compensation and Benefits where I am responsible for all aspects of the Company's compensation and benefits administration.

2021
Salary Adjustment Recommendations

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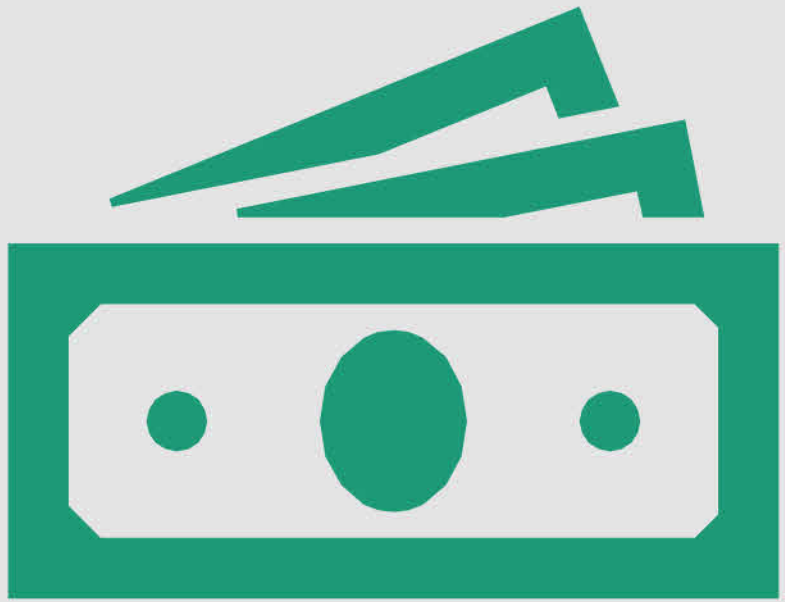
Agenda

- Current SWG Employee Pay Review
  - Non-Exempt Employee Wages, Grade Structures
  - Exempt Employee Compa-Ratios
- National Energy & Utility Industry Market Review
  - 2020 Salary Survey Results
  - 2021 Salary Survey Results
- SWG Salary Adjustment Review & Recommendation
  - SWG Historical Data
  - Recommendations

Employee Salaries



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Non-Exempt Wage Schedules

Grandfathered Wage Schedule

- **568** Employees

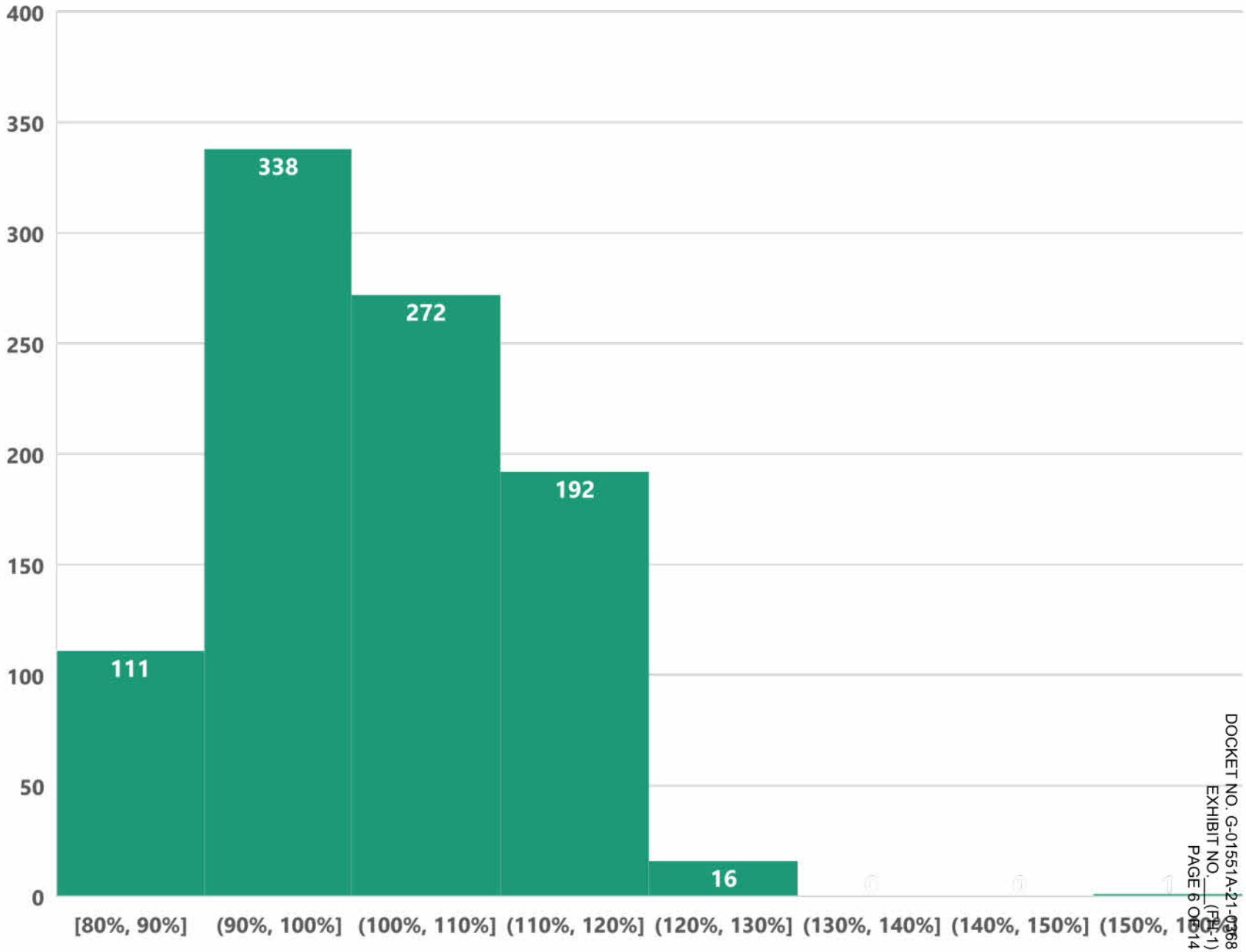
New Wage Schedule (effective 6/21/2010)

- **741** Employees

Non-Exempt Grade Step Details

Grade Step	Grandfathered Wage Schedule	New Wage Schedule	Total Headcount	Percent of Total
1	0	23	**23**	**1.8%**
2	0	61	**61**	**4.7%**
3	0	73	**73**	**5.6%**
4	0	88	**88**	**6.7%**
5	0	94	**94**	**7.2%**
6	1	118	**119**	**9.1%**
7	1	78	**79**	**6.0%**
8	5	71	**76**	**5.8%**
9	561	135	**696**	**53.2%**
Total	**568**	**741**	**1309**	**100%**

Exempt Compa-Ratios



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Market Review

National Energy & Utility Industry

Salary Survey Results

2020 Projected *vs* Actuals

Projected Salary Increase Budget*		Actual Salary Increase Grant*	
Exempt	Non-exempt	Exempt	Non-exempt
3.0%	**3.0%**	**3.1%**	**3.0%**

Projected Structure Adjustment	Actual Structure Adjustment
Exempt	Exempt
2.0%	**2.1%**

**Represents National Energy/Utility Industry Average*

2021 Projected Structure Adjustments

National Survey Source	Scope	Exempt
AON Hewitt	Energy	**2.0%**
Conference Board	Utilities	**2.0%**
Korn Ferry	Utilities	**2.0%**
Mercer	Utilities	**2.2%**
PayFactors	Utilities	**1.7%**
Towers Watson	Utilities	**2.3%**
World@Work	Utilities	**2.1%**
Survey Average		**2.0%**

2021 Projected Salary Increase Budgets

National Survey Source	Scope	Exempt	Non-Exempt
AON Hewitt	Energy	3.2%	3.0%
Conference Board	Utilities	3.0%	2.9%
Korn Ferry	Utilities	3.0%	3.0%
Mercer	Utilities	2.8%	2.8%
PayFactors	Utilities	3.1%	3.0%
Towers Watson	Utilities	3.0%	3.0%
World@Work	Utilities	3.1%	3.1%
Survey Average		**3.0%**	**3.0%**

Wage & Salary Structure

Adjustment Recommendations

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Historic

SWG Salary Adjustments

Year	Exempt *(Base + Discretionary)*	Non-Exempt *(+Step Increase)*
2016	2.2% + 1.3% = 3.5%	2.2% (+.45%)
2017	2.3% + 1.3% = 3.6%	2.3% (+.56%)
2018	2.3% + 1.3% = 3.6%	2.3% (+.61%)
2019	2.3% + 1.0% = 3.3%	2.3% (+.70%)
2020	2.0%	2.0% (+.74%)

Salary Adjustment Recommendations

(Represented in Thousands of Dollars)

Non-Exempt = 2.2% Base, 0.72% Step Increase; Exempt = 2.2% Base, 1.0% Discretionary (3.2% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Non-Exempt	$90,425	$2,640	$1,320			
Exempt	$94,969	$3,039	$1,520			
Total	$185,394	$5,679	$2,840	$3,422	**$583**	**$429**

Non-Exempt = 2.3% Base, 0.72% Step Increase; Exempt = 2.3% Base, 1.0% Discretionary (3.3% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Non-Exempt	$90,425	$2,731	$1,366			
Exempt	$94,969	$3,134	$1,567			
Company	$185,394	$5,865	$2,933	$3,422	**$490**	**$336**

Non-Exempt = 2.3% Base, 0.72% Step Increase; Exempt = 2.3% Base, 1.2% Discretionary (3.5% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Nonexempt	$90,425	$2,731	$1,366			
Exempt	$94,969	$3,324	$1,662			
Company	$185,394	$6,055	$3,028	$3,422	**$395**	**$241**

**Adjusted Variance = after estimated officer increases*

June 24, 2021

Salary Adjustment Effective Date

**Payable on Paycheck Dated July 09, 2021*

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Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-2)

CONFIDENTIAL

SOUTHWEST GAS CORPORATION

Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-2)

Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Medical/RX Dental Vision	Employee	Coverage available to employees and eligible dependents one month following date of hire.	X	X	X	X
Life Insurance	Company	1.0 times annual base salary one month following date of hire	X	X	X	X
Supplemental Life Insurance	Employee	Employee can purchase additional life insurance for self up to 5 times annual base salary to a maximum of $2,500,000. Coverage for spouse and children also available.	X	X	X	X
Accidental Death & Dismemberment (AD&D)	Company	1.0 times annual base salary in the event of accidental death. Lump sum benefit is paid for dismemberment.	X	X	X	X
Supplemental AD&D	Employee	Employee can purchase additional AD&D insurance for self and family, up to a maximum of $500,000.	X	X	X	X
Business Travel Insurance	Company	1.0 times annual base salary beginning date of hire	X	X	X	X
Salary Continuation (Short-Term Disability)	Company	After 6 months of continuous employment, employees are eligible for Salary Continuation and receive a % of their salary for up to 26 weeks. The amount received is based on years of service and prior usage.	X	X	X	X
Long Term Disability (LTD)	Company	After one year of service, employees are eligible for LTD after experiencing six months of continuous disability. LTD is paid at 66-2/3% of basic monthly earnings during the period of disability.	X	X	X	X
Health Care Flexible Spending Account (FSA)	Employee	The Health Care FSA allows employees to set aside tax-free ddollars to pay for eligible health care expenses not covered by their health care plan.	X	X	X	X
Dependent Care Flexible Spending Account (FSA)	Employee	The Dependent Care FSA allows employees to set aside tax-free ddollars to pay for eligible dependent day care expenses.	X	X	X	X
Employee Assistance Program (EAP)	Company	The EAP is a confidential, short-term counseling and referral service designed to help employees and household members deal with personal or work-related problems, including but not limited to marriage/relationship problems, financial issues, elder care, and bereavement. Eligibility begins on date of hire.	X	X	X	X

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Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Health Savings Account (HSA)	Employee	Allows employees to set aside pre-tax or tax-deductible dollars to pay for qualified health care expenses not covered by their health care plan. Maximum contribution limits are determined each year by the IRS. At the beginning of the calendar year, the Company contributes $1,000 to each employee's HSA account who met healthy biometic screening criteria during the previous calendar year.	X	X	X	X
Retirement (Pension)	Company	Tax-qualified, non-contributory defined benefit pension plan. Employees are fully vested after 5 years of service and can receive a pension at age 65. With 10 or more years of Company service, employee can elect early retirement at age 55.	X	X	X	X
Employees' Investment Plan (EIP) -- 401(k)	Employee / Company	Employees are eligible to participate in EIP on date of hire and can contribute from 2% to 60% of salary to a tax-deferred retirement account. After-tax Roth contributions are also available. The Company matches 50% of the first 7% that employee contributes.	X	X	X	X
Supplemental Executive Retirement Plan (SERP)	Company	Provides a benefit equal to the difference between the amount that would have been payable under the Retirement plan, in the absence of laws limiting pension benefits and earnings.	X	X		
Vacation	Company	Employees receive vacation time each year based on their years of service: 1 to <5years, 2 weeks; 5-<15 years, 3 weeks; 15-<25 years, 4 weeks; 25 years, 5 weeks	X	X	X	X
Sick Time	Company	Employees receive up to 40 hours of Sick Time each year after 90 days of continuous service. The amount of hours received is prorated based on the pay period when the 90 days ends.	X	X	X	X
Paid Absence Time	Company	Employees receive up to 40 hours of Paid Absence Time each year after 90 days of continuous service. The amount of hours received is prorated based on the pay period when the 90 days ends.	X	X	X	X
Company Holidays	Company	Employees are eligible for 10 holidays per year as of their first workday.	X	X	X	X
Personal Holidays	Company	Active employees as of January 1 of any calendar year are eligible for 2 personal holidays; employees hired between January 1 and June 30 of the calendar year, are eligible for 1 personal holiday; and employees hired after June 30 of the calendar year are not eligible for personal holidays.	X	X	X	X
Employee Appliance Purchase Program	Company	After one year of service, an employee may purchase a gas or combination gas/electric appliance and decide between two payment programs: pay cash and be reimbursed by the Company, or arrange for the Company to pay the dealer. The employee may then use payroll deductions to make payments for up to 5 years with no interest or finance charges.	X	X	X	X
Matching Gifts Program	Company	Each year, the Southwest Gas Foundation will match any eligible participant's contributions to colleges and universities between $25 and $2,500.			X	X

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EXHIBIT NO.___(FH-2)
PAGE 2 OF 3

Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Employee Education Assistance Program	Company	Reimbursement for tuition, registration, lab fees, and books to a maximum of $5,250 per year.			X	X

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Confidential Exhibit No.___(FH-4)

CONFIDENTIAL

SOUTHWEST GAS CORPORATION

Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-4)

Tab D

Direct Testimony
of
Timothy S. Lyons

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
TIMOTHY S. LYONS

ON BEHALF OF
SOUTHWEST GAS CORPORATION

December 3, 2021

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of
Timothy S. Lyons

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Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Timothy S. Lyons

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Timothy S. Lyons. My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

Q. 2 Please describe your current position.

A. 2 I am a Partner at ScottMadden, Inc. ("ScottMadden").

Q. 3 Please summarize your educational background and professional experience.

A. 3 My educational background and professional experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously sponsored testimony before a regulatory commission?

A. 4 Yes, I have previously sponsored testimony before 21 regulatory commissions. A summary of my qualifications is included in Appendix A.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor Southwest Gas' (Southwest Gas or Company) Class Cost of Service Study (CCOSS) and proposed rates, including the continuation of the Delivery Charge Adjustment (DCA), for the Company's Arizona rate jurisdiction, which

includes Central Arizona, Southern Arizona, Bullhead City and the recently acquired Graham County Utilities.[1]

Q. 6 How is your prepared direct testimony organized?

A. 6 My prepared direct testimony is organized into the following sections:

- *Development of the Class Cost of Service Study;*
- *Development of the Rate Design; and*
- *Support for Continuation of the Delivery Charge Adjustment (DCA).*

II. DEVELOPMENT OF THE CLASS COST OF SERVICE STUDY

Q. 7 Please summarize the results of the Class Cost of Service Study

A. 7 The results of the Company's CCOSS show the current rate design produces a disparity in class rates of return ("ROR") for the Arizona rate jurisdiction, as shown in Figure 1 (below). Figure 1 summarizes each rate class's "unit" ROR (where "unit" ROR is the class ROR as a factor of the system or overall ROR).

[1] The Company notes that Graham County Utilities customers currently pay different rates than other Southwest Gas Arizona customers. The Company proposes that upon conclusion of this case, Graham County Utilities customers will pay the Commission approved rates in this proceeding.

Figure 1: Class ROR vs. System ROR

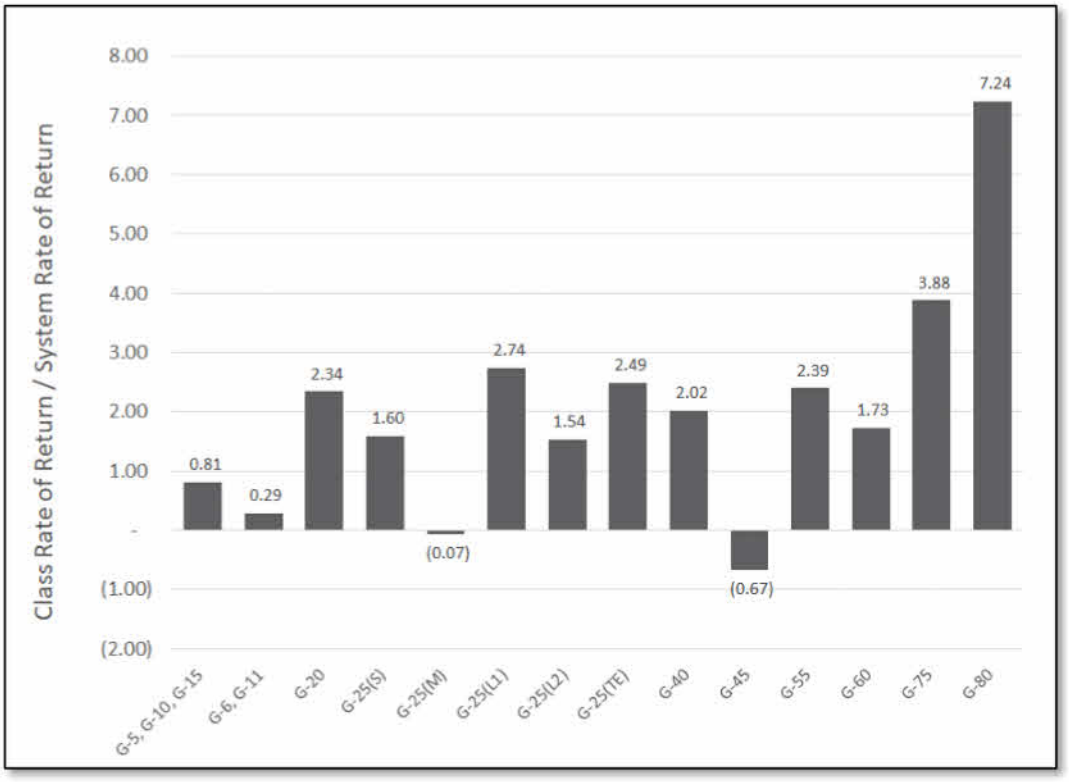

Figure 1 shows that certain rate classes produce RORs at current rates that are less than the system ROR (i.e., the unit ROR is less than 1.00), indicating the current rates recover less than the cost of service for that rate class. The remaining rate classes produce RORs that are higher than the system ROR (i.e., the unit ROR is greater than 1.00), indicating the current rates recover more than the cost of service for that rate class.

Q. 8 Please explain the purpose of a CCOSS.

A. 8 The purpose of a CCOSS is to allocate a utility's overall cost of service to the appropriate rate class in a manner that reflects the underlying cost of service for each of the rate classes included in the study.

Q. 9 Please explain how the CCOSS sponsored in this testimony was developed.

A. 9 The CCOSS sponsored in this testimony was developed by identifying the relationship between the service requirements for each rate class and their respective cost drivers. This approach is well established in industry literature[2] and is consistent with the Company's approach adopted by the Commission in the Company's most recent rate case (Decision No. 77850). Specifically, the CCOSS utilizes the spreadsheet models adopted by the Commission in Decision No. 77850 and incorporates the same three step process to cost allocation: (1) functionalization, or cost assignment into functional categories; (2) classification, or cost assignment according to whether costs are related to serving peak demands, customer service requirements, or commodity demands; and (3) allocation, or cost assignment to rate classes consistent with the functionalization and classification steps described above.

Q. 10 Please describe the data used to prepare the CCOSS.

A. 10 The CCOSS includes the number of customers, usage under normal weather conditions, and revenues by rate class. Revenues at present rates reflect the Company's current margin rates. The CCOSS also includes rate base items, including intangible plant, distribution, and general plant-in-service as well as (a) additions to rate base, including cash working capital, materials and supplies, and prepayments, and (b) reductions to rate base, including deferred income taxes, customer deposits, and customer advances. The CCOSS also includes operations and maintenance (O&M) expenses, including distribution, customer service, customer account, sales, and administrative and general expenses as

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[2] *See* "Principles of Public Utility Rates" by James C. Bonbright.

well as taxes other than income, such as payroll and property taxes, and income taxes.

Q. 11 What is Functionalization and how was it used to develop the CCOSS?

A. 11 Cost functionalization consists of separating rate base and expense items into major operating functions that generally consist of production, storage, and distribution including customer accounting pursuant to the Federal Energy Regulatory Commission (FERC) Uniform System of Accounts.

Q. 12 What is classification?

A. 12 Classification involves the process of separating rate base and expense items into three categories based on cost drivers, commonly referred to as customer, demand and commodity classifications.

Q. 13 Please describe the classification process used to develop the CCOSS.

A. 13 The CCOSS classified costs into one of three classification categories:

- Customer – costs that vary with providing customer access to the natural gas system as well as on-going customer services, such as meter reading and billing services.
- Demand – costs that vary with meeting customer peak demand requirements
- Commodity – costs that vary with meeting customer commodity requirements.

In some cases, costs were classified into only one of the three categories. The cost of meter reading, for example, was classified as customer. Meter reading costs vary with the number of customers. In other cases, costs were classified into more than one category. The cost of distribution mains, for example, was

classified as both customer and demand. Distribution main costs vary with the number of customers and peak day demands.

Q. 14 Please describe the classification of distribution mains.

A. 14 Distribution mains typically represent the largest plant investment for a natural gas utility. The classification of distribution mains reflects two cost drivers. The first cost driver is the number of customers. Distribution mains are designed to provide customer access to the natural gas system. The second cost driver is peak day demand. Distribution mains are designed to meet customer demands on the design day.[3]

Distribution mains in the CCOSS were classified as 50 percent customer and 50 percent demand, consistent with the Company's approach approved by the Commission in Decision No. 77850.

Q. 15 Did the Company prepare an analysis to support the classification of distribution mains?

A. 15 Yes. The Company prepared an analysis to support the classification of distribution mains utilizing the minimum size main method.

Q. 16 What is the minimum size main method?

A. 16 The minimum size main method is based on the estimated cost of the distribution system assuming all mains were installed at the unit cost of the smallest (or minimum size) main installed in the distribution system. The estimated cost of the minimum size main is considered that portion that varies with customer access – and is classified as customer. The difference between the total system

[3] Design day demand is the highest estimated gas demand for a 24-hour period and is used as a basis for designing the capacity of the transmission and distribution system.

cost and minimum size main cost is considered that portion that varies with demand – and is classified as demand.

Q. 17 How was the estimated cost of a minimum size main determined?

A. 17 The estimated cost of the minimum size main was based on two-inch and below plastic mains, which are the smallest mains installed by the Company. Multiplying the unit cost of two-inch and below plastic mains by the actual number of feet in the distribution system yielded a theoretical cost of a system comprised of two-inch and below plastic mains. The customer portion of distribution mains was calculated as the ratio of the cost of two-inch and below mains cost to the total system cost.

Q. 18 What were the results of the minimum size main method?

A. 18 The results of the minimum size main method show the customer portion of the mains investment is 58.58 percent, as shown in Figure 2 (below).

Figure 2: Results of Minimum Size Main Method (Arizona)

Arizona Minimum Size Main Analysis		
Total Quantity		98,549,487
Min-System Unit Costs	$	23.68
Min-System Costs	$	2,333,337,823
Total System Costs	$	3,983,330,419
Customer-Related		58.58%

The Figure shows for the Arizona jurisdiction the estimated cost of a minimum size main is $2.3 billion, which is based on the estimated cost of two-inch and below plastic mains and the actual footage of main in the distribution system. The customer portion of distribution mains of 58.58 percent was calculated as

the ratio of the cost of minimum size main of $2.3 billion to the total cost of the mains of $4.0 billion. The demand portion of the mains investment was 41.42 percent.

Q. 19 What is the Company's recommendation regarding the classification of distribution main?

A. 19 The Company recommends classifying distribution mains in this proceeding as 50.00 percent customer and 50.00 percent demand. The approach is consistent with the approach approved by the Commission in Decision No. 77850 and is supported by the results of the minimum size system method.

Q. 20 Please discuss the classification of other rate base items.

A. 20 Other rate base items were similarly classified based on their underlying cost drivers. For example, meter cost, meter installation, service cost, and regulator investments were classified as customer since they provide customer access to the natural gas system. Rate base items not directly associated with one of the classification categories, such as general plant, were classified through a composite classifier based on the related costs.

Q. 21 Please discuss classification of operations and maintenance (O&M) expenses.

A. 21 O&M expenses were classified similar to their respective plant items. For example, Maintenance of Services (Account 892) was allocated based on the allocation of Services plant (Account 380).

O&M expense items not directly associated with one of the classification categories, such as administrative and general expenses, were classified through a composite classifier based on related costs.

. . .

Q. 22 What is allocation?

A. 22 Allocation consists of assigning rate base and expense items to individual rate classes based on allocators that reflect their underlying cost of service.

Q. 23 Please describe the allocation process used to develop the CCOSS.

A. 23 Costs were allocated to each rate class based on the costs incurred to serve that rate class. In short, cost allocation follows cost causation. This is an established industry approach and is consistent with the Company's approach in Docket No. G-01551A-19-0055. This approach requires development of cost allocators that reflect the design of the natural gas system.

The CCOSS in this filing was developed based on three types of allocators:

1. Class determinants – class characteristics, such as number of customers, usage, and peak demands by rate class.
2. Special studies – detailed analysis of specific plant or expense items, such as meters and services.
3. Internal – composite of how other costs are allocated.

Q. 24 Please describe the process used to develop the demand allocator.

A. 24 The demand allocator is based on peak month sales. The allocator reflects each rate class's responsibility to peak month sales. The approach is consistent with the method approved by the Commission in the Company's most recent rate case proceeding.

Q. 25 Please describe the process used to develop the special studies allocators.

A. 25 There were two special studies developed to allocate meter investments, meter installations, and service investments. The allocators were developed separately for the Company's Arizona rate jurisdictions.

- Meters and Meter Installation investments were allocated to each rate class based on the average installed cost of a meter in each rate class.
- Service investments were allocated to each rate class based on the average installed cost of a service line in each rate class.

The results of the most recent meter and service special studies were blended with the results of the meter and service special studies utilized in the prior rate case to create a composite allocator that was used in the CCOSS. The "composite allocator" approach helps to minimize the impact of variations in the results of the special studies.

Q. 26 Please summarize the results of the Company's CCOSS.

A. 26 The results of CCOSS are shown in Figure 1 (above). The Figure compared the calculated ROR for each rate class based on current rates to the system or overall ROR.

Q. 27 What conclusions can be reached when a rate class ROR is higher or lower than the system ROR?

A. 27 If a rate class produces a ROR that is lower than the system ROR, then the revenues recovered from the rate class are less than the cost of service. Conversely, if a rate class produces a ROR that is higher than the system ROR, then the revenues recovered from the rate class are more than the cost of service. As discussed below, the CCOSS results were used to inform the proposed rate design for each rate class.

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III. DEVELOPMENT OF THE RATE DESIGN

Q. 28 Is the Company proposing any changes to its currently authorized rate design?

A. 28 No. As discussed below, the Company believes that the current rate design, including the basic service charge, remains in the public interest and should not be modified.

Q. 29 Please provide an overview of the Company's currently effective rates.

A. 29 Customers are presently served under rate schedules based on the type of service and load characteristics. The Company's current rate structure consists of delivery charges that recover the cost of delivering gas to customers, gas cost charges that recover purchased gas costs and rate adjustment mechanisms. The delivery charges include a monthly Basic Service Charge and per therm commodity charge. The Transportation Service class G-25 (TE) also includes a demand charge that recovers the delivery cost of service.

Q. 30 Please describe the principles used to guide the development of the proposed rate design.

A. 30 The proposed rate design was guided by several principles common throughout the industry, including: (a) rates should recover the overall cost of providing service; (b) rates should be fair, minimizing inequities to the maximum extent possible; and (c) rate changes should be tempered by rate continuity concerns.[4]

Because these principles can conflict, the rate design process also includes a level of judgment to balance these principles.

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[4] See Bonbright, James, Danielsen, Albert, and Kamerschen, David. "Principles of Public Utility Rates." Public Utilities Reports, Inc. pp. 377-407 (2nd Ed. 1988).

Q. 31 How were the principles applied to the proposed rate design?

A. 31 First, rates were designed to recover the Company's overall cost of service. This was done by developing customer and usage charges based on adjusted test year bills and usage. In addition, rates were designed to be fair and equitable. This was done by setting revenue targets that reflect each rate class's cost of service subject to rate continuity considerations. As discussed earlier, the results of the CCOSS show that some rate classes produce less than the overall ROR. The goal of the proposed rate design was to eliminate that deficiency, subject to rate continuity considerations.

Q. 32 What is the total revenue requirement that you used as a starting point for the rate design?

A. 32 The total revenue requirement used as a starting point for the rate design is described in the prepared direct testimony of Company Witness Randi L. Cunningham.

Q. 33 Please describe the process used to set the revenue targets for each rate class.

A. 33 The proposed revenue targets for each rate class were based on the results of the CCOSS and resulted in classes with RORs lower than the system ROR receiving greater percentage increases than classes with RORs that are higher than the system ROR.

Q. 34 Please describe the proposed rate design for each rate class.

A. 34 The proposed rate design for each rate class is provided in the Schedule H-2. The proposed Residential rate design is described below.

<u>Basic Service Charge</u>

The Company proposes to maintain the current residential basic service charge. The current single-family residential (G-5) basic service charge is $10.70 per month, and the current multi-family residential (G-6) basic service charge is $9.70 per month.

Delivery Charges

The Company proposes a residential delivery charge that recovers delivery costs not recovered through the Basic Service Charge. The Company proposes a delivery charge of $1.10224 per therm for single-family residential customers (G-5), and $1.30601 per therm for multi- family residential customers (G-6). The Company proposes to simplify its low income rates by providing a 30 percent discount off the applicable residential single-family and multi-family rates year-round. The Company also proposes to maintain the discount on its air conditioning rate over 15 therms of $0.16952 per therm.

Q. 35 Why is the Company not proposing any change to its Basic Service Charge?

A. 35 The Company's proposal to maintain the current customer charges addresses potential bill impact concerns on low-use customers, who would be most impacted by an increase in the Basic Service Charge. The Company believes the proposal strikes a reasonable balance between minimizing intra-class inequities and addressing potential bill impact concerns on low-use customers. It is important to note the Company's primary concern with maintaining the current customer charges is that more of the Company's revenue requirement will be recovered through volumetric charges, thus increasing the likelihood that the Company will over-collect or under-collect its authorized revenue

requirement since a majority of the Company's revenue requirement is fixed and does not change with changes in volumes.

The Company's concerns, however, are currently addressed through its proposal to continue the DCA. The DCA addresses the Company's concerns regarding the over- and under-collection of the authorized revenue requirement as higher revenues under colder-than-normal weather, for example, are refunded to customers under the DCA and lower revenues under warmer-than-normal weather, for example, are recovered from customers.

As discussed below, the Company believes the DCA (1) addresses the Company's concerns regarding recovery of the revenue requirement through volumetric charges, (2) provides benefits to the Company and its customers, and (3) should be continued.

The Company notes that if the DCA is removed from the Company's tariffs – as was recommended by Arizona Grain, Inc. in the Company's most recent rate case proceeding – then it is important to replace it with an alternative rate design that provides similar benefits to the Company and its customers while addressing the Company's concerns regarding the under- and over-collection of its revenue requirement.[5]

Q. 36 What rate structure is the Company proposing for the general service customers?

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[5] Direct Testimony of Scott J. Rubin (Revenue Requirements) on behalf of Arizona Grain, Inc., Docket No. G-01551A-19-0055, at 44.

A. 36 The Company proposes to retain its existing rate structure for the general service customers. The four General Service rate classes (G-25(S), G-25(M), G-25(L1), G-25(L2),) have a two-part rate structure, consisting of a monthly Basic Service Charge and a single commodity charge. The Transportation-Eligible General Gas Service rate class (G-25(TE)) has a three-part rate structure, consisting of a monthly Basic Service Charge, a single commodity charge, and a demand charge based on the customers' highest monthly gas demand in the most recent 12-month period, ending two months prior to the current billing period.

Q. 37 Which schedules evaluate the impact of the proposed rate design on customers?

A. 37 Schedule H-4 evaluates the impact of the proposed rate design on customers. The schedule compares average customer bills at the present and proposed rates, as shown in Figure 3 (below) for single-family residential customers. The bill impact analysis compares the proposed and current tariff rates for residential customers during an average summer, average winter, and average annual month. The bill impact analysis also compares the proposed and current tariff rates for residential customers at 75.0 percent and 125.0 percent of an average summer and average winter month.

Figure 3: Comparison of Proposed and Current Residential Bills

Bill Impact Analysis: Single-Family Residential Gas Service	Monthly Consumption (Therms)	Month Bill ($) Proposed Rates	Month Bill ($) Current Rates	Increase / (Decrease) Dollars ($)	Increase / (Decrease) Percent (%)
Summer Season Bills					
75 Percent of Average Use	8	$ 23.60	$ 21.89	$ 1.71	7.81%
Average Summer Use	11	28.44	26.09	2.35	9.01%
125 Percent of Average Use	14	33.28	30.29	2.99	9.87%
Winter Season Bills					
75 Percent of Average Use	27	$ 54.24	$ 48.47	$ 5.77	11.90%
Average Winter Use	36	68.75	61.07	7.68	12.58%
125 Percent of Average Use	45	83.26	73.66	9.60	13.03%
Annual Average Bills					
Average Monthly Use	24	$ 49.40	$ 44.28	$ 5.12	11.56%

The Figure shows the proposed single-family residential rates will increase winter bills for the average customer using 36 therms in a winter month by $7.68 per month, or 12.58 percent, summer bills for the average customer using 11 therms in a summer month by $2.35 per month, or 9.01 percent, and average monthly bills for the average customer using 24 therms per month by $5.12, or 11.56 percent. Actual customer bill impacts at the time of approval by the Commission will vary depending on a number of factors, such as gas costs or rate adjustments, at the time the Commission issues a Decision in this case.

Q. 38 Has Southwest Gas included schedules showing the proposed revenue changes by rate schedule?

A. 38 Yes. Schedules H-1 and H-2 show the proposed revenue changes by rate schedule.

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IV. SUPPORT FOR CONTINUATION OF THE DELIVERY CHARGE ADJUSTMENT

Q. 39 What is revenue decoupling?

A. 39 Revenue decoupling breaks or "decouples" the link between utility revenues and sales volumes, helping to ensure that a utility does not over- or under-recover its authorized revenue requirement. There are two basic forms of revenue decoupling:

- Partial or Limited Revenue Decoupling – this type addresses specific variances between actual and authorized revenues, such as the impact of weather or energy efficiency.
- Full Revenue Decoupling – this type addresses the total variance between actual and authorized revenues. Variances can be measured based on total revenues, or revenues per customer ("RPC").

The Company's Delivery Charge Adjustment ("DCA") is a form of full revenue decoupling.

Q. 40 What are the primary benefits of revenue decoupling?

A. 40 The primary benefits of revenue decoupling are:

1. It ensures that the utility does not over- or under-recover its Commission-authorized revenue per customer.
2. It avoids disputes over billing determinants.
3. It corrects the basic misalignment between utility rates and costs.
4. It supports achievement of certain policy objectives, such as energy efficiency initiatives.
5. It helps stabilize utility cost recovery as well as customer bills.

. . .

. . .

Q. 41 Please discuss the basic misalignment between utility rates and costs.

A. 41 Gas utilities incur three types of costs in providing natural gas service to customers:

- Customer costs – including meter, billing and a portion of distribution costs that generally vary by the number of customers
- Demand-related costs – including transmission and distribution costs that generally vary by demand
- Commodity-related costs – including variable Operating and Maintenance expenses that generally vary by usage or natural gas consumed

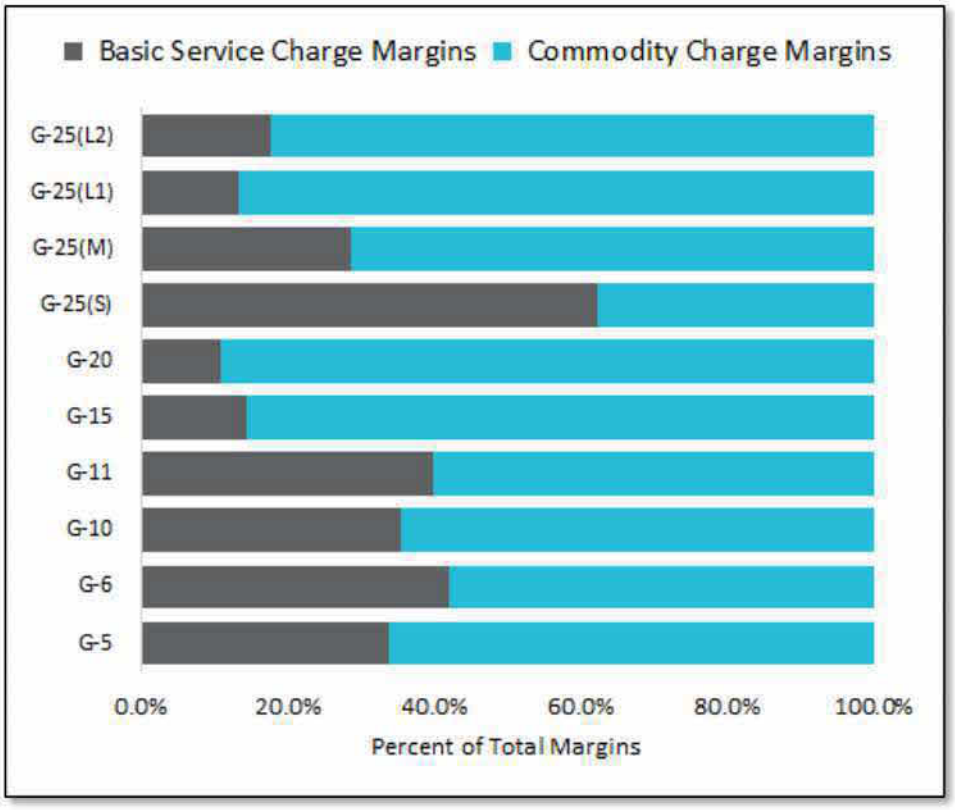
Utility rates are designed to recover all of these costs or authorized revenue requirements. However, a significant portion of the costs are recovered based on consumption charges, reflecting usage at the time rates are established (i.e., rates are set based on an assumed level of usage). Thus, to the extent that actual usage is significantly lower than the assumed level of usage in rates, the utility rates recover less than the authorized revenue requirement. Conversely, to the extent that actual usage is significantly higher than the assumed level of usage in rates, then utility rates recover more than the authorized revenue requirement.

Revenue decoupling corrects for this misalignment by adjusting revenues to match the authorized revenue requirement.

Q. 42 Do the Company's current rates exhibit this misalignment between utility rates and costs?

A. 42 Yes. The Company's current rates recover a significant portion of revenues through usage charges, as shown in Figure 4 (below).

Figure 4: Rate Margins as Percent of Total Margins[6]



The Figure shows that a significant portion of the Company's margins are recovered through commodity or usage charges. The single-family residential class (G-5), for example, recovers 33.8 percent of its revenue requirement through a basic service or fixed charge and 66.2 percent of its revenue requirement through a commodity or usage charge. The Company's decoupling mechanism alleviates much of the concern associated with the recovery of its largely fixed revenue requirement through commodity or usage charges as approximately 91.90 percent of its tariff sales margins are subject to the DCA.

Q. 43 Please discuss how revenue decoupling supports certain policy objectives.

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[6] The DCA applies to the rate classes included in Figure 4.

A. 43 Revenue decoupling supports certain Commission policy objectives, such as energy efficiency initiatives. Recovery of fixed costs through variable charges creates an inherent financial disincentive for utilities to promote initiatives that reduce customer consumption and has been referenced as a "primary barrier to aggressive utility investment in energy efficiency."[7]

Revenue decoupling removes this financial disincentive, facilitating policies aimed to encourage energy efficiency. The Commission has noted: "Revenue decoupling may offer significant advantages over alternative mechanisms for addressing utility financial disincentives to energy efficiency, as it establishes better certainty of utility recovery of authorized fixed costs and better aligns utility and customer interests."[8]

Q. 44 Has the utility industry recognized the benefits of revenue decoupling in achieving policy objectives?

A. 44 Yes. Revenue decoupling is recognized by the utility industry as an essential tool in promoting energy efficiency initiatives. The American Council for an Energy-Efficient Economy (ACEEE), an authority on utility energy efficiency programs, states: "For energy efficiency to flourish, the use of decoupling needs to be expanded so that utilities can recover their fixed costs even if sales decline."[9] Moreover, the benefits of revenue decoupling are recognized in

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[7] National Action Plan for Energy Efficiency (2007): Aligning Utility Incentives with Investment in Energy Efficiency, at p. ES-3

[8] Final ACC Policy Statement Regarding Utility Disincentives to Energy Efficiency and Decoupled Rate Structures, Docket Nos. E-000005-08-0314 and G-00000C-08-0314, Policy Statement 3.

[9] ACEEE The Future of the Utility Industry and the Role of Energy Efficiency (June 2014), at p. viii

regulatory jurisdictions throughout the U.S. Full revenue decoupling is currently in effect in 22 jurisdictions.[10]

Q. 45 Has the Commission approved a revenue decoupling mechanism for Southwest Gas?

A. 45 Yes, the DCA is the Company's Commission-approved full revenue decoupling mechanism. The Company's DCA was originally approved in the 2010 rate case[11] and modified in the 2016 rate case[12]. In the Company's latest rate case, the Commission approved the continuation of the DCA mechanism stating that:

> "We find that the continuation of the DCA mechanism is appropriate at this time. As noted by the Company, the DCA mechanism has been functioning as expected and the benefits associated with the DCA mechanism identified in the Company's last rate case remain valid in this case. Accordingly, we adopt and approve the continuation of the DCA mechanism."[13]

Q. 46 What is the purpose of the Company's DCA provision?

A. 46 The DCA accounts for annual differences between actual billed margin per customer and margin per customer authorized by the Commission in the most recent rate case. Over-collected amounts for a given year are refunded to customers and under-collected amounts are recovered from customers. The

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[10] S&P Global Market Intelligence. Data as of April 12, 2021

[11] Decision 72723 in Docket No. G-01551A-10-0458

[12] Decision 76069 in Docket No. G-01551A-16-0107

[13] Decision 77850 in Docket No. G-01551A-19-0055

mechanism ensures that the Company will only recover its Commission-authorized margin per customer. The Company maintains accounting records that accumulate the difference between authorized and actual billed margin per customer in the Delivery Charge Adjustment Balancing Account (DCABA).

Q. 47 Please describe the performance of DCA in the most recent reporting period?

A. 47 The DCABA showed an under-collected balance of $32,643,150 at December 31, 2019. During the period of January 1, 2020 through December 31, 2020 the Company's billed revenues were $13,104,542 less than authorized revenues, and the Company recovered $44,806,734 through the DCA[14] resulting in an under-collected balance of $1,001,062 at December 31, 2021. Based on this balance, the DCA rate would have been set at $.00198 per therm. However, the Company supported a DCA rate of $0.00 per therm until the next annual DCA balance update in the first quarter of 2022..

Q. 48 Has the DCABA balance changed since the most recent reporting period?

A. 48 Yes, the DCABA shows an over-collected balance of $6,464,785 at September 30, 2021 due in large part to higher customer usage from colder than normal temperatures during Winter Storm Uri in February 2021.

Q. 49 Has the Commission recognized benefits of the Company's DCA provision?

A. 49 Yes. The Commission has recognized the benefits of the DCA in the Company's most recent rate case, including:

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[14] Based on the DCA rate of $0.00 per therm approved on May 23, 2020 in Decision No. 77623 (Docket No. G-01551A-20-0078), and the DCA rate of $0.14902 per therm approved on May 15, 2019 in Decision No. 77174 (Docket No. G-01551A-16-0107)

1. preventing utility profit from increased sales;
2. ensuring customers pay no more than costs authorized by the Commission;
3. including customer protection from high winter bills due to a severe weather event;
4. allowing for both upward and downward rate adjustments;·
5. addressing the long-tern declining usage issue for SWG; and
6. retaining immediate permanent customer saving on commodity costs.

Specifically, the Commission noted in the Company's most recent rate case decision, "...the benefits associated with the DCA mechanism identified in the Company's last rate case remain valid in this case." [Decision 77850 at 80]

Importantly, the DCA removes the Company's financial disincentive to promote energy efficiency and conservation efforts as well as address customer bill impact concerns, particularly among low use customers. Specifically, the DCA enables the Company to maintain its basic service charges at their current levels – for example, the single family residential basic service charge is proposed to remain at $10.70.

Q. 50 What is the Company's recommendation regarding the DCA provision?

A. 50 The Company requests authority to continue the DCA provision. The Company's 2021 Annual Revenue Decoupling report "demonstrates that the DCA continued to perform as designed and authorized by the Commission"[15].

[15] Southwest Gas Corporation 2021 Revenue Decoupling Report, p.1

Q. 51 Does this conclude your prepared direct testimony?

A. 51 Yes, it does.

Summary of Qualifications

Tim Lyons is a partner with ScottMadden with more than 30 years of experience in the energy industry. Tim has held senior positions at several gas utilities and energy consulting firms. His experience includes rates and regulatory support, sales and marketing, customer service and strategy development. Prior to joining ScottMadden, Tim served as Vice President of Sales and Marketing for Vermont Gas. He has also served as Vice President of Marketing and Regulatory Affairs for Providence Gas Company, Director of Rates at Boston Gas Company, and Project Director at Quantec, LLC, an energy consulting firm.

Tim has sponsored testimony before 21 state regulatory commissions. Tim holds a B.A. from St. Anselm College, an M.A. in Economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Areas of Specialization

- Regulation and Rates
- Retail Energy
- Utilities
- Natural Gas

Capabilities

- Regulatory Strategy and Rate Case Support
- Strategic and Business Planning
- Capital Project Planning
- Process Improvements

Articles and Speeches

- "Country Strong: Vermont Gas shares its comprehensive effort to expand natural gas service into rural communities." ***American Gas Association***, June 2011 (with Don Gilbert).
- "Talking Safety With Vermont Gas." ***American Gas Association***, February 2009 (with Dave Attig).
- "Consumers Say 'Act Now' To Stabilize Prices." ***Power & Gas Marketing***, September/ October 2001 (with Jim DeMetro and Gerry Yurkevicz).
- "Rate Reclassification: Who Buys What and When." ***Public Utilities Fortnightly***, October 15, 1991 (with John Martin).

Sponsor	Date	Docket No.	Subject
Regulatory Commission of Alaska			
Cook Inlet Natural Gas Storage Alaska, LLC	7/21	Docket No. U-21-058	Sponsored testimony supporting the lead-lag study/cash working capital requirement for a general rate case proceeding.
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted and sponsored testimony supporting a lead-lag study for a general rate case proceeding.
Arkansas Public Service Commission			
Liberty Utilities (Pine Bluff Water)	10/18	Docket No. 18-027-U	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding.
California Public Utilities Commission			
Liberty Utilities (CalPeco Electric)	5/21	Docket No. A 21-05-017	Sponsored testimony supporting the lead-lag study/cash working capital, marginal cost study, rate design and bill impact analysis for a general rate case proceeding.
Southwest Gas Corporation (Southern California, Northern California and South Lake Tahoe jurisdictions)	8/19	Docket No. A.19-08-015	Sponsored testimony on behalf of three separate rate jurisdictions supporting revenue requirements, lead-lag/ cash working capital, and class cost of service, rate design and bill impact analysis for a general rate case proceeding.
Connecticut Public Utilities Regulatory Authority			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony supporting the review and evaluation of gas expansion policies, procedures and analysis.
Illinois Commerce Commission			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. 16-0401	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
Iowa Utilities Board			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. RPU-2016-0003	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
Kansas Corporation Commission			
The Empire District Electric Company	12/18	Docket No. 19-EPDE-223-RTS	Sponsored testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Maine Public Utilities Commission			
Maine Water Company	03/21	Docket No. 2021-00053	Sponsored testimony supporting a proposed rate smoothing mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/19	Docket No. 2019-00092	Sponsored testimony supporting a proposed capital investment cost recovery mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/15	Docket No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
Maryland Public Service Commission			
Sandpiper Energy, a Chesapeake Utilities company	12/15	Case No. 9410	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.

Sponsor	Date	Docket No.	Subject
Massachusetts Department of Public Utilities			
Liberty Utilities (New England Gas Company)	08/20	Docket No. DPU 20-92	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2020/2021 through 2024/2025.
Liberty Utilities (New England Gas Company)	07/18	Docket No. DPU 18-68	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2018/2019 through 2022/2023.
Liberty Utilities (New England Gas Company)	07/16	Docket No. DPU 16-109	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2016/2017 through 2020/2021.
Boston Gas	10/93	Docket No. DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.
Boston Gas	03/90	Docket No. DPU 90-55	Sponsored testimony supporting the weather and other cost of service adjustments, rate design and customer bill impact studies for a general rate case proceeding.
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Michigan Public Service Commission			
Lansing Board of Water & Light and Michigan State University	04/20	Docket No. U-20650	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Lansing Board of Water & Light and Michigan State University	04/19	Docket No. U-20322	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Midland Cogeneration Ventures, LLC	09/18	Docket No. U-18010	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Minnesota Public Utilities Commission			
Northern States Power Company (XcelEnergy)	10/21	Docket No. E002/GR-21-630	Sponsored testimony supporting a Return on Equity (ROE)adjustment mechanism that would allow the Company to symmetrically adjust its ROE to reflect significant changesin financial market conditions.
Missouri Public Service Commission			
The Empire District Gas Company	08/21	Docket No. GR-2021-0320	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
The Empire District Electric Company	05/21	Docket No. ER-2021-0312	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Spire Missouri, Inc.	12/20	Docket No. GR-2021-0108	Sponsored testimony supporting class cost of service, rate design, and lead-lag study proposals for a general rate case proceeding. The testimony also included support for a proposed revenue adjustment mechanism.
The Empire District Electric Company	08/19	Docket No. ER-2019-0374	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a weather normalization mechanism.

Sponsor	Date	Docket No.	Subject
Liberty Utilities (Midstates Natural Gas)	09/17	Docket No. GR-2018-0013	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
Missouri Gas Energy	04/17	Docket No. GR-2017-0216	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Laclede Gas Company	04/17	Docket No. GR-2017-0215	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
New Hampshire Public Utilities Commission			
Unitil (Northern Utilities, Inc.)	8/21	Docket No. DG 21-104	Sponsored testimony supporting a revenue decoupling mechanism.
Unitil Energy Systems, Inc.	4/21	Docket No. DE 21-030	Sponsored testimony supporting a revenue decoupling mechanism.
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	11/17	Docket No. DG 17-198	Sponsored testimony supporting a levelized cost analysis for approval of firm supply and transportation agreements.
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
Nevada Public Utilities Commission			
Southwest Gas Corporation	09/21	Docket No. 21-09001	Sponsored testimony supporting the class cost of service,rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
Southwest Gas Corporation	02/20	Docket No. 20-02023	Sponsored testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
New Jersey Board of Public Utilities			
South Jersey Gas Company	03/20	Docket No. GR20030243	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Elizabethtown Gas Company	04/19	Docket No. GR19040486	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	08/16	Docket No. GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Corporation Commission of Oklahoma			
The Empire District Electric Company	03/19	Cause No. PUD 201800133	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
The Empire District Electric Company	04/17	Cause No. PUD 201600468	Adopted direct testimony and sponsored rebuttal testimony supporting the revenue requirements for a general rate case proceeding. The testimony included proposals for alternative ratemaking mechanisms.

Sponsor	Date	Docket No.	Subject
Rhode Island Public Utilities Commission			
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony supporting the changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony supporting the extension of a rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony supporting the de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony supporting a rate plan that fixed all billing rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for a rate design proceeding.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for a rate design proceeding.
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony supporting the rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for a rate design proceeding.
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.
Railroad Commission of Texas			
Texas Gas Service Company – Central Texas and Gulf Coast Service Areas	12/19	GUD No. 10928	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Beaumont/ East Texas Division	11/19	GUD No. 10920	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	08/18	GUD No. 10766	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	06/18	GUD No. 10739	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/17	GUD No. 10669	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Rio Grande Valley Service Area	06/17	GUD No. 10656	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor	Date	Docket No.	Subject
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Public Utility Commission of Texas			
CenterPoint Energy Houston Electric, LLC	04/19	Docket No. 49421	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Vermont Public Utilities Commission			
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the market served by $90 million natural gas expansion project to Addison County, VT. Also described the terms and economic benefits of a special contract with International Paper.
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.
Virginia State Corporation Commission			
American Electric Power - Appalachian Power Company	3/20	Case No. PUR-2020-00015	Sponsored testimony supporting the Lead/Lag study for the 2020 triennial review of base rates, terms, and conditions.

Tab E

Direct Testimony
of
John R. Olenick

IN THE MATTER OF

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
JOHN R. OLENICK

ON BEHALF OF

SOUTHWEST GAS CORPORATION

December 3, 2021

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of
Prepared Direct Testimony
of
JOHN R. OLENICK

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Appendix A – Summary of Qualifications of John R. Olenick

Exhibit No.__(JRO-1)

Exhibit No.__(JRO-2)

Exhibit No.__(JRO-3)

Exhibit No.__(JRO-4)

Exhibit No.__(JRO-5)

Exhibit No.__(JRO-6)

Exhibit No.__(JRO-7)

Exhibit No.__(JRO-8)

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
John R. Olenick

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is John R. Olenick. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89193.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Gas Supply department. My title is Director/Gas Supply.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony before Public Utilities Commission of Nevada, the Arizona Corporation Commission (Commission), and the California Public Utilities Commission.

Q. 5 What is the purpose and summary of your prepared direct testimony in this proceeding?

A. 5 The purpose of my prepared direct testimony is to: 1) support the proposed optional Move2Zero Program that will permit the Company's Arizona customers to participate in reducing greenhouse gas emissions through the purchase of carbon offset credits; and 2) support the reasonableness and prudence of the Company's

gas procurement activities from January 2019 to August 2021 ("Covered Period").

II. MOVE2ZERO PROGRAM

Q. 6 Please describe the Company's proposed Move2Zero Program.

A. 6 The Move2Zero Program ("Move2Zero Program" or "Program") is optional program that provides the Company's Arizona customers the ability to offset combustion-related greenhouse gas (GHG) emissions associated with natural gas usage through the Company's purchase and retirement of certified carbon offset credits. Southwest Gas proposes to offer its Arizona customers the option to participate in the Move2Zero Program, however, there is no requirement that a customer participate in the Move2Zero Program, and only customers that participate in the Move2Zero Program will incur any incremental costs associated with the Program. The Program will be available to customers who voluntarily elect to participate in the Move2Zero Program. The Company will procure carbon offset credits through a third-party on behalf of customers who participate in the Program. Customers who do not elect to participate in the Program will not in any way pay or be otherwise impacted by any Program related costs.

Please refer to the Direct Testimony of Company Witness, Matthew D. Derr, for support as to how rates will be established and costs associated with the Program will be accounted for.

Q. 7 Why is the Company proposing the Move2Zero Program?

A. 7 The Company is proposing the Program to provide an option for its customers to reduce their carbon footprint and assist in reducing GHG emissions.

Q. 8 What is a carbon offset and how does it differ from a carbon offset credit?

A. 8 Carbon offsets and carbon offset credits are somewhat interchangeable, but their meanings are slightly different. A carbon offset "broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration

or the planting of trees) – that is used to compensate for emissions that occur elsewhere."[1] A carbon offset credit "is a transferrable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric ton of CO2, or an equivalent amount of other GHGs."[2] The distinction between the two is that a carbon offset credit can be used "to transfer a net climate benefit from one entity to another."[3]

Q, 9 How are carbon offset credits produced?

A. 9 Activities or projects that reduce GHG emissions or increase carbon sequestration can produce carbon offset credits.[4] Activities or projects that produce carbon offset credits are commonly referred to as carbon offset projects.

Q. 10 What is a carbon offset program?

A. 10 Carbon offset programs provide oversight to the production of carbon offset credits and: 1) develop and approve carbon offset credit standards; 2) review carbon offset projects against those standards; and 3) operate registries that issue, transfer, and retire carbon offset credits.[5] Southwest Gas would purchase any carbon offset credits that would be used in the Move2Zero Program through a carbon offset program to ensure that the carbon offset project that produced the credits meet the proper standards and those credits are reviewed, issued, transferred, and retired with third-party oversight.

Q. 11 Please describe how carbon offset credits will be used in structure of the Move2Zero Program.

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[1] https://www.offsetguide.org/understanding-carbon-offsets/what-is-a-carbon-offset/; see also, Exhibit No.__(JRO-1), Securing Climate Benefit: A Guide to Using Carbon Offsets, Broekhoff, D., Gillenwater, M., Colbert-Sangree, T., Cage, P., Nov. 13, 2019, p. 6.
[2] Id.
[3] Id.
[4] Exhibit No.__(JRO-1), p. 7.
[5] Id at p 8.

A. 11 The Move2Zero Program will be offered to Arizona customers through a "block" design. One "block" represents the equivalent of ten therms of combustion-related natural gas usage that will be offset through the purchase and retirement of a carbon offset credit through a carbon offset program. Each "block" will cost a fixed amount per month, and customers can choose how many "blocks" they would like to purchase. A customer may elect to purchase blocks that equate to more or less therms than that customer's actual usage. This approach provides customers the opportunity to reduce GHG emission beyond their emissions related to their own natural gas usage.

Q. 12 How is the "block" price and equivalent natural gas usage offset determined?

A. 12 The cost of each "block" is determined based on multiple variables, including the cost and quantity of carbon offset credits purchased, other Program costs, and the level of customer participation. To ensure only customers who elect to participate in the Program are responsible for Program-related expenses, the "block" price is designed to include the cost of the carbon offset credit as well as all other Program related expenses. A therm equivalent can be derived using the previously referenced US EPA's default emission factor relating to the combustion of natural gas (0.0053 metric tons C02-e/therm).

Upon approval from the Commission to offer the Move2Zero Program, the Company would solicit offers from carbon offset programs for carbon offset credit procurement and Program administration. The price of each "block" would be finalized at the time the Program costs are established with the selected third-party carbon offset program(s). The carbon offset programs are further discussed below.

. . .

Q. 13 What is the cost of each "block" that the Company is proposing?

A. 13 The Company proposes a $5.00 per "block" charge as reflected in the Proposed Tariff Sheet No. 94. Southwest Gas Witness, Matthew D. Derr, provides more information related to proposed additions to the Company's tariff in his testimony in this proceeding.

III. CARBON OFFSET CREDIT AND QUALITY REPORTING

Q. 17 What type of carbon offset credits will Southwest Gas purchase under the proposed Move2Zero Program?

A. 17 Southwest Gas will purchase carbon offset credits for the Program through third-party vendors. The third-party vendors must demonstrate that each carbon offset credits is real, additional, verifiable, enforceable, and permanent. Moreover, each carbon offset credit must be registered by a widely used and reputable carbon offset program such as American Carbon Registry, Climate Action Reserve, Verra, Green-e, etc. This will provide the ability to demonstrate the purchase, transfer, and retirement of all carbon offset credits purchased for the Carbon Offset Program.

Q. 18 Does Southwest Gas propose to provide annual reporting related to the Program?

A. 18 Yes. As part of an annual compliance filing with the Commission, Southwest Gas would provide annual Program status updates and any proposed adjustments to the "block" cost. These reports will include customer enrollment levels, carbon offset credit purchases, carbon offset programs utilized, carbon offset project that are producing the carbon offset credits for the Program, and the quantity of GHG emissions offset by the Program.

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. . .

IV. GAS COSTS AND SUPPLY ACQUISITION FOR THE COVERED PERIOD

Q. 19 Has Southwest Gas made any substantive changes to its gas purchase policies, processes, or procedures since gas costs were reviewed in Docket No. G-01551A-19-0055?

A. 19 Yes. The Company made various changes to the Gas Purchases & Transportation Portfolio Selection Procedures and Gas Purchasing and Nomination Procedures. The updated document is contained in Exhibit No.__(JRO-2) and Exhibit No.__(JRO-3) contains a redline version to the previous document. In addition, the Company implemented the Arizona Gas Supply Policy Statement, which is included as Exhibit No.__(JRO-4). The Company also follows the Arizona System Supply Acquisition, a copy of which is included as Exhibit No.__(JRO-5).

Q. 20 Please summarize the changes made to the Gas Purchases & Transportation Portfolio Selection Procedure and Gas Purchasing and Nomination Procedures which are highlighted on Exhibit No.__(JRO-3) and the rationale for those changes.

A. 20 The changes highlighted in Exhibit No.__(JRO-3) provide additional steps that the Company's personnel should follow when determining the quantity and purchase location for monthly or daily spot purchases. The Company made the changes referenced in Exhibit No.__(JRO-3) to help Southwest Gas personnel identify potential critical weather events or market pricing anomalies that could lead to supply disruptions or daily gas price increases.

Southwest Gas believes that these procedure and process changes are reasonable and prudent and may help to 1) identify market anomalies and critical weather events; 2) prepare for those conditions; and 3) reduce the potential for supply disruptions.

. . .

. . .

Q. 21 Did the Company experience any out of the ordinary events since the Commission last reviewed gas costs in Docket No. G-01551A-19-0055 that affected gas prices and overall gas costs?

A. 21 Yes. In February 2021, extreme cold weather gripped the central part of the United States. This cold weather event, commonly referred to as winter storm Uri, led to gas supply shortages and power outages in Texas, and caused a significant, and unprecedented, increase in daily natural gas spot market prices throughout the United States. Daily spot market natural gas prices for the areas where Southwest Gas routinely purchases gas supplies for its Arizona customers rose from slightly over $2.60/Dth at the beginning of February 2021 to prices that exceeded $300.00/Dth on February 17, 2021.

As a result of the market dynamics from Texas, there were substantial cuts to gas supplies Southwest Gas procured from the Permian Basin. Southwest Gas relies upon Permian Basin gas supplies to serve much of its Arizona customers. These supplies were obtained to meet Arizona customers' requirements during this time period.

After winter storm Uri subsided and EPNG's COC concluded, gas prices fell quickly, back to under $3.00/Dth by February 25, 2021. These price increases were unprecedented in my experience -- I personally had never seen daily gas prices that high in the San Juan and Permian production regions in the almost 30 years since the Federal Energy Regulatory Commission deregulated natural gas prices.

Exhibit No.__(JRO-6) shows the daily market prices for February 2021 Permian and San Juan Basin supplies and illustrates the dramatic increase in daily gas prices that occurred during winter storm Uri. The increase in daily gas prices caused Arizona gas supply costs for February 2021 to increase to previously unseen levels.

Despite purchasing and nominating gas supplies more than the forecasted demands of the Company's Arizona customers, the supply shortages in the Permian Basin caused a large portion of those gas supplies to be cut and unscheduled by EPNG and customer usage in Arizona exceeded the available supplies that were scheduled by EPNG. Arizona customers were never in jeopardy of losing service due to winter storm Uri and the ensuing gas supply shortages, EPNG's invoice to Southwest Gas for February 2021 gas flows initially included over $65 million in COC charges related to EPNG COC Event.

Q. 22 What was the magnitude of gas purchase costs made during February 2021?

A. 22 Total Arizona gas costs, including upstream pipeline transportation charges for February 2021 were approximately $191 million. By way of comparison, for the full year of 2020, Southwest Gas incurred approximately $133 million in gas costs and upstream transportation charges for Arizona customers. These gas cost and upstream pipeline charges are recovered through the Company's Monthly Gas Cost mechanism. Please refer to the Direct Testimony of Matthew D. Derr for additional information on this mechanism.

Q. 23 Were the Arizona gas purchases made during February 2021 reasonable and prudent?

A. 23 Yes. The Company needed to purchase those gas supplies to meet the Company's obligation to serve its customers' requirements.

Had Southwest Gas not purchased gas during winter storm Uri at the high daily market prices, it either would have been required to drastically curtail customer demand or face the potential for even higher COC charges during the EPNG COC Event. Southwest provided notices to customers voluntarily reduce usage[6] and did curtail some low priority loads.[7]

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[6] See Exhibit No.__(JRO-7).
[7] See Exhibit No.__(JRO-8) (Yuma Cogen).

The only market area storage facility available to Southwest Gas in Arizona is the Tucson LNG facility Southwest Gas prudently vaporized about 10,500 Dth (approximately five-percent of the LNG inventory in the tank), which resulted in gas cost reductions and potential COC charges of approximately $3 million.

Q. 24 What is the Arizona Price Stability Plan?

A. 24 The Arizona Price Stability Plan (APSP) refers to purchases that Southwest Gas previously made at fixed prices (or a combination of an index-priced supply and the purchase of a fixed-for-floating index price swap) as a method to reduce the volatility in customer rates. Southwest Gas suspended APSP purchases with the 2020/2021 gas portfolio year because: 1) the Company's purchased gas cost adjustor mechanism mitigates volatility in the monthly gas cost rates charged to customers; and, 2) APSP purchases only provide minimal additional volatility benefits. The Company discussed this change to the APSP with Utilities Division Staff on October 15, 2019 and this change was referenced in the Commission's order in Docket No. G-01551A-19-0055.[8]

Q. 25 If Southwest Gas did not suspend APSP purchases and instead continued to make APSP purchases, would the gas cost increase that occurred during winter storm Uri been reduced?

A. 25 No. The gas cost increase experienced during winter storm Uri was directly related to increases in the daily market prices for gas. The daily gas purchase quantity made during winter storm Uri at those high daily prices would have been the same with or without the suspension of APSP purchases. This is because the quantity of gas supplies the Company previously baseloaded under the APSP are essentially the same quantities the Company now baseloads and purchases under the Baseload Supply Plan (BSP).

[8] See Docket No. G-01551A019-0055, Decision No. 77850, 96:10 -20.

Q. 26 What substantive steps did Southwest Gas take to minimize the potential for EPNG's COC charges during winter storm Uri?

A. 26 Southwest Gas took the following steps to attempt to minimize EPNG's COC charges during winter storm Uri:

* Southwest Gas purchased and nominated gas supplies that were in excess of the forecasted usage for its Arizona customers;
* Southwest Gas purchased and nominated gas supplies off of Transwestern Pipeline that included supplies to the Germann delivery point directly reducing the risk of COC charges being incurred at EPNG's DSWG PHX Delivery Code (D-Code);
* Southwest Gas asked its customers to voluntarily reduce usage;
* Southwest Gas curtailed low priority gas usage;
* Southwest Gas provided EPNG timely notice of a force majeure;
* Southwest Gas liquefied LNG from the Tucson LNG facility reducing the quantity of gas delivered to Tucson from EPNG's system;
* Southwest Gas timely disputed the COC related charges EPNG applied to its February 2021 invoice by initiating a formal billing dispute with EPNG;
* Southwest Gas exchanged multiple letters with EPNG and had multiple conversations with EPNG personnel; and,
* Southwest Gas filed a complaint with the Federal Energy Regulatory Commission (FERC) alleging various claims and requesting that the FERC either determine that EPNG's tariff did not permit assessment of the COC charges or in the alternative require that EPNG waive the COC charges it included on the February 2021 invoice.

Further, Southwest Gas personnel discussed winter storm Uri and the Company's gas procurement activities with Commission staff on February 18, 2021 and provided follow-up information requested at that meeting in early March

2021.

Q. 27 What was the ultimate outcome of the Company's efforts to minimize the COC charges included by EPNG on the February 2021 invoice?

A. 27 Shortly after Southwest Gas and other EPNG customers filed complaints against EPNG at FERC[9], EPNG made a filing at FERC seeking authority to waive all COC related charges it previously assessed related to the COC during winter storm Uri. FERC granted EPNG's request on August 11, 2021, which mooted all the outstanding complaints filed at FERC by Southwest Gas and the other EPNG customers.

Q. 28 So the end result was that EPNG waived all of the COC charges?

A. 28 Yes. In the end, neither Southwest Gas nor its customers were required to pay any COC charges previously assessed by EPNG for activity during winter storm Uri.

V. CONCLUSION

Q. 29 Were the Company's gas supply purchases and transportation purchases and costs incurred during the Covered Period made pursuant to the Company's policies, processes, and procedures in place at the time of purchase?

A. 29 Yes. The Company made the gas supply purchases and utilized the transportation contracts in place during the Covered Period pursuant to the policies, processes, and procedures in place at the time of each purchase.

Q. 30 Does the combination of your prepared direct testimony and exhibits provide an affirmative demonstration of the reasonableness and prudence of the gas supply purchases and transportation purchases and costs incurred during the Covered Period?

[9] On June 22, 2021 the Commission filed a Notice of Intervention and Protest in Docket No. RP21-887 which was the FERC docket for Southwest Gas' complaint against EPNG.

A. 30 Yes. Prudent and reasonable gas supply and transportation acquisition for any utility consists of a policy, a process, and procedures that are appropriate for that utility, followed by adherence to the process and procedures to meet the goals set forth in the policy.

The Portfolio Selection Procedures and Gas Acquisition Policy Statement (Procedures and Statement), Exhibit No.__(JRO-2), provides a detailed view of the many steps that are appropriate for Southwest Gas to use in the creation of a reasonable and prudently acquired gas supply portfolio for its customers. The Procedures and Statement set forth the responsibilities of the various parties and departments in completing those steps for all categories of supply purchases, on an annual, monthly, and daily basis.

Exhibit No.__(JRO-4) sets forth the high-level policy followed by the Company when purchasing gas supplies and upstream resources for Arizona.

Exhibit No.__(JRO-5) provides the Arizona jurisdiction specific gas purchase strategies and criteria and provides further support that the Company has a reasonable set of policies and procedures in place to guide gas procurement for the Arizona jurisdiction.

Southwest Gas purchased its gas supply, procured upstream transportation resources, and managed and performed under its previously contracted for transportation resources during the Covered Period pursuant to the process and procedures set forth in Exhibit Nos.__(JRO-2) and (JRO-5), and with the information and knowledge available at the time purchases were made. The upstream transportation capacity in place during the Covered Period is essential for meeting current and future customer design-day demands. Further, the purchases for the Covered Period were consistent with this Commission's previously issued directives and orders. Consequently, the purchases and costs for the Covered Period are reasonable and prudent.

Q. 31 Does this conclude your prepared direct testimony?

A. 31 Yes.

SUMMARY OF QUALIFICATIONS
JOHN R. OLENICK

I hold a Bachelor of Science degree in Chemistry from the University of Nevada Las Vegas and a Juris Doctorate degree from the Williams S. Boyd School of Law, University of Nevada Las Vegas. I am licensed to practice law in the State of Nevada, the United State District Court for the District of Nevada, and the United States Court of Appeals for the Ninth Circuit.

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After leaving Nevada Power in November 1999, I entered law school. Starting in January 2002, I was employed by Ryan Marks Johnson & Todd, first as a law clerk where my responsibilities included drafting motions, oppositions, discovery requests and answers, researching legal issues, and drafting memorandum summarizing research and recommendations. After graduation and passing the Nevada Bar exam, I was promoted to Associate Attorney and my responsibilities included defending residential construction subcontractors in lawsuits involving construction defect claims.

In January 2005, I started at Morris Pickering & Peterson where I defended business entities in litigation concerning real estate escrow transactions, multifamily residential financing agreements, personal injury claims, products liability, and contract disputes.

In May 2007 I returned to work at Southwest Gas Corporation where I previously held the positions of Manager/Gas Purchases & Transportation and Senior Manager/Gas Purchases & Transportation. In February 2014, I was promoted to Director/Gas Supply. My responsibilities include soliciting, negotiating, and contracting for the gas supply and transportation resources required to meet the needs of the Southwest Gas Corporation's core customers. I am also responsible for nominations and confirmations of gas supplies on upstream interstate pipelines and the confirmation of all gas supplies at the delivery points into Southwest Gas Corporation's distribution system and the scheduling of those supplies to the Company's customers. Finally, I have responsibility for the support of the Gas Transaction System that Southwest Gas Company uses to track gas purchases, transportation capacity, nominations, confirmations, scheduled quantities, and the settlement of gas procurement transactions.

Securing Climate Benefit: A Guide to Using Carbon Offsets

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ACKNOWLEDGEMENT

We are grateful to the High Tide Foundation for supporting the development of this guidance and the accompanying web resource. The mission of the High Tide Foundation is to have a significant, measureable impact on climate change mitigation.

ADDITIONAL ACKNOWLEDGEMENTS

Thank you also to our many expert reviewers who helped to improve this guide. In particular, we thank Claire Carver (Colorado State University), Craig Ebert and Max DuBuisson (Climate Action Reserve), Barbara Haya (UC Berkeley), Anja Kollmus (Carbon Market Watch), Benjamin C Pierce (University of Pennsylvania), Lambert Schneider (Oeko Institute), Jerry Seager (Independent Expert), Mark Trexler (Climatographers), and Ruby Woodside (Second Nature).

Thank you to Amy Falcione from Big Picture Marketing for design templates. Thank you to Erika Barnett from GHGMI for formatting and design implementation for this guidance document and its companion website offsetguide.org. Thank you to Molly White for design assistance and for support in creating offsetguide.org.

Date of Publication: November 13, 2019

For an updated version of this guide, please see OffsetGuide.org

Please cite this document as *Broekhoff, D., Gillenwater, M., Colbert-Sangree, T., and Cage, P. 2019. "Securing Climate Benefit: A Guide to Using Carbon Offsets." Stockholm Environment Institute & Greenhouse Gas Management Institute. Offsetguide.org/pdf-download/*

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Title image credit: reforestation and restoration of degraded mangrove lands, sustainable livelihood and community development project in Myanmar.

HOW TO USE THIS GUIDE

You should use this guide in combination with www.OffsetGuide.org, which provides more detail on the topics covered in this guide. For example, the website expands on the following topics:

- Global warming potential and CO_2 equivalent
- Comparing offset credits with green power and other environmental instruments and investments
- Common types of offset projects
- What carbon offset programs do
- How to acquire carbon offset credits
- Achieving carbon neutrality
- Air Travel & Climate
- Concerns about carbon offset quality
- Additionality
- Avoiding social and environmental harms
- How carbon offset programs address social and environmental harms
- Domestic or Foreign Projects
- Conducting project due diligence when vetting offset projects

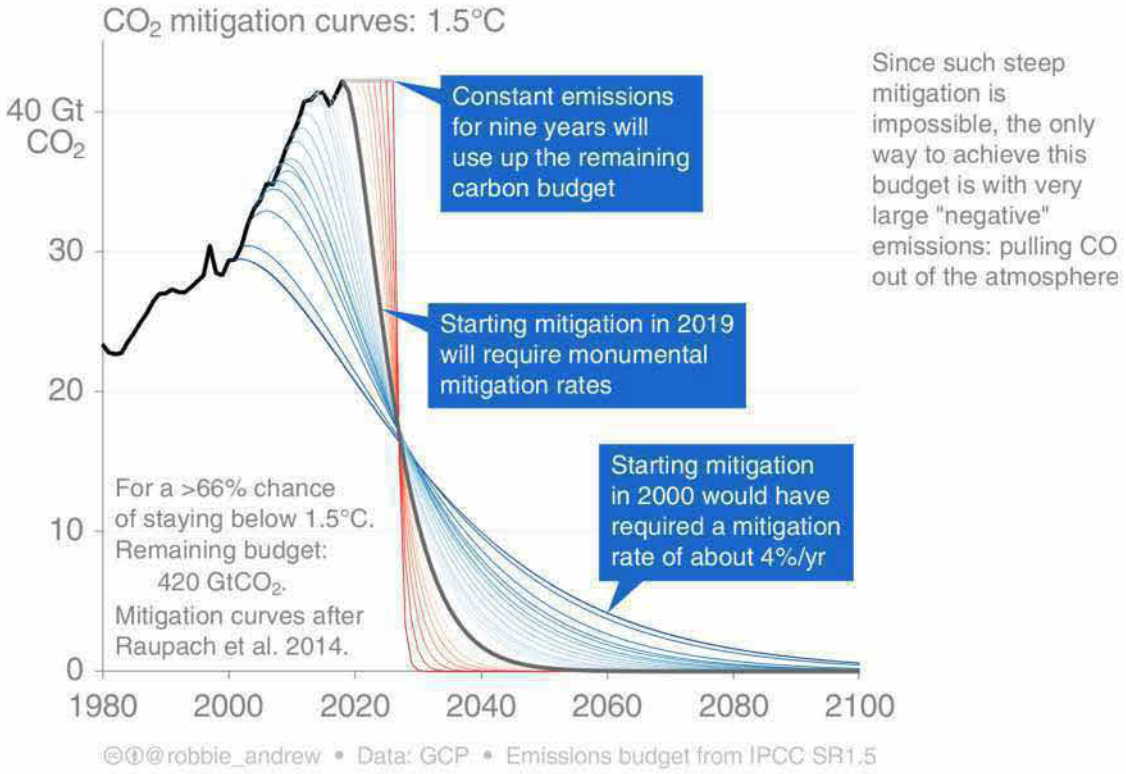
Internet links are provided throughout this PDF guide to access expanded and updated information. Links are presented as a clickable button ( ) at the end of each related section.

1. INTRODUCTION

According to the Intergovernmental Panel on Climate Change (IPCC), the world has until 2030 to cut human-caused carbon dioxide (CO_2) emissions in half (and cut other greenhouse gas emissions considerably) to maintain a 50% chance of avoiding the worst effects of climate change.[1] By 2050, CO_2 emissions will need to reach "net zero" – where emissions are in balance with removals[2] – to sustain this chance. Such reductions will require worldwide action by national and local governments, along with businesses and civil society (Figure 1).

The urgency is clear: incremental steps to address greenhouse gas (GHG) emissions will not be enough. Companies and organizations will need to use every tool at their disposal to achieve emission reduction goals. "Carbon offsets" are one such tool that – if used responsibly – can accelerate action to avert dangerous climate change.

Figure 1. Required emission reduction rates for limiting global warming to 1.5°C



This guide is for companies and organizations seeking to understand carbon offsets and how to use them in voluntary GHG reduction strategies. It may also be useful for individuals interested in using carbon offsets to compensate for their personal emissions.

We begin, in Section 2, with an explanation of the basics of carbon offsets, how to acquire them, and how they can (or should) be used in carbon management strategies. Section 3 addresses common criticisms of carbon offsets. Section 4 clarifies the essential elements of carbon offset quality, explains how carbon offset certifiers try to ensure that quality, and includes basic questions prospective buyers can ask about quality. Section 5 describes strategies buyers can use to avoid lower quality offset credits. This guide ends with Section 6, which provides links to further resources.

Fig. 1 source: Robbie Andrew (CICERO), http://folk.uio.no/roberan/t/global_mitigation_curves.shtml

2. UNDERSTANDING CARBON OFFSETS

The term "carbon offset" is shorthand for GHG emission reductions or removals that compensate for CO_2 emissions. In this section, we define carbon offsets, as well as explain the difference between offset credits, projects, and programs; detail how buyers can obtain offset credits; and describe how offset credits can (or should) be used in an organization's GHG management strategies.

2.1 WHAT IS A CARBON OFFSET?

The terms carbon offset and carbon offset credit (or simply "offset credit") are used interchangeably, though they can mean slightly different things. A carbon offset broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere. A carbon offset credit is a transferable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric tonne of CO_2, or an equivalent amount of other GHGs (see Box 1). The purchaser of an offset credit can "retire" it to claim the underlying reduction towards their own GHG reduction goals.

Box 1. Establishing a common denomination for different greenhouse gases

CO_2 is the most abundant GHG produced by human activities, and the most important pollutant to address for limiting dangerous climate change. However, human beings create and emit numerous other GHGs, most of which have a far greater heat-trapping effect, pound for pound, than CO_2. The most prevalent of these gases are methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). Fully addressing climate change will require reducing emissions of all GHGs. Scientists and policymakers have established "global warming potentials" (GWPs) to express the heat-trapping effects of all GHGs in terms of CO_2-equivalents (annotated as "CO_2e"). This makes is easier to compare the effects of different GHGs and to denominate carbon offset credits in units of CO_2-equivalent emission reductions.

Learn more about GWP

The key concept is that offset credits are used to convey a net climate benefit from one entity to another. Because GHGs mix globally in the atmosphere, it does not matter where exactly they are reduced. From a climate change perspective, the effects are the same if an organization: (a) ceases an emission-causing activity; or (b) enables an equivalent emission-reducing activity somewhere else in the world. Carbon offsets are intended to make it easier and more cost-effective for organizations to pursue the second option.

As explained later in this guide, offset claims are only defensible under a set of rigorous conditions. Although organizations sometimes use other kinds of investments to make GHG reduction claims – such as the purchases of "renewable energy credits" – these other instruments usually do not meet the criteria for effective carbon offset claims.

How do I compare offset credits with green power and other environmental instruments and investments?

2.2 CARBON OFFSET PROJECTS

Carbon offset credits can be produced by a variety of activities that reduce GHG emissions or increase carbon sequestration. In most cases, these activities are undertaken as discrete "projects." A carbon offset project, for example, may involve:

- Renewable energy development (displacing fossil-fuel emissions from conventional power plants);
- The capture and destruction of high-potency GHGs like methane, N_2O, or HFCs; or
- Avoided deforestation (which can both avoid the emission of the carbon stored in trees, as well as absorb additional carbon as trees grow).

Projects can range in scale from very small (e.g., reducing a few hundred tonnes of CO_2e per year) to very large (e.g., millions of tonnes reduced per year). Carbon offset credits are also sometimes produced by large-scale "programs of activities,"[3] which aggregate together many similar small projects or coordinated efforts across entire jurisdictions (such as in the case of avoided deforestation).[4]

What other types of offset projects are common?

In many cases, carbon offset projects produce social and environmental benefits beyond just GHG reductions. Depending on the project type, these "co-benefits" can include: improvements to community employment opportunities; enhanced air or water quality; biodiversity and habitat conservation; improved energy access; and better access to community health and education services. Many offset credit buyers seek projects that yield a broad range of benefits. Carbon offsets can thus be part of a comprehensive strategy for corporate social responsibility, combining efforts to address climate change with contributions to other public goods.

One challenge is that the types of projects that make for higher-quality carbon offsets tend to be those with the fewest co-benefits – and vice versa (see Section 5.2).

2.3 CARBON OFFSET PROGRAMS

Carbon offset credits are not a simple commodity. As with many products whose quality is difficult for casual buyers to assess, standard-setting organizations have been established to provide quality assurance for carbon offsets. These carbon offset programs[5] range from international or governmental regulatory bodies – such as the United Nation's Clean Development Mechanism (CDM) Executive Board, which oversees carbon offsets under the Kyoto Protocol – to independent non-governmental organizations (NGOs). Historically, governmental bodies certified offset credits for regulatory purposes ("compliance programs"), while NGOs primarily served voluntary buyers ("voluntary programs"); more recently, both types of programs have begun to serve both types of markets (Table 1). Each carbon offset program issues its own labelled "brand" of credit.

Offset programs perform three basic functions: (1) they develop and approve standards that set criteria for the quality of carbon offset credits; (2) they review offset projects against these standards (generally with the help of third-party verifiers); and (3) they operate registry systems that issue, transfer, and retire offset credits.

More detail on how carbon offset programs seek to ensure the quality of offset credits (along with some of their limitations) can be found in Section 4 of this guide.

Villagers learn how to use bio-gas as a fuel source for cooking supplied by small-scale anaerobic digesters. Image credit: Sichuan Rural Poor-Household Biogas Development Programme

Learn more about what carbon offset programs do

Table 1. Examples of major carbon offset programs

"Compliance" carbon offset programs (run by governmental bodies)	Geographic Coverage	Label used for offset credits
Clean Development Mechanism (CDM)[6]	Low & middle income countries	Certified Emission Reduction (CER)
California Compliance Offset Program	United States	Air Resources Board Offset Credit (ARBOC)
Joint Implementation (JI)[7]	High income countries	Emission Reduction Unit (ERU)
Regional Greenhouse Gas Initiative (RGGI)	Northeast United States	RGGI CO_2 Offset Allowance (ROA)
Alberta Emission Offset Program (AEOP)	Alberta, Canada	Alberta Emissions Offset Credit (AEOC)
"Voluntary" carbon offset programs (run by NGOs)	**Geographic Coverage**	**Label used for offset credits**
American Carbon Registry	United States, some international	Emission Reduction Tonne (ERT)
Climate Action Reserve (CAR)	United States, Mexico	Climate Reserve Tonne (CRT)
The Gold Standard	International	Verified Emission Reduction (VER)
Plan Vivo	International	Plan Vivo Certificate (PVC)
The Verified Carbon Standard	International	Verified Carbon Unit (VCU)

2.4 HOW TO ACQUIRE CARBON OFFSET CREDITS

Although there are some trading exchanges that facilitate offset credit transactions, most transactions occur "off-exchange", making price discovery difficult. The price of an offset credit can range from under US$1 to well over US$35. Prices tend to vary mostly by project type, generally with small differences between offset credit labels.[8]

Although offset credit buyers do not need to be familiar with every carbon offset program rule and procedure, they should have a basic understanding of how carbon offset credits are generated, transferred, and used. Purchasing options can depend on where in this "lifecycle" a buyer gets involved. In general, the earlier in the lifecycle, the better the nominal price and terms will be – but the greater the delivery risk and the longer it may take to actually receive offset credits.

The basic lifecycle for carbon offset credits looks like the following:

1. Methodology development. Before any GHG reductions can be certified for use as carbon offsets, they must be shown to meet carbon offset quality criteria. This process requires a methodology or protocol that is specific to the type of offset project generating the reductions. Most carbon offset programs have a library of approved methodologies covering a wide range of project types. However, project developers may also propose new methodologies for program approval and adoption.

Purchasing options: In rare cases, a prospective offset credit buyer may sponsor the development of a methodology for a new project type that is not already eligible in existing offset programs. This effort can be a resource-intensive – and risky – but could make sense for organizations with a strong interest in a new type of project activity.

2. Project development, validation, and registration. An offset project is designed by project developers, financed by investors, validated by an independent verifier, and registered with a carbon offset program. Official "registration" indicates that the project has been approved by the program and is eligible to start generating carbon offset credits after it begins operation (next step).

Purchasing options: Some offset credit buyers directly invest in an offset project in return for rights to (some portion of) the credits the project is able to generate. This approach can allow for deeper engagement and a fuller understanding of a project's strengths and weaknesses.

Alternatively, a commonly used purchasing option is to contract directly with a project developer for delivery of carbon offset credits as they are issued. Such contracts generally take the form of "Emission Reduction Purchase Agreements" (ERPAs). An ERPA provides project developers with confidence that they will be able to sell a reliable volume of offset credits. For buyers, the advantage is being able to lock in a price for offset credits that is typically lower than market prices (in exchange for some delivery risk). ERPAs can be structured in numerous ways, including as option contracts

3. Project implementation, verification, and offset credit issuance. An offset project is implemented, then monitored and periodically verified to determine the quantity of emission reductions it has generated. The length of time between verifications can vary, but is typically one year. A carbon offset program approves verification reports, and then issues a number of carbon offset credits equal to the quantity of verified CO_2-equivalent GHG reductions. Offset credits are generally deposited into the project developer's account in a registry system administered by the offset program.

Purchasing options: In some cases, project developers may have unsold offset credits for which they are seeking buyers. Purchasing directly from a project developer can avoid some transaction costs. However, projects with unsold credits (e.g., not contracted through an ERPA) may sometimes raise quality concerns (see Section 4.1.2).

4. Offset credit transfer. After they are issued, carbon offset credits can be transferred into different accounts in an offset program's registry. Transfers are usually undertaken as a result of a purchase or trade (so, after a purchase, the offset credits will be transferred from the project developer's account into an account owned by the purchasers). Offset credit buyers may then use the offset credits by retiring them (see next step), hold them, or transfer them to other accounts. Offset credits may change hands multiple times (getting transferred among multiple accounts) before they are ultimately retired and used.

Purchasing options: As with other commodities, numerous firms act as brokers for carbon offset credits. Brokers procure offset credits and then transfer (or retire) them on clients' behalf. Brokers can make it easier to identify a mix of offset credits from different project types, and facilitate large or small transactions. Some brokers sell offset credits from projects they have invested in, in addition to projects developed by others. This practice may provide efficiencies in pricing, but it can affect the ability of the broker to be impartial about the credits they sell.

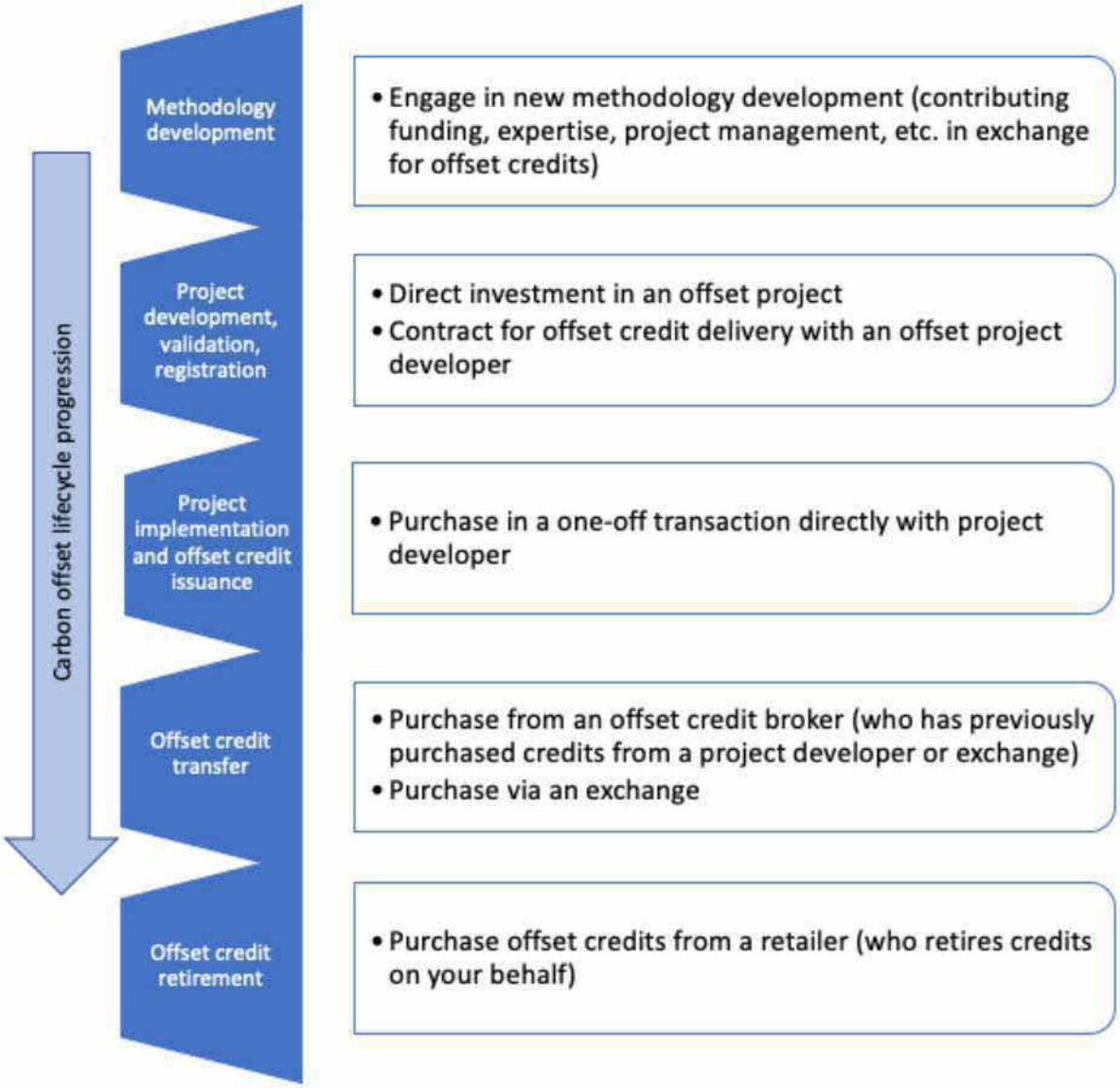
Another option is to purchase offset credits on an exchange. There are a number of environmental commodity exchanges – mostly in North America and Europe – that list carbon offset credits for sale and work with registries to enable transfers. Purchasing offset credits on an exchange can be relatively quick and easy, but it can be harder to obtain the information needed to evaluate the quality of these credits.

5. Offset credit retirement. Offset credit holders must "retire" carbon offset credits in order to use them and claim their associated GHG reductions towards a GHG reduction goal. Retirement occurs according to a process specified by each carbon offset program's registry. Once an offset credit is retired, it cannot be transferred or used (meaning it is effectively taken out of circulation).

Purchasing options: For buyers looking to acquire only a small number of offset credits (such as small companies or individuals), the most feasible option is to go through a retailer. Retailers can provide access to offset credits from a range of different projects, and will provide at least basic information about those projects. In most cases, the retailer will maintain accounts on carbon offset program registries, and will retire offset credits directly on a buyer's behalf.

Learn more about how to acquire carbon offsest credits

Figure 2. Carbon offset credit lifecycle and buyer purchase options at each stage



2.5 THE ROLE OF OFFSETS IN CARBON MANAGEMENT STRATEGIES

In principle, carbon offset credits offer a convenient and cost-effective way to reduce GHG emissions. Often, this means offset credits are used to compensate for (or "offset") an organization's GHG emissions, in lieu of reducing those emissions directly. For example, since most organizations find it impractical to completely eliminate their carbon footprint using only internal measures, carbon offsets offer the only practical way to claim "carbon neutrality." If your organization pursues carbon neutrality, however, it should still seek to use carbon offsets sparingly (Section 2.5.1).

In the future, international policy efforts could make it more difficult for organizations to establish valid voluntary offset claims (see Section 2.5.2). This could change how most buyers approach the use of offset credits. Instead of offsetting GHG emissions, for example, credits may be used to indicate an organization's charitable contribution to external climate change mitigation efforts. One indication of this shift in thinking is the increasing use of the term "carbon credit" rather than "offset credit" to refer to the commodity being purchased. In this guide, we continue to use the term "offset credit" since the underlying principles involved remain the same.

2.5.1 ACHIEVING CARBON NEUTRALITY

Carbon neutrality refers to achieving a net carbon footprint of zero.[9] The term is often applied to an entire organization (or committed individual), but can also be applied to a product or activity (such as air travel). Since it is not possible for most organizations or individuals to completely eliminate all GHG emissions associated with their activities and products, carbon neutrality is typically premised on the idea of using external GHG reductions to balance emissions that cannot readily be eliminated. Carbon offset credits are the primary tool for achieving such reductions.

Carbon neutrality goals are growing in popularity, and on their face are highly ambitious. Achieving "net zero" emissions by 2050, for example, is increasingly seen as the benchmark for a "science-based" GHG reduction target.[10] One risk, however, is that carbon neutrality can mask what is ultimately required to avert climate change. Given their ease of use, it can be tempting to rely on carbon offsets as a primary means for meeting a carbon neutrality goal. In fact, as originally conceived, carbon offset credits were seen primarily as a way to lower the cost of meeting a particular GHG target, including carbon neutrality.

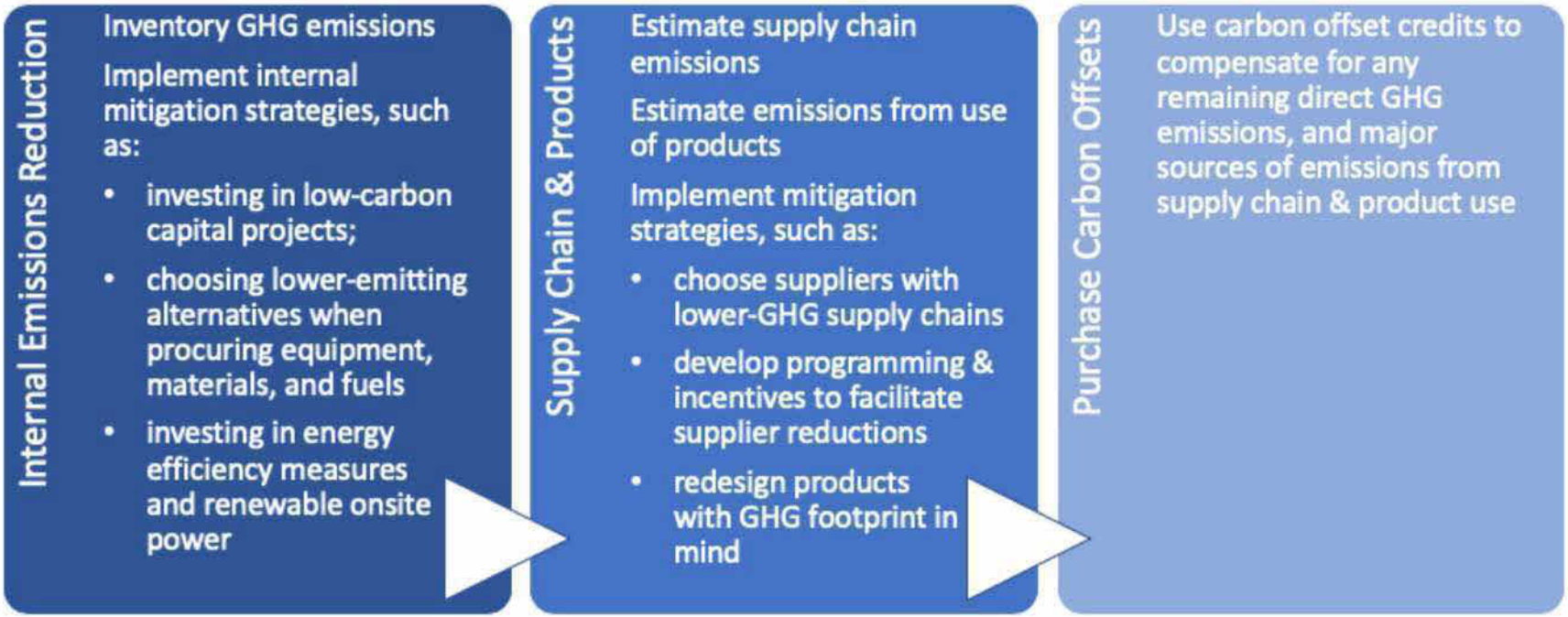
Under current circumstances, this approach to using carbon offsets would be a mistake. Collectively, all CO_2 emissions from burning fossil fuels must cease altogether well before the end of the century: there will be little room for anyone to "net out" their emissions using someone else's GHG reductions. Thus, although the idea of achieving zero net emissions is compelling and even necessary, the focus should be on reducing GHG emissions directly (and dramatically) in line with global mitigation goals. Arguably, organizations should only use carbon offsets on top of efforts to reduce their own emissions to near-zero by 2050.

A basic strategy would look like the following (Figure 3):

- Inventory your company's GHG emissions.[11]
- Implement internal mitigation strategies in line with global goals (for example, halving CO_2 emissions by 2030, and achieving net-zero emissions by 2050).
- Reduce supply chain emissions, such as by selecting suppliers with lower-GHG supply chains, and emissions from the use of consumer products, such as by designing energy-efficient products.
- Use carbon offset credits to cover any remaining GHG emissions from sources your organization owns or controls, and if possible, from your supply chain and product use.

Achieving carbon neutrality

Figure 3. Steps to achieving carbon neutrality



2.5.2 CARBON OFFSETS AFTER 2020: THE WORLD UNDER PARIS

The practice of carbon offsetting has arisen in a world where far too little is being done to address climate change. At a global level, relatively few organizations have taken meaningful action to reduce GHG emissions. As a result, for companies committed to taking action, it has not been hard to find low-cost carbon offsets. The potential supply of GHG reductions is huge, because there are so many sources of GHG emissions that face no legal or economic incentives to reduce.

The 2015 Paris Agreement could change this. For the first time, nearly every country in the world has identified explicit actions (i.e., "contributions") they agree to make to reduce GHG emissions and adapt to climate change. This approach is a major change from the Kyoto Protocol, where only industrialized countries committed to reduce emissions. Under Kyoto, offsetting was an explicit and prominent strategy: industrialized countries could fund offset projects in developing countries, providing them with needed investment and promoting sustainable development. In exchange, industrialized countries could more cheaply meet their obligations, by claiming the reductions achieved by these projects. Developing countries benefited from such an exchange, because they faced no obligations themselves and therefore gave nothing up in allowing emission reductions to be "transferred."

The Paris Agreement complicates this older picture considerably. The fact that every country has agreed to reduce emissions means there will be fewer opportunities for additional reductions – i.e., reductions that go beyond what countries have pledged (and would otherwise not happen in the absence of a carbon offset market - see Section 4.1). This does not mean the end of carbon offsetting. In fact, Article 6 of the Paris Agreement explicitly recognizes the possibility for international cooperation through the transfer of emission reductions. However, if a country allows an emission reduction to be claimed by another party (either another country or some other entity), it should no longer be able to count the reduction towards its own GHG target. The Paris Agreement has language expressly prohibiting such "double counting" among countries.

Currently, it is envisioned that double counting will be avoided through "robust" accounting methods (the language used in Article 6). Specifically, if a country transfers an emission reduction, it will adjust its GHG balance sheets so that the reduction is not counted toward its pledged "contribution," while a country receiving the transfer can apply the reduction to its own GHG balance sheet.[12] Similar accounting will likely be done for emission reductions funded by the international aviation industry, which has pledged to offset any increase in its GHG emissions after 2020.[13] In principle, the same methods could be applied to backstop claims for carbon offset credits purchased by private voluntary buyers.

Players in the voluntary carbon offset market are still sorting out what this will all mean. [14] Whatever happens, the criteria for what makes a quality credit will not change. In the remainder of this guide, we highlight some common concerns about carbon offset credits, explain the essential criteria for a "high quality" offset credit, and indicate what buyers can do to avoid lower-quality credits.

Air travel and climate

3. COMMON CRITICISMS OF CARBON OFFSETS

Carbon offsets are frequently criticized by the press and some environmental advocates. Some observers object to "market-based" approaches for solving environmental problems, and oppose carbon offsets on that basis. Even those who are open to such approaches, however, often have reservations about carbon offsets. Their concerns fall into two categories:

- How carbon offset credits are used
- The quality of carbon offset credits

Some criticisms are more valid than others, but many have at least some validity and are important for buyers of carbon offset credits to keep in mind.

3.1 CONCERNS ABOUT HOW OFFSET CREDITS ARE USED

Examples of criticisms:

- "Carbon offsets allow polluters to go on polluting" (i.e., they are a form of "greenwashing")
- "Carbon offsets are not a long-term solution and can 'lock in' high-carbon infrastructure"
- "Carbon offsets create an incentive to avoid regulating certain sectors and industries"

These kinds of criticisms are not so much about whether carbon offsets are a valid form of climate change mitigation, but rather whether they create "perverse" incentives. Carbon offsets were conceived as a way to facilitate investment in cost-effective mitigation options that organizations would otherwise not be able to access. The temptation, however, can be for organizations to use carbon offset credits to achieve all (or large parts) of their GHG reduction goals, rather than make the investments needed to significantly reduce their own carbon footprint. The counterproductive result can be that they continue to pursue high-emitting activities – and invest in high-emitting equipment and facilities – effectively "locking in" higher emissions over the long run. This concern is the primary reason that many observers advocate for treating carbon offsets as a complement to aggressive internal climate action, not a primary means of mitigation.

Another possible perverse incentive created by carbon offsets is to discourage needed regulation.[15] Regulations that require GHG reductions could deprive project developers of revenue from selling offset credits, because the reductions would no longer be "additional" (see Section 4.1). Project developers would likely resist such regulatory changes. From a climate policy perspective, therefore, carbon offsets have been viewed as an interim solution — a way to accelerate action in the near term, but one that must ultimately (and explicitly) be replaced by more comprehensive policy action in the future.

3.2 CONCERNS ABOUT CARBON OFFSET QUALITY

Examples of criticisms:

- "Carbon offset credits do not represent valid GHG mitigation; if they are used as a substitute for real climate action, they only make climate change worse."
- "Carbon offset projects have adverse impacts on local communities and may make other environmental problems worse."

These criticisms are probably the most immediate concern for most offset credit buyers. Carbon offset credits are of little use in mitigating climate change if they are not a valid substitute for an organization's own internal GHG reductions. Unfortunately, despite the efforts of carbon offset programs, a number of independent studies have identified serious problems with some carbon offset credits. For example, studies of the world's two largest offset programs – the Clean Development Mechanism (CDM) and Joint Implementation (JI), both administered by the United Nations under the Kyoto Protocol – suggest that up to 60-70% of their offset credits may not represent valid GHG reductions.[16] Other critiques have highlighted instances of carbon offset projects that harmed local communities or resulted in broader environmental damage.[17] An official report commissioned by the United Nations in 2012 catalogued many of the CDM's shortcomings and identified areas of potential improvement.[18]

These critiques are troubling and should give pause to prospective buyers of offset credits. Major carbon offset programs, however, have responded to at least some of the concerns raised by these studies.[19] These responses include amending quantification methodologies to prevent over-estimation of GHG reductions,[20]

Some species, such as bamboo, may rapidly sequester carbon, but planting non-native or invasive species of plants can lead to damaging outcomes. Photo source: Misha FroLove/Bigstockphoto.com

as well as reconsidering the eligibility of certain project types.[21] Nevertheless, it is still wise to approach the carbon offset market with healthy scepticism.

Buyers can employ a number of strategies to improve their likelihood of acquiring higher-quality offset credits. In the next section, we explain the essential elements of a "high-quality" carbon offset credit and indicate some basic questions buyers can use to vet potential purchases. In Section 5, we provide some general strategies for avoiding "low-quality" offset credits.

Concerns about carbon offset quality

4. WHAT MAKES A HIGH-QUALITY CARBON OFFSET?

The central idea behind a carbon offset is that it can substitute for GHG emission reductions that an organization would have made on its own. For this to be true, the world must be at least as well off when you use a carbon offset credit as it would have been if you had reduced your own carbon footprint.[22] **When people talk about the "quality" of a carbon offset credit, they are referring to the level of confidence one can have that the use of the credit will fulfil this basic principle.**

This concept- **frequently referred to as preserving "environmental integrity"**- sounds straightforward, but it is challenging to guarantee in practice. Quality has two main components. First and foremost, a quality offset credit must represent at least one metric tonne of additional, permanent, and otherwise unclaimed CO_2 emission reductions or removals. Second, a quality offset credit should come from activities that do not significantly contribute to social or environmental harms.

A variety of terms are frequently used to define quality criteria for carbon offsets, including that associated GHG reductions must be "real," "quantifiable," and "verifiable." Most of these terms have their origin in regulatory criteria established for air pollutant credits under the U.S. Clean Air Act (going back to 1977). However, these terms have distinct regulatory meanings under U.S. law that do not always translate meaningfully to carbon offsets. The term "real," for example, has no commonly agreed definition across carbon offset programs and standards, and is often used as a vague catch-all. [23]

For this guide, therefore, we have distilled the essential elements of carbon offset quality down to five criteria. In short, quality carbon offset credits must be associated with GHG reductions or removals that are:

- Additional
- Not overestimated
- Permanent
- Not claimed by another entity
- Not associated with significant social or environmental harms

Carbon offset programs were created with the intention of ensuring the quality of carbon offset credits (Section 2.3). In the remainder of this section, we describe the approaches carbon offset programs use to address the quality criteria listed above. As indicated in Section 3, however, many observers believe that carbon offset programs have a mixed track record. Part of the challenge is that offset quality is not black and white. The multiple criteria involved – plus the fact that critical criteria like "additionality" are a matter of confidence rather than absolute truth (see below) – means that quality exists along a continuum. Carbon offset programs, by contrast, are forced to make a binary decision: do they issue an offset credit or not? Most carbon offset programs will say that every credit they issue is equally valid, but buyers should feel justified in questioning this assertion. Think of scoring the quality of an offset on a 100-point scale. A carbon offset program may decide to issue credits for every GHG reduction that exceeds a score of 50. But as a buyer, is a score of 51 really "good enough"?[24]

Astute buyers will understand this difficulty and actively seek out higher quality offset credits. For each offset quality criterion

below, we highlight some questions that buyers can ask about specific offset projects to better ascertain their relative quality. Even for sophisticated buyers, however, getting detailed answers to these questions may be difficult. Thus, in Section 5, we identify a range of strategies buyers can use to steer clear of lower quality offset credits and improve the chances of acquiring higher-quality credits.

Tree planting carbon offset projects can provide many co-benefits to local communities. Image credit: The international small group and tree planting program.

4.1 ADDITIONALITY

GHG reductions are additional if they would not have occurred in the absence of a market for offset credits. If the reductions would have happened anyway – i.e., without any prospect for project owners to sell carbon offset credits – then they are not additional. Additionality is essential for the quality of carbon offset credits – if their associated GHG reductions are not additional, then purchasing offset credits in lieu of reducing your own emissions will make climate change worse.

Evaluating whether GHG reductions are additional can be deceptively difficult. The challenge is that GHG-reducing activities occur all the time.[25] Sometimes this is because the activities are required by law. Landfill operators in California, for example, are required to install equipment that captures and destroys methane. In other cases, investments that reduce emissions are made simply because they are profitable, without any consideration of carbon offset credits. An investment in energy-saving lighting, for example, can pay for itself through avoided energy costs. Similarly, renewable energy technologies, like wind and solar, are increasingly cost competitive with fossil fuels, without revenue from carbon offset sales. For an activity or project to be additional, the possibility to sell carbon offset credits must play a decisive ("make or break") role in the decision to implement it.

Additionality is a topic about which there is frequent misunderstanding. One commonly heard claim, for example, is that a project can be considered additional if GHG emissions are lower than they would have been "in the absence of the project." This is incorrect. If a project would have been pursued without the sale of carbon offset credits, it is not additional, even if it reduces

emissions below what they would have been in the project's absence. It is also common to hear discussion of different "kinds" of additionality, using terms like "financial additionality" or "regulatory additionality," as if these are distinct concepts. In fact, the only definition of additionality relevant to offset quality is the one presented here. Legal and financial considerations come into play when making determinations about additionality, but are not separate benchmarks for what it means for GHG reductions to be "additional."

Furthermore, while additionality is the most essential ingredient of carbon offset quality, its determination is subjective. Additionality is frequently talked about in binary terms: a GHG reduction is either additional or it is not. In practice, however, determining whether an activity is additional requires comparing it to a scenario without revenue from the sale of carbon offsets. Such a scenario is inherently unknowable, and must be determined using educated predictions (such as about future fuel, timber, or electricity prices). The determination can also fall prey to "information asymmetry": only a project developer can say whether the prospect of selling carbon offset credits was truly decisive, but regardless of the truth, every project developer has an incentive to argue that it was. **In light of these uncertainties, it best to think of additionality in terms of risk: how likely is a project to be additional?**

Additionality

4.1.1 HOW CARBON OFFSET PROGRAMS ADDRESS ADDITIONALITY

Carbon offset programs have developed two main approaches to determining the additionality of a project: "project-specific" and "standardized." Each of these approaches has strengths and weaknesses.

Renewable energy carbon offset projects like this wind farm, must be highly scrutinized for their additionality and the role of potential offset revenue incentivizing the project to occur. Image credit: Los Santos Wind Power Project.

Project-specific approaches rely on an analysis of an individual project's characteristics and circumstances to determine whether it is additional. For example, they may involve:

- A demonstration that the proposed project activity is not legally required (or that non-enforcement of the legal requirements is wide-spread); and
- An "investment analysis" of whether the project is financially attractive in the absence of offset credit revenues; and/or
- A "barriers analysis" demonstrating that at least one alternative to the project would not be prevented by (non-financial) implementation barriers (e.g., social, institutional, or technical barriers); and
- A "common practice analysis" demonstrating that the proposed project is not common practice, or is distinct from similar types of activities that are common practice.

Project-specific approaches can be effective when applied rigorously, but can also be time consuming. Moreover, they often require subjective judgments (such as in the evaluation of financial parameters or the identification of barriers) and strongly hinge on uncertain assumptions about the future (such as fuel prices). It is often challenging for offset program staff and verifiers to judge whether project developers are biasing these assumptions in their favor. All voluntary carbon offset programs rely heavily on project-specific approaches, except for the Climate Action Reserve (CAR).

"Standardized" approaches to determining additionality were developed in response to the perceived shortcomings of project-specific approaches. A standardized approach evaluates projects against a set of pre-determined eligibility criteria (e.g., performance benchmarks that—in principle—distinguish additional from non-additional projects). Standardized approaches require upfront analysis to establish these eligibility criteria. Their main advantages are that they can reduce the administrative burdens of making additionality determinations, and they reduce elements of subjectivity in assessing projects. Their main drawback is that they may be imprecise in distinguishing additional and non-additional projects. Of the major voluntary carbon offset programs, the CAR has been the primary adopter of standardized approaches,[26] although other programs (e.g. VCS) apply them to some project types.

For many project types, it can be difficult to define objective criteria that reliably screen out non-additional projects, while not mistakenly excluding truly additional projects. Consequently, standardized approaches are available for a smaller set of project types. For example, CAR, which uses a standardized approach, has adopted less than 20 protocols, in contrast to the VCS and Gold Standard, which incorporate over 200 project-specific methodologies/protocols.

4.1.2 QUESTIONS FOR BUYERS TO ASK ABOUT ADDITIONALITY

None of the program-administered screens for additionality are perfect. Some key questions to avoid lower quality projects include the following:

- Did the project secure a buyer for offset credits before implementation? Given the risks and uncertainties of the carbon market, it is rare for a project that truly needs offset credit revenue to go forward without first securing buyers for some or all of the credits it expects to produce. Forward contracts generally take the form of "emission reduction purchase agreements" (ERPAs). Although there are exceptions, if a project began implementation without an ERPA, its claims to additionality should be further examined.
- How large is the project's offset credit revenue stream compared to other revenue streams or cost savings achieved by the project? Claims of additionality are often tenuous if carbon offset revenues constitute a small portion of a project's total revenues. For example, if 95% of the total revenues for a renewable energy project derive from electricity sales and only 5% are from offset credit revenue, the project's additionality should be questioned.
- Would the project cease reducing emissions if it did not continue to receive carbon offset revenues? Even if a project's offset credit revenue is comparable to (or greater than) other revenue streams, those other revenues may be sufficient to cover costs – meaning that the project may continue reducing emissions even if it stopped selling carbon offset credits. While such projects are not necessarily non-additional -- the decision to implement the project, for example, may still have been based on the prospect of carbon offset sales – they may pose a higher risk of being non-additional.

Sometimes GHG reduction activities are required by law. Landfill operators in California, for instance, are required to install equipment that captures and destroys methane. Photo source: Panaramka/ Bigstockphoto.com

- If the project is not (currently) legally required, is there reason to believe that it is being undertaken in anticipation of future legal requirements (or to avoid triggering such requirements in the future)? Programs may differ in the extent to which they examine prospective legal requirements. For example, a landfill gas flaring project may not be currently required by law, but landfill owners may seek to implement such a project anyway if they anticipate being mandated to control landfill emissions in the future (e.g., as the landfill grows to where it exceeds a regulatory size threshold). Thus, they could claim that the project is additional today, even though it would be implemented anyway in the (near) future.

4.2 AVOIDING OVERESTIMATION

Suppose that, for every 50 additional tonnes of CO_2 that are reduced by an offset project, the project developer reports reducing 100 tonnes, and 100 offset credits are then issued to the project. Half of these credits would have no effect in mitigating climate change, and using them in lieu of reducing your own emissions would make climate change worse. Overestimation of GHG reductions can occur in several ways:

- Overestimating baseline emissions. The first – and most subtle – way GHG reductions can be overestimated is if a project's baseline emissions are overestimated. Baseline emissions are the reference against which GHG reductions are calculated, and are closely tied to additionality: they are the emissions that would have occurred in the absence of demand for offset credits.[27] Baselines are easier to determine for some types of projects than others. For a project that captures methane from a landfill and destroys it, the amount of methane that would have been emitted is generally equal to the amount that is captured and destroyed.[28] In contrast, there can be much greater uncertainty when estimating how many GHG emissions will be displaced on an electricity grid by a solar power project – leading to greater risk of overestimation if methods are not appropriately conservative.
- Underestimating actual emissions. Many kinds of carbon offset projects reduce, but do not eliminate, GHG emissions. A project's GHG reductions are quantified by comparing the actual emissions that occur after the project is implemented to its predicted baseline emissions. In the same way that baseline emissions can be overestimated, actual emissions can be underestimated – with both contributing to an overestimation of GHG reductions. One way actual emissions can end up underestimated is through measurement error. For example, determining the increase in the amount of carbon stored in trees in any given year is subject to measurement uncertainty, and sampling errors can lead to overestimating carbon sequestration (the equivalent of underestimating GHG emissions).
- Failing to account for the indirect effects of a project on GHG emissions (aka "leakage"). To quantify GHG reductions, actual and baseline emissions are determined for sources (or sinks) affected by a project. Often, however, a project will have both intended and unintended effects on GHG emissions. If quantification methods fail to account for GHG emission increases caused by the project at some sources (even indirectly), then the total net GHG reductions will be overestimated. Unintended increases in GHG emissions caused by a project outside of its boundaries are referred to as "leakage." The classic example is a forest preservation project that avoids the emissions caused by clearing one parcel of forest, but ends up shifting the production of timber through deforestation to other areas.
- Forward crediting. Although rare, offset credits may be issued for GHG reductions that a project developer expects to achieve in the future. Such "forward crediting" is usually problematic, because it can lead to an over-issuance of offset credits if a project fails to perform as expected.[29] It can also pose issues if future events (e.g., regulatory changes) lead to additionality or emission reduction ownership concerns.

Finally, to control for all these possible causes of overestimation, it is important to monitor and verify a project's performance.[30] It is important for measurement and data collection procedures – and for any calculations or estimates derived from these data – to be scientifically sound and methodologically robust. Furthermore, it is important for project monitoring data to be rigorously verified. Verification entails assessing the veracity of data provided by project developers, often through an audit of selected data samples. Carbon offset project developers have an incentive to report data that maximize the number of carbon offset credits they can sell. Verification helps to assure that reported data are accurate and do not overstate GHG emission reductions.

Forestry-based offset projects have the potential to shift deforestation from the project location to unprotected areas causing project leakage to occur. Image credit: Biofilica Resex Rio Preto – Jacundá REDD+.

4.2.1 HOW CARBON OFFSET PROGRAMS ADDRESS OVERESTIMATION

Carbon offset programs try to ensure that GHG reductions are not overestimated by requiring the use of detailed quantification methods specific to individual project types. In general, these methods prescribe:

- GHG accounting boundaries that define the GHG sources and sinks that must be considered in quantifying a project's baseline and actual GHG emissions. [31]
- Baseline emission estimation methods that prescribe how a project's baseline scenario is defined, including acceptable assumptions regarding baseline technologies and practices.
- Monitoring requirements that prescribe the data to be collected for predicting baseline emissions and quantifying a project's actual emissions. These methods also specify how to conduct measurements, what kinds of estimates are acceptable, and what calculation formulas must be used. [32]

Importantly, carbon offset programs require verification by independent, third-party verifiers, who check that projects have properly applied prescribed quantification methods (see Box 2). In most cases, offset credits are only issued after GHG reductions or removals have already occurred and been verified.

Finally, offset programs also limit the crediting periods during which projects can generate creditable GHG reductions. Crediting periods are typically from 7 to 10 years, which is often shorter than the operational lifetime of a project's equipment. Programs generally allow crediting periods to be renewed (usually one or two times, depending on project type), as long as a project remains eligible under its standard. [33]

Box 2. What do carbon offset project verifiers do?

Third-party verifiers have two main responsibilities in the context of a carbon offset program. First, they perform project validation, which entails confirming that a proposed project meets a program's eligibility criteria. Second, verifiers conduct project verification, which entails confirming that project monitoring data was collected in accordance with a program's requirements, as well as reviewing calculations to confirm that the project's GHG reductions were estimated according to the approved methodology/protocol.[34] The verification process usually involves a site visit combined with auditing (or sampling) of monitoring data to confirm with "reasonable assurance" that the data are accurate.

Verifiers are generally paid by project developers, which creates a conflict of interest. To reduce the risk of bias, most carbon offset programs review verification arrangements, require verifiers to legally certify that they are free of conflicts, and limit the number of times that the same verifier can verify a project. Programs also regularly audit the work of verifiers to ensure their objectivity.

4.2.2 QUESTIONS FOR BUYERS TO ASK ABOUT OVERESTIMATION

Examining in detail how a project's GHG reductions were quantified can be difficult and time-consuming. However, two relatively straightforward questions can point to areas of potential risk:

- Does the project apply any deviations from the protocol/methodology and appropriately justify these deviations? Several carbon offset programs allow projects to deviate from a protocol's requirements if the project developer can justify an alternative approach to program staff. Deviations are often temporary, and typically involve situations where a project is not able to produce monitoring data according to prescribed methods, but is able to estimate them using alternative methods. Programs will generally try to ensure that alternative methods are more conservative than what a protocol prescribes. Offset credit buyers may nevertheless wish to review cases where a deviation was applied for and approved.
- Are there any gaps or other discrepancies in project monitoring data, and have these discrepancies been properly explained and addressed? Major carbon offset programs have rules and procedures to address gaps or discrepancies in project monitoring data (for example, if a flow meter temporarily breaks down and fails to collect data for a period of time). Such instances should be transparently reported, along with methods to address them. If monitoring reports and relevant data are not available and easily accessible (usually online), this lack of transparency should raise concerns about overestimation.

4.3 PERMANENCE

One challenge with using carbon offsets to compensate for CO_2 emissions is that the effects of CO_2 emissions are very long-lived. Most of the carbon in a tonne of CO_2 emitted today will – eventually – be removed from the atmosphere. However, around 25% remains in the atmosphere for hundreds to thousands of years.[35] To compensate for this, offset credits must be associated with GHG reductions that are similarly permanent. If a GHG reduction or removal is "reversed" (i.e., GHGs are subsequently emitted so that no net reduction occurs),[36] then it no longer serves a compensatory function.

For most kinds of carbon offset projects, reversals are either physically impossible or extremely unlikely.[37] The greatest risk occurs with projects that store carbon in "leaky" reservoirs. The classic example is a forestry project that keeps carbon in trees and soils (and adds to those carbon stores over time, as the forest grows). Such a project will reduce CO_2 emissions – and increase removals – if the trees would have been cut down otherwise. But, if a fire later burns down the project's trees, some or all of the carbon may be (re)emitted, leading to a reversal.

One common misunderstanding is that – for carbon offsets – "permanent" means something less than hundreds or thousands of years. A standard convention, for example, is that carbon only needs to be kept out of the atmosphere for 100 years (or less, in some cases) to be considered "permanent." Such compromises are frequently made in the context of carbon offset programs seeking to balance technical requirements with the practical constraints of insuring against reversals. But, scientifically, anything less than a full guarantee against reversals into the indefinite future is not "permanent."

4.3.1 HOW CARBON OFFSET PROGRAMS ADDRESS PERMANENCE

Most carbon offset programs have established "buffer reserves" to address the risk of GHG reductions being reversed.[38] Under this approach, offset credits from individual projects are set aside into a common buffer reserve (or "pool"), which functions as an insurance mechanism. Reserved credits can be drawn upon to compensate for reversals from any project. If a reversal occurs, credits are retired or cancelled from the buffer reserve on behalf of the project's buyers. The number of credits a project must contribute to the buffer reserve is usually based on an assessment of the project's risk for reversals. Over finite time periods, this approach can fully cover catastrophic losses affecting individual projects, as long as the buffer reserve is sufficiently stocked with credits from projects across an entire program.

Carbon offset programs also encourage – or require – projects to reduce the risk of reversals. Some programs, for example, allow lower buffer reserve contributions if project developers implement risk mitigation measures (such as fuel treatments, and the use of conservation easements or other legally binding restrictions on land use). Other programs make reversal risk mitigation a requirement for eligibility.

Buffer reserves can effectively compensate for reversals due to natural disturbance risks—such as fire, disease, or drought affecting forests and soils. However, they present a "moral hazard" problem if used to compensate for human-caused reversals, such as intentional timber harvesting.[39] If a landowner faces no penalty for harvesting trees for their timber value, for example – because any reversals caused by harvesting would be compensated out of a buffer reserve – then the landowner could face a strong incentive

to harvest. Offset programs approach this issue in different ways. Some programs use buffer reserves only to compensate for natural disturbances, and impose contractual obligations on landowners to compensate for any "avoidable" reversals (including reversals due to negligence or willful intent). Others will cover such reversals using buffer reserves, but will not issue further offset credits to a project until the reversal is remedied.

4.3.2 QUESTIONS FOR BUYERS TO ASK ABOUT PERMANENCE

No reversal risk can be insured against in perpetuity. Over the very long run, the chance of reversal for projects that store carbon in trees and soils approaches 100%. Buyers should keep this in mind when considering offset credits from these kinds of projects. As a rule of thumb, if your goal is strictly to offset GHG emissions, avoiding reversible GHG reductions altogether is the safest approach. However, addressing emissions from agriculture, forestry, and land use is critically important for mitigating climate change globally – and these kinds of projects often have desirable co-benefits. If your primary goal is to contribute to mitigation efforts (not offset per se), then purchasing credits representing additional GHG reductions from these projects can be a great choice.

Assuming some risk of reversibility is acceptable, questions for buyers to consider include:

- Does the project have a formal plan for managing and reducing reversal risks, and is this plan being followed? Higher quality carbon sequestration projects will have management plans in place to lower the risk of reversals. These plans may cover physical measures like thinning or other treatments to reduce the risks of fire and disease in forests; financial management practices to reduce risk of project failure or bankruptcy; and/or easements, legal restrictions, or other measures to guard against over-harvesting or land conversion. Projects with strong plans, along with implementation and enforcement provisions, are likely to have higher quality offset credits.
- How long is "permanence" guaranteed by the offset program that issued the credits? Offset programs differ significantly in terms of the length of time that they will guarantee compensation for reversals. The majority do so only through the end of a project's lifetime, which under some programs may be as short as 10 years. Other programs offer a minimum guarantee of 100 years from the time a credit is issued. Offset programs are not always transparent about what their minimum guarantee is, so it is worth inquiring either with project proponents or directly with program staff. The longer the guarantee, the higher the relative quality of the offset credits.

4.4 EXCLUSIVE CLAIM TO GHG REDUCTIONS

Carbon offset credits must convey an exclusive claim to GHG reductions. Imagine if two different companies laid claim to the same 100 tonnes worth of CO_2 reductions. Together they would claim a total of 200 tonnes of reductions, but the actual reduction would only be 100 tonnes. Again, climate change would be made worse, compared to a situation where both companies simply reduced 100 tonnes of their own emissions. This type of "double counting" can happen in three ways:[40]

- **Double issuance** occurs if more than one offset credit is issued for the same GHG reduction. For example, a carbon offset program can mistakenly issue two credits to the same project for one tonne of CO_2-equivalent reductions. More likely, however, is that a program issues credits to two different projects, each of which claims the same reduction. An example would be if both the producer and consumer of biofuels claim GHG reductions associated with using the same liters of fuel – and a program issues offset credits to both of them without realizing the overlap. Established carbon offset programs are generally good at avoiding this error within their system, but a somewhat greater risk is that two different programs issue offset credits for these kinds of overlapping claims (not realizing that another program has recognized the same reductions).
- **Double use** occurs if two different parties count the same offset credit towards their GHG reduction claims. Again, most carbon offset programs have procedures to prevent this from happening. The most likely way for it to occur is for an unscrupulous seller to represent to multiple buyers that the credit was retired on their behalf. To avoid such fraud, it is essential for carbon offset programs to require that the purpose of any offset credit retirement is clearly recorded in their registry systems – including on whose behalf the retirement was made.
- **Double claiming** can happen if offset credits are issued to a project, but another entity (e.g., a government or private company) then counts the same GHG reductions towards its own GHG reduction goal. For example, double claiming would occur if an energy efficiency project obtains offset credits for reducing emissions at a power plant covered by a (regulatory or voluntary) emission reduction target. In this case, both the project and the power plant would claim the same reduction: the project through offset credits, and the power plant, through a reduction of emissions relative to its target. Such overlapping claims must be carefully avoided. As described in Section 2.5.2, a potentially significant double claiming issue could arise under the Paris Agreement. Specifically, unless governments agree not to count an offset project's GHG reductions towards their national mitigation targets, the reductions will effectively be double claimed.

4.4.1 HOW CARBON OFFSET PROGRAMS ADDRESS EXCLUSIVE CLAIMS

Carbon offset programs apply a number of methods to ensure that offset credits convey an exclusive claim to GHG reductions.

Double issuance is avoided primarily by:

- Ensuring that offset credits are only issued after program approval of emission reduction verification reports and other supporting documentation;
- Checking that the accounting boundaries used to quantify GHG reductions for different projects do not overlap
- Actively monitoring project registrations – including at other programs—to check that a project is not issued credits by more than one program for the same emission reductions[41]

Double use is avoided primarily through registry systems that assign unique serial numbers to individual offset credits, track their transfer and ownership, and record the purpose of their use and retirement.[42]

Double claiming is avoided though:

- Restricting the eligibility of project types (e.g., excluding those are known to be subject to GHG reduction mandates or competing claims); and/or
- Requiring project developers to sign legal attestations asserting exclusive claims to any credited emission reductions, and agreeing to legally convey such claims to the buyers of offset credits.

Offset programs are still deliberating on how to reconcile competing claims for GHG reductions that are covered by countries' climate action pledges under the Paris Agreement (see Section 2.5.2).

4.4.2 QUESTIONS FOR BUYERS TO ASK ABOUT OWNERSHIP CLAIMS

Although carbon offset programs generally have effective measures in place to assure that the emission reductions are not double counted, there are still some steps that credit buyers should take to make sure they have an exclusive claim to emission reductions. Key questions to ask include:

- When offset credits are retired, is the purpose of the retirement clearly indicated in a carbon offset program registry? Buyers should ask to see proof of offset credit retirement on the relevant registry – including certificate numbers or a transaction ID that match the quantity purchased – along with a clearly identified purpose and the beneficiary of the retirement.
- Were the offset credits issued for indirect emission reductions? Ownership claims are harder to police where they involve indirect emission reductions (i.e., reductions that occur at sources not owned or controlled by the project owners). Claims to these emission reductions are inherently riskier because there is always a chance that the entities who do own or control the sources may claim the reductions as well. Major carbon offset programs generally try to prevent conflicting claims by having project owners legally attest to having an exclusive claim to credited reductions. However, it can be difficult (if not impossible) to determine exactly where indirect reductions occur, making the truth of such attestations difficult to verify. Where risks of double claiming seem significant (for example, if GHG reductions occur in sectors with significant voluntary commitments or regulatory obligations), buyers should avoid offset credits associated with indirect reductions (e.g., from projects that displace fossil fuel emissions on an electricity grid).

4.5 AVOIDING SOCIAL AND ENVIRONMENTAL HARMS

Finally, for a project to produce high quality offset credits, it should not significantly contribute to social and environmental harms. For example, a project should demonstrate it complies with all legal requirements in the jurisdiction where it is located. Depending on the type of project and the jurisdiction where it is located, however, additional reviews and safeguards may be necessary to guard against negative outcomes unrelated to GHG emissions.

Avoiding social and environmental harms

4.5.1 HOW CARBON OFFSET PROGRAMS ADDRESS SOCIAL AND ENVIRONMENTAL HARM

Carbon offset programs generally have environmental and social safeguard policies designed to reduce the risk of any detrimental effects from registered projects. Nearly all require (and verify) that projects are in compliance with applicable legal requirements. Most offset programs also require local stakeholder consultations as part of the project approval process, and have established grievance mechanisms to address complaints about projects after implementation. Finally, some programs actively require that projects demonstrate social and environmental co-benefits (and not just avoid harms), as well as monitor and report on these benefits.

There are a number of "add-on" certification schemes focused on the social and environmental impacts of carbon offset projects. Organizations like the Climate, Community & Biodiversity Alliance (CCBA) and SOCIALCARBON, for example, certify the added co-benefits achieved by offset projects (but do not otherwise address offset quality).

How carbon offset programs address social and environmental harms

4.5.2 QUESTIONS FOR BUYERS TO ASK ABOUT SOCIAL AND ENVIRONMENTAL HARMS

Asking the following questions can help reduce the risk of purchasing offset credits from harmful projects:

- Prior to implementation, did the project developers engage and consult with local stakeholders potentially affected by the project? Stakeholder consultation can be particularly important in developing countries, where there are often fewer regulatory safeguards. If stakeholder outreach was not undertaken, this failure should raise concerns, though the seriousness may depend on the type of project involved and where it is located. Some types of projects pose fewer risks to local communities than others.
- Has the project received any program or third-party certifications affirming its environmental or social co-benefits? Generally, such certifications (e.g., from the CCBA; SOCIALCARBON; or offset programs themselves) can provide added assurance that a project will not cause harm and ensure that project developers have taken into account the concerns

of local stakeholders. Projects that have not received any co-benefit certification do not necessarily pose a high risk of harms, but it may be useful to inquire with project developers about why they did not seek certification, if it was an option.

- What has the project done to minimize risks and reduce potential harm? Annex 1 (also available at offsetguide.org) contains a list of general project types and identifies those for which the risk of social or environmental harms may be significant. Where there is significant risk, it is crucially important to understand a project's specific circumstances, how it has addressed potential risks and the concerns of local stakeholders, and what mechanisms it has in place to both avoid harms and compensate for them if they occur. The CCBS, for example, requires ongoing community impact monitoring associated with forestry projects.

Domestic or foreign projects

Agriculture-based carbon offset projects can create job opportunities through increased management intensity. Image credit: The international small group and tree planting program.

5. STRATEGIES FOR AVOIDING LOWER-QUALITY OFFSET CREDITS

As the prior sections make clear, carbon offset credits are not a typical commodity. Although carbon offset programs provide some assurance, purchasing high quality offset credits is not as simple as buying any "certified" credit issued by an offset program. It is common to tell credit buyers to "do their homework," and indeed such advice is appropriate for organizations with the time and resources to do so. In this section, we describe both thorough and simpler strategies for steering clear of lower-quality offset credits.

5.1 VETTING OFFSET PROJECTS

As indicated in the prior section, buyers can ask basic questions about offset projects that may help screen out lower quality options. In most cases, project developers and offset credit owners should be forthcoming with answers to such questions (if they are not, it is a red flag). For more sophisticated buyers or those with more resources, a fuller list of offset project "due diligence" questions can be applied.

How do I conduct more rigorous project due diligence?

One option is to engage the services of consultants or trusted retailers to examine projects, navigate different options, and put together a portfolio of offset credits that meet a buyer's goals (with respect to location, project type, offset quality, and co-benefits, for example). It is often a good idea to work with someone who has a detailed understanding of the sectors or project types being considered, which in some cases could involve enlisting multiple experts.

5.2 STICKING TO LOWER-RISK PROJECT TYPES

Although many kinds of projects can deliver GHG reductions, some types of projects have a harder time meeting essential carbon offset criteria than others. It is generally easy to show that industrial gas destruction projects are additional, for example: as long as they are not required by law, there are few if any reasons to undertake them aside from generating carbon credits.[43] For many renewable energy projects, on the other hand, careful scrutiny is required to determine whether the prospect of carbon credit sales played a decisive role in their implementation (and even with such scrutiny, it can be hard to be certain – they are often on the margin of viability with energy sales revenue alone).

Perhaps the easiest way to reduce the risk of buying low-quality offset credits is to restrict purchases to credits that come from lower-risk project types. Annex 1 (also available at offsetguide.org) provides an overview of the relative offset quality risks associated with common types of carbon offset projects.

There are two potential drawbacks to this approach. First, as Annex 1 indicates, there are only a handful of project types

that have low environmental integrity risks as a class. Second, the kinds of projects that can most easily meet environmental integrity requirements tend to be projects that offer the least in terms of environmental and social co-benefits – and vice versa. Often, a buyer must choose between a project type with lower quality risks and one with greater co-benefits. A project that avoids N_2O emissions at a nitric acid plant, for example, will generally be highly additional, easy to quantify, will pose no ownership or permanence concerns, and will not cause social or environmental harms – but it will do little to enhance people's livelihoods or otherwise improve the environment. An agroforestry project that sequesters carbon in trees across many small farms, on the other hand, may yield a multitude of local benefits – but its GHG impact will be harder to quantify, and the carbon stored in trees may not be permanent. These kinds of trade-offs can be observed in Annex 1, which also identifies project types that offer the greatest potential for social and environmental co-benefits.

5.3 "DISCOUNTING" OFFSET PURCHASES

One strategy to address quality risks is to simply retire extra offset credits. For example, to compensate for 100 tonnes of CO_2 emissions, a buyer could purchase and retire 200 offset credits from a range of different projects. This approach is commonly referred to as "discounting."[44]

Although this strategy does not address quality directly, it hedges against the risk that some offset credits may be associated with GHG reductions that are non-additional, over-estimated, non-permanent, or claimed by others. It can also help buyers focus on reducing their own emissions, since it effectively increases the cost of offsetting.

While discounting can be part of a responsible strategy for using carbon offsets, it should not be done in the absence of other methods to check for offset quality. Doubling the purchase of non-additional GHG reductions still contributes nothing to climate change mitigation!

Clean cookstoves reduce CO_2 through more efficient fuel usage while reducing indoor air pollution and providing financial savings to residents. Image (left) credit: Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America.

5.4 WEAKER METHODS: RELYING ON PRICE OR VINTAGE

In many markets, "cheap" is often synonymous with "low quality." Very cheap offset credits can indeed be a sign of low quality, especially for newer projects. If a project is selling offset credits for a price below US$1-2 per tonne (i.e., close to the transaction cost of getting a project developed, registered, and verified) then the case for additionality is probably weak; it can be hard to argue that the project truly depended on offset credit revenue for its implementation. However, some offset project types with high environmental integrity can produce GHG reductions at relatively low cost (e.g., industrial N_2O destruction or avoidance projects).

The inverse argument – that higher prices correlate with higher quality – is not reliably true either. Truly additional offset projects will have a higher intrinsic cost for generating GHG reductions, and will therefore need to charge a higher price for offset credits to be financially viable. However, there is nothing to prevent non-additional projects from also charging high prices, assuming they can find a gullible buyer. These projects may end up crowding out projects with higher actual costs. Looking only for higher-priced offset credits (without looking at other variables) is therefore not a wise strategy.

The "vintage" of an offset credit can refer either to the year in which it was issued, or the year in which its associated GHG reduction occurred (for some kinds of offset projects, there can be a significant lag between the latter and the former, because of longer verification cycles, e.g., with forestry projects). The vintage of an offset credit does not necessarily indicate anything about its quality.

However, older *issuance* vintages may present a quality concern where the following conditions are true:

- The offset credits under consideration have remained unsold for a long time; and/or
- The offset credits are being sold directly by the project developer, where the developer:
  - Did not contract with a dedicated offset credit buyer upfront (e.g., under an ERPA); and/or
  - Has carried forward a significant number of unsold offset credits; and
  - Has continued to operate the offset project for several years despite the lack of offset credit sales.

6. CONCLUSION

Recent years have seen a surge in interest in carbon offsets, and this is a good sign. It suggests public attention to climate change is growing, at a time when action to address it is more urgent than ever. As we make clear in this guide, offset credits are far from a perfect tool. If used carelessly, carbon offsets could slow progress on climate change and amount to little more than greenwashing. However, used responsibly, they can accelerate action on climate change beyond the slow pace that has so far been set and enabled through government policies.

Using offset credits responsibly requires, first, a strong plan for reducing one's own greenhouse gas emissions. Simply buying credits instead of taking more direct and aggressive action – flying less, for example, or investing in improving the energy efficacy of your buildings, equipment, and vehicles – is not defensible given the strong need for aggressive action in all areas of human activity.

Responsible use also requires spending time to understand and seek out high-quality credits. Carbon offset programs provide a necessary level of quality assurance for the credits they issue; you should avoid offsets that have not been certified by an established program. But, whether this assurance is sufficient is another question. As explained in Section 4, whether a carbon offset has "environmental integrity" is not a binary question. Quality exists along a continuum defined by the level of confidence one has in an offset project's additionality (first and foremost), as well as its quantification, permanence, exclusive claim to emission reductions, and avoidance of social and environmental harms. The issuance of an offset credit signifies – or should signify – that a project meets a minimum quality threshold. However, offset programs do not have spotless track records. You should not equate meeting a minimum threshold with high confidence in environmental integrity. It is important to understand the projects you are buying from, ask questions about key criteria (like whether a project has other revenue streams), and stick to project types that are more likely to fulfill basic quality requirements (as indicated in Annex 1).

Finally, voluntarily using carbon offsets to accelerate climate action is admirable, and arguably even necessary – there is no single "silver bullet" approach to solving climate change. However, buyers should never neglect the need for ambitious governmental policy responses. Using high quality offset credits to make a claim of carbon neutrality – even a highly defensible claim – is a detriment to climate action if it distracts companies, customers, and other stakeholders from pushing for stronger regulation and carbon pricing. Voluntary action cannot supersede policy action! And, coordination between voluntary actors and governments will be essential for ensuring a strong collective response to climate change. Carbon offsets should be seen as one element of this collective response, not a solution by themselves.

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We welcome your questions or any feedback you have about this guide. Please see www.offsetguide.org for updated guidance.

You may email GHGMI at info@ghginstitute.org

ANNEX 1: OFFSET PROJECT TYPES AND RELATIVE QUALITY RISKS

Some types of carbon offset projects have an easier time meeting essential carbon offset criteria than others. In the following tables, we distinguish between "lower risk" project types, where individual projects will frequently meet all offset quality criteria, and other project types, where more caution may often be necessary. For each project type, we indicate in the tables whether meeting a particular criterion could be relatively difficult and may therefore be of particular concern when considering an offset credit purchase. In Tables 3-5, if a cell is left blank, then the criterion is not a major concern for that project type.

Table 2. Relative offset quality risk for different project types

Lower risk	Medium risk	Higher risk
• CO_2 usage • Methane destruction (w/o utilization) • N_2O avoidance from nitric acid production • N_2O – adipic acid* • Ozone-depleting substance (ODS) destruction	• Methane capture and utilization • Methane avoidance • Energy distribution • Energy efficiency, household demand side • PFCs & SF_6 avoidance/ reuse • Renewable energy, small scale	• Agriculture • Biomass energy • Cement production • Energy efficiency, industrial demand side • Energy efficiency -- supply side • Forestry & land use • Fossil fuel switching • Fugitive gas capture or avoidance • Low-carbon transportation measures • Renewable energy, large scale

* Studies have found potential concerns with N2O avoidance projects at adipic acid plants. In principle, however, these could be lower risk projects if appropriate methodologies are applied.

Table 3. Lower risk project types

Project Type	Sub-Types Included	Additionality	Quantification & Leakage	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
CO_2 usage	Use of CO_2 from biomass or industrial tail gases to replace fossil or mineral CO2 in industrial applications				
Methane destruction	Coalmine ventilation air methane (VAM) destruction				Harms: Could be seen as supporting coal industry and therefore not a project type consistent with long-term climate goals.
	Landfill gas flaring	Varies by location. Projects are likely additional in most parts of the developing world. In developed countries, including the United States, some projects are pursued to avoid triggering regulatory requirements.	Some potential for baseline uncertainties (e.g., how much methane would have been generated in the absence of a project), but most are addressed through program quantification & eligibility rules.		Benefit: May reduce odor issues for communities near landfills.

Project Type	Sub-Types Included	Additionality	Quantification & Leakage	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
N_2O avoidance from nitric acid production	Various process improvements in nitric acid production		The baseline can be overestimated, as N_2O measurement is technically complex.		Harms: Could be seen as supporting the manufacture of synthetic fertilizer and therefore not consistent with long-term climate goals
N_2O destruction in adipic acid production	Destruction or reuse/ recycling of N_2O by-product from adipic acid production		Studies have found evidence of plants increasing their acid production to generate more N_2O to destroy for carbon offset credits. Current methodologies may correct for this tendency.		
Destruction of ozone depleting substances (ODS)	Collection and destruction of ODS used in insulating foams and refrigeration equipment		Some uncertainties may exist regarding baseline emission rates (e.g., how quickly ODS would leak if reused in old equipment). The high GWP for ODS gases can amplify quantification errors.		Benefit: Destruction of ODS helps to accelerate recovery of stratospheric ozone.

Table 4. Medium risk project types

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane capture and utilization for energy	Coal mine methane, coal bed methane	Carbon offset revenue can make up a large portion of return on capital investment; however, technical hurdles for these projects are no longer substantial and there are significant levels of business-as-usual methane usage at mines in some countries	Some projects may incentivize increased drainage of methane, leading to more methane destroyed than would have been released in the baseline. Most protocols control for this, however. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: May have air pollution benefits if captured methane is used to displace coal. Harms: Could be seen as supporting coal industry and therefore not a project type consistent with long-term climate goals.
	Livestock methane, manure management, biogas utilization	For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: Offset projects at industrial livestock operations may mitigate local environmental impacts. Similarly, biodigesters can provide energy families use for cooking, saving money on fuel and reducing the sanitary issues associated with burning of animal and human waste. A lower dependence on firewood due to biogas use reduces fuel wood use.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane capture and utilization for energy (cont.)	Other (waste water, industrial solid waste methane capture & utilization)	Regulatory drivers should be examined for many of these projects. For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefit: May reduce odor issues for communities near facilities.
	Landfill gas utilization (for energy, electricity)	Varies by location. Projects are likely additional in most parts of the developing world. In developed countries, including the United States, some projects are pursued to avoid triggering regulatory requirements, and projects that generate energy can be economical without carbon revenue.	Some potential for baseline uncertainties (e.g., how much methane would have been generated in the absence of a project), but most are addressed through program quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefit: May reduce odor issues for communities near landfills.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane emission avoidance	Composting; aerobic treatment of waste or wastewater; palm oil waste management / utilization	For composting and aerobic waste treatment, regulatory drivers should be carefully examined. For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. If palm oil (or other) waste is used for energy generation, uncertainties can arise regarding baseline for displaced emissions.	Ownership: Projects that generate energy (e.g., from palm oil waste) may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: Composting projects help reduce food waste, promote the environmental and health benefits of organic farming and reduce fossil-based fertilizer demand.
Energy distribution	District heating, connection of isolated grids, microgrid development, other	Additionality may be unclear in many cases; projects may be capital intensive and it is not clear that carbon revenues would be decisive for investment decisions.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally address this concern with sufficient conservativeness.	Ownership/double counting: Often results in indirect emission reductions. Where distribution displaces electricity applications (e.g., fewer space heaters used as a result of a district heating project), electricity generators could double count reductions.	Benefits: Can lead to significant air quality benefits where displacing inefficient distributed combustion (e.g., in home coal or peat stoves). Connecting isolated grids or microgrid development, provides more reliable energy access.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Energy efficiency, household demand side	Improved cookstoves		Significant uncertainty and potential for over-crediting due to approaches used to estimate reduction in biomass fuel used with improved stoves, fraction of non-renewable biomass (i.e., emissions associated with land-use change impacts), emission factors for wood-fuel used in baseline, inclusion of "suppressed demand" for fossil fuels, and underestimation of stove abandonment or stove stacking.	Permanence: Where project includes accounting for avoided deforestation (i.e., increase in forest carbon stocks due to decreased use of biomass), carbon storage could be reversed.	Benefits: Can lead to significant air quality benefits where replacing inefficient distributed combustion (e.g., in home wood, coal, charcoal or peat stoves) and therefore significant health benefits for families using improved cookstoves. Can lead to creation of new employment through market for stoves. Can reduce time and expenditures on fuel by rural families.
	More efficient lighting, insulation, & appliances; HVAC systems; air conditioning; street lighting; water pumping and purification; etc.	For some projects, it may be hard to show that carbon revenues were a decisive factor, e.g. where energy cost savings exceed offset credit revenues. In many places, improved efficiency is already common practice with national and local support schemes.	Often there can be uncertainty about avoided baseline emissions, actual adoption rates for new equipment, and/or baseline usage patterns. Baselines are sometimes linked to estimates of "suppressed demand" for fossil fuels, which run the risk of overestimating baseline emissions.	Ownership/double counting: Energy efficiency measures will often lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Can lead to cost savings for end users, and meaningful public health improvements for communities and families in low income areas.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
PFC & SF_6 avoidance & reuse	PFC & SF_6 emission avoidance; SF_6 capture & re-use	Additionality depends on specific project activity and facilities involved. In some contexts, measures for reducing emissions may be cost-effective without carbon revenues. In addition, PFCs and SF_6 are increasingly being regulated by governments, and so some projects could be mandated in some jurisdictions. Some projects may be pursued in anticipation of these regulations, prior to them taking effect.			

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Renewable energy, small scale (under 15 MW)	Electricity generation from small-scale (run of river) hydropower plants	Can face greater investment hurdles than large hydro projects, but it is often not clear whether carbon revenues would materially affect investment decisions	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address this concern conservatively.	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project then another entity may functionally double count reduction.	Benefits: Reduced air pollution where fossil generation is displaced. Rural electrification. Harms: Displaced ecosystem services and communities that relied on previous river resources (this is less of a concern for smaller projects).
	Electricity generation from solar, wind, geothermal, other renewable power sources	For many of these projects, it is not clear that carbon revenues can decisively influence investment decisions.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively.	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project, then another entity may functionally double count reduction.	Benefits: Reduced air pollution where fossil generation is displaced. Rural electrification.
	Gasification and/or combustion of municipal solid waste	For many of these projects, it is not clear that carbon revenues can decisively influence investment decisions.	Potential uncertainties related to methane emissions avoided in baseline. Potential uncertainties related to displaced energy emissions (similar to other renewable energy projects)	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project then another entity may functionally double count reduction..	Benefits: Better local solid waste management. Harm: Air pollution, if advanced emission controls not part of project.

Table 5. Higher risk project types

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence	Co-benefits/ harms
Agriculture	Low-till/no-till soil carbon sequestration; use of biochar	Additionality is context-specific. In U.S., for example, low-till/ no-till is increasingly common practice. Frequently, for individual landowners, carbon revenues for these project types are too low to play a decisive role in changing practice. Programmatic approaches (where many landowners are aggregated together under a single project) are more likely to be additional.	Quantification of net GHG reductions in biological systems is inherently more uncertain than for many other project types; diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult. Leakage risk can be a significant issue for tillage projects (to the extent crop yields are affected).	Permanence: Risk of reversal (i.e., non-permanent reductions) is a concern for all carbon storage projects.	Benefits: Both biochar and tillage projects can enhance soil productivity and reduce erosion, increasing farmers' yields and reducing impact on aquatic ecosystems.
	Rice cultivation methane avoidance, improved fertilizer management, etc.	Improved fertilizer management can often pay for itself (without carbon revenue), although barriers may prevent efficient investments in some cases. Conversely, carbon revenues for these project types (rice methane, nutrient management) are often too low to play a decisive role in changing practice. Programmatic approaches (where many landowners are aggregated together under a single project) are more likely to be additional.	Quantification of net GHG reductions in biological systems is inherently more uncertain than for many other project types; diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult. Leakage risk can be a significant issue to the extent crop yields are affected (shifting production to lands where mitigation actions are not practiced).		Benefits: Improved fertilizer management can help reduce nutrient runoff. Harms: Effects of alternative rice cultivation methods may vary depending on context. (In California, for example, reduced flooding of fields may negatively impact waterfowl habitat.)

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Biomass energy	Industrial waste: Bagasse power, palm oil solid waste, black liquor, forest residues, sawmill waste, industrial waste, biodiesel from waste oil	Regulatory incentives frequently make biomass power competitive with fossil fuels, even without carbon revenues. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Some risk of exaggerated claims of avoided methane emissions associated with anaerobic decay of biomass.	Ownership/double counting: Often results in indirect emission reductions; other energy suppliers or electricity generators could double count reductions.	Benefits: Supports a beneficial use of waste from agricultural industries, diverting waste from landfills and providing revenue in return for environmental benefit. A source of renewable and environmentally-improved energy by generating electricity from waste. Accordingly, creates more sustainable patterns of production.
	Agricultural farm residue, forest residue, and dedicated energy crop	Regulatory incentives frequently make biomass power competitive with fossil fuels, even without carbon revenues. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Significant risks of over-crediting concern due to lack of assessment of land use, as well as direct and indirect land use change from collection of biomass feedstocks (leakage risk). Some protocols may better address these concerns than others.	Ownership/double counting: Often results in indirect emission reductions; other energy suppliers or electricity generators could double count reductions.	Benefits: Promotes renewable energy development. If land-use risks are properly dealt with, creates more sustainable patterns of production. Harms: Risks competing with other land-uses, primarily agriculture for food and reforestation/ afforestation.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Cement production	Use of blended cements, process and efficiency improvements	Choice of cement blends is often determined by institutional purchasing or regulatory requirements over which carbon revenues have little influence; higher-blend cements are also often cheaper than standard blends. Additionality for these projects may therefore hinge upon non-financial factors that are more difficult to prove.			
Energy efficiency, industrial demand side	Various forms of Industrial energy use efficiency	Many industrial efficiency projects pay for themselves and are common practice. Carbon revenues are often small relative to energy cost savings, so are seldom a decisive factor in pursuing a project.		Ownership/double counting: Energy efficiency measures will often lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Increasing industrial energy efficiency decreases the lifecycle emissions – and environmental impact – of products. These projects contribute to private sector participation in decarbonization.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Energy efficiency – supply side	Waste heat/ gas recovery; combined heat and power projects; improving energy conversion efficiency at boilers, power plants, etc.	Carbon revenues are often small relative to energy cost savings, so are seldom a decisive factor in pursuing a project. Projects are also common practice in many (though not all) countries and sectors. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Baseline determination can be complicated and site-specific. In existing facilities, it can be difficult to assess the actual use of waste heat in the baseline. In new projects, there are high uncertainties in modelling baseline waste heat production. Baselines under some protocols for supply-side efficiency projects have been set too high, resulting in over-crediting.	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Harms: Financially supporting energy efficiency improvements in fossil burning energy systems may slow the transition to low-carbon energy systems.
Forestry and land use	Afforestation & reforestation; avoided deforestation; improved forest management; agroforestry; avoided conversion of high-carbon soils	Frequent challenges in determining baseline activity, which may be highly site-specific. Since the baseline determines how much carbon storage is additional, this makes additionality uncertain. In addition, timber and land-use values often exceed carbon revenue value, making it difficult in some cases to determine whether carbon revenues were decisive in changing baseline activities.	There are frequently significant baseline uncertainties for these project types. In addition, diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult for these projects. Significant leakage risk can occur from displacement of harvesting or land-use development (i.e., reduced harvest in one area can cause an increase elsewhere)	Permanence: Risk of reversal (i.e., non-permanent reductions) is a concern for all carbon storage projects.	Benefits: Forests provide a range of ecosystem services that forest sector offset projects can maintain and expand. These may include increased local livelihoods, maintaining ecosystems and biodiversity, local farm productivity (pollination and precipitation services), limiting runoff, and water filtration.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Forestry and land use (cont.)					Avoided conversion of grasslands can yield significant environmental benefits beyond carbon storage, such as preserving landscapes and biodiversity. Harms: Poorly-designed forestry projects that do not sufficiently engage local communities and indigenous peoples can have major negative impacts, including livelihood restrictions and even community displacement.
Fossil fuel switching	Switch from coal to natural gas in boilers or power generation; use of natural gas as a transportation fuel	Carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project. Studies have identified significant uncertainties in assessment of investment barriers to fuel switching, and point to new natural gas projects becoming increasingly common practice and non-additional.	Failure to account for upstream emissions from fossil fuel extraction & transport (e.g., methane leaks at well-head or in transmission & distribution) can lead to over-crediting.		Harms: Supporting adoption or continued use of fossil fuels may slow the transition to low-carbon energy systems. Widespread use of natural gas is incompatible with the temperature goals of the Paris Agreement.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Fugitive gases	Waste gas recovery from oil & gas production or other industrial operations; leak prevention in natural gas transmission & distribution systems; other fugitive gas prevention and recovery	Many fugitive emission reduction activities are cost-effective without carbon revenues; the financial value of preventing fugitive emissions (e.g., in terms of reduced fuel losses) often exceeds the carbon revenue value, so carbon revenues are seldom a decisive factor in pursuing a project.	Where waste gas quantities are directly measured, quantification concerns are low. Fugitive emissions, however, can be hard to detect and quantify, creating uncertainties about the effects of leak prevention activities.		Harms: Supporting adoption or continued use of fossil fuels may slow the transition to low-carbon energy systems. Widespread use of natural gas is incompatible with the temperature goals of the Paris Agreement.
Renewable energy, large scale	Geothermal; solar; mixed renewables; tidal energy; other	Unconventional renewables face greater financial hurdles than other technologies, and thus are more likely to be additional. However, carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively.	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Reduced air pollution where fossil generation is displaced.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Renewable energy, large scale (cont.)	Hydropower and wind projects	Common practice in many countries Carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project. Studies have found documented concerns related to additionality assessment in large-scale hydro and wind projects.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively. Some studies have identified issues with quantification methodologies for hydro projects, particularly when methane emissions (from plant material that is buried in the dam reservoir) are omitted, leading to over-crediting .	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Harms: Some large-scale hydropower projects have well-documented negative social and environmental impacts. These projects can displace local communities and indigenous peoples, degrade forests, harm biodiversity and affect aquatic life and existing food sources for populations.
Low-carbon transportation measures	Public transportation improvements, mode shifting, vehicular fuel efficiency improvements, vehicle scrapping or retirement	In general, the mitigation cost of transportation projects ($/ tonne CO2 reduced) is well above current and historical prices for carbon offsets, calling into question whether carbon revenues can be a decisive factor in incentivizing these projects. For transport efficiency projects, fuel cost savings often (substantially) exceed carbon revenues from avoided emissions, raising similar questions about additionality.	High levels of uncertainty in quantifying avoided emissions from public transportation, mode shifting, and vehicle scrapping/ retirement projects. Reasonable quantification certainty for efficiency upgrades (notwithstanding baseline/additionality concerns).		Benefits: Transportation emissions reduction projects can improve air quality and the health of those living nearby as well as increase urban liveability.

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ENDNOTES

1 Under the Paris Agreement, the international community has established a goal of limiting global warming to "well below 2°C" by the 2100, and to pursue efforts to limit warming to 1.5°C. In a 2018 report, the IPCC summarized current modeling of what will be required to achieve the latter goal, noting that very substantial CO_2 reductions will be required by 2030. See: IPCC (2018).

2 CO_2 can be removed from the atmosphere through natural sequestration (e.g., in trees, soils, or the ocean) or through artificial means (e.g., using direct-air capture technologies, which are still in their infancy).

3 Such "programs" were pioneered under the Kyoto Protocol's Clean Development Mechanism; see here.

4 See, for example, Verra's framework for Jurisdictional and Nested REDD+ programs. (REDD stands for "reduced emissions from deforestation and forest degradation".)

5 The terms "standard" or "registry" are sometimes used when referring to offset programs. However, a comprehensive carbon offset program will consist of more than just a standard and a registry.

6 Although the CDM has functioned primarily as a regulatory program under the Kyoto Protocol, it now also caters to voluntary purchasers.

7 Like the CDM, "Joint Implementation" is a separate offset program established under the Kyoto Protocol; the CDM applies only to developing countries, while JI is used in developed countries.

8 In general, price discrepancies among programs arise only when one program serves a captive market with strong demand that other programs may not serve, such as the regulatory cap-and-trade market in California.

9 Similar terms, like "climate neutral" or "net zero" are largely synonymous.

10 See, for example, https://sciencebasedtargets.org/step-by-step-guide/

11 Scope 2 emissions for your corporate inventory should be estimated using grid average emission factors (e.g., kg CO2/kWh), also referred to as the location based method. Application of a zero emission factor, based on green power purchasing claims (i.e., the market based method), generally lacks environmental integrity and is inconsistent with good practice in environmental accounting. For further information see https://scope2openletter.wordpress.com/

12 This kind of "double-entry bookkeeping" is referred to in international negotiations as "corresponding adjustments." Detailed rules for how corresponding adjustments will be implemented are still being negotiated – see Schneider et al. (2019).

13 The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), established in 2016, is expected to demand anywhere from 1.6 to 3.7 billion offset credits between 2021 and 2035 – see Warnecke et al. (2019). On the subject of avoiding double counting, see Schneider, Broekhoff, et al. (2019).

14 See, for example, Kreibich and Obergassel (2019) as well as ICROA (2019) and Voluntary Carbon Market Working Group (2019).

15 See Wara and Victor (2008).

16 The primary concern is that a large number of offset credits come from energy sector projects that have significant sources of other revenue besides offset credits, suggesting that they would have happened anyway and do not represent additional mitigation. Other identified issues include concerns about over-estimation of emission reductions, e.g., for industrial gas destruction and other project types (Alexeew et al. 2010; Cames et al. 2016; Gillenwater and Seres 2011; Haya and Parekh 2011; Kollmuss et al. 2015; Kollmuss and Lazarus 2010; Lazarus et al. 2012; Ruthner et al. 2011; Schneider 2009; Schneider et al. 2010; Spalding-Fecher et al. 2012)

17 See, for example, Dufrasne (2018) as well as here.

18 See Spalding-Fecher et al. (2012).

19 Although most critical studies of carbon offsets have focused on the CDM and JI because of their high profile, many of the same issues are likely to arise in other programs as well. For some programs – like Verra (i.e., VCS) and the Gold Standard – this is because they incorporate CDM methodologies by reference, so there is substantial overlap in the kinds of projects they certify. In other cases, programs have used CDM methodologies as a starting point in developing their own standards. Although a number of programs have followed approaches that differ from the CDM, no program should be considered categorically free of all concerns about offset quality.

20 The CDM Executive Board, for example, adopted amendments and clarifications to its methodology for destruction of HFC-23 emissions to address demonstrated concerns about over-production of this gas purely for the purpose of producing more offset credits. Such projects are now disallowed. However, similar concerns for other project types – e.g., N_2O abatement at adipic acid plants – have not been fully addressed.

21 Verra and the Gold Standard, for example, have solicited public input on whether to exclude from eligibility clean energy projects in wealthy and middle-income countries, on the grounds that these projects have a low likelihood of being additional.

22 This condition applies to GHG emissions, as well as to other social and environmental impacts. If global GHG emissions would be no greater as a result of using a carbon offset credit instead of reducing your own emissions, then the credit is said to preserve "environmental integrity" (Schneider and La Hoz Theuer 2019). However, it is also important that offset projects do not cause significant social or (non-climate) environmental harms. Both are important for offset quality.

23 See Gillenwater (2012).

24 For an in depth discussion of these ideas, see Trexler (2019).

25 Again, see Trexler (2019).

26 Standardized additionality approaches can use "positive lists" (lists of defined technologies or practices that are deemed additional without further

evaluation) or a set of technical specifications and other criteria that a project must meet to be eligible (for example: landfill gas collection and destruction, occurring at a sanitary landfill that is below a certain size threshold, where gas collection is not required by law, etc.).

27 Again, a common misconception is that the baseline for a project represents what would have happened "in the absence of the project." However, it is essential to evaluate whether a proposed project is itself the baseline (i.e., is not additional), and therefore will generate no emission reductions.

28 Assuming that the project is additional and that the project itself does not affect the rate of methane generation at the landfill – for example, by creating a "bioreactor" landfill.

29 See, for example, Offset Quality Initiative (2008).

30 This process may include collecting and verifying data needed to estimate a project's baseline emissions.

31 Some of these sources and sinks may be treated as "leakage" effects and addressed in supplemental calculations.

32 Most quantification methods prescribe a combination of project-specific data collection, along with the use of conservative defaults or estimates where data collection is impractical.

33 Renewal under some programs may also involve an updated

34 Carbon offset programs can differ in their approach to validation and verification. Some programs, like CAR, combine validation with the first verification of a project, and do not make a formal distinction between the two functions. Others require validation and verification as separate steps (and some, like the CDM, require separate verifiers for each to avoid conflicts of interest – since a positive validation could lead to a more lucrative verification contract).

35 Technically, the individual molecules of CO_2 emitted may cycle back and forth between the atmosphere and terrestrial reservoirs multiple times, but atmospheric concentrations of CO_2 will remain elevated by an amount equal to about 25% of the original mass emitted after 1,000 years (Joos et al. 2013).

36 Technically, a "reversal" occurs if – at any point in the future – the rate of GHG emissions accelerates so that it is higher than would have occurred if the project had never happened. For example, protecting a parcel of forest from deforestation prevents 100 tonnes of carbon from being released to the atmosphere (reducing emissions by 100 tonnes). Fifty years later, however, the parcel is burned down, emitting all the carbon. The rate of emissions in year 50 is accelerated, because without the project, the 100 tonnes of carbon would not have been present to be burned. Net GHG reductions over 50 years are zero, because the additional emissions cancel out the prior reductions.

37 Unless a project involves carbon storage of some kind (e.g., sequestering carbon in trees), a reversal of emission reductions is highly unlikely. In theory, however, reversals can occur in other circumstances. A hypothetical example would be where a solar panel and battery storage system is used to provide electricity to a building, allowing it to operate off the grid (and avoiding grid-based electricity emissions); however, the solar panel fails and a backup diesel generator is brought in to provide power instead, causing more emissions than would have occurred without the project. Such circumstances will be rare, but for

some project types, it may be worth evaluating whether these types of risks exist.

38 The CDM is alone in issuing "temporary credits" for reversible GHG reductions. Under this approach, offset credits issued for these reductions expire after a predefined period (up to 30 years) and must be replaced with other emission reductions. This approach effectively guarantees permanence if it is enforced (whether the CDM's administrative structures will be maintained in the future is an open question). However, it has faced significant hurdles, not least because it puts the onus for ensuring permanence on offset credit buyers. As a result, buyers have been far less willing to pay for these credits, and the market for them has been largely non-existent.

39 See Murray et al. (2012).

40 See Schneider et al. (2015) for a fuller explanation of double counting issues with carbon offsets.

41 Procedures may include requiring project developers to sign legal attestations stipulating that they will not request issuance of offset credits for emission reductions from more than one program (unless they are effectively "transferring" credits from one program to another).

42 Some third-party programs, like Green-e Climate, provide checks on credit retirement steps for retail credit buyers. However, in most cases this adds little value beyond what carbon offset programs already make available to any buyer in terms of retirement certification.

43 While additionality is not usually a concern, some kinds of industrial gas projects do have issues with baseline estimation and overestimation of reductions.

44 Technically, "discounting" refers to issuing fewer credits to a project than the GHG reductions it achieved, but it is often used more broadly to refer to any approach that effectively uses more GHG reductions to offset fewer GHG emissions. It has also been proposed as an approach to be used in regulatory carbon markets; for example, see Warnecke et al. (2014).

Image (next page) courtesy of High Tide Foundation

Limits and Controls

Southwest's Gas Purchases & Transportation (GP&T) personnel (Administrator, Sr. Analyst, and Manager), as well as the Director/Gas Supply, are authorized to enter into specific gas supply transactions based upon the authority outlined in this document or the Gas Purchasing Authorization and Limits document. With regard to one month or less spot purchases, although each of the authorized personnel are assigned a specific service territory(ies) and generally only purchase gas supplies for the assigned service territory(ies), authorized personnel may complete purchases for any of the Company's service territories. Authorized personnel shall forward any questions concerning the authority to enter into a specific transaction to management or senior management prior to entering into such transaction to ensure authorized personnel do not exceed authority levels. Authorized personnel may not enter into unauthorized gas supply transactions without the approval of management or senior management.

Solicitation of Firm Term Bids

1. GP&T consults with Gas Resources Planning (GRP) to identify the input variables required by the computer model or other analyses GRP will use in the upcoming portfolio evaluation process.

2. In consideration of GRP modeling and other analytical needs, requisite non-modeled contractual details, and concerns for respondent understandability, GP&T fashions a solicitation designed to maximize the quantity, quality, and diversity of proposals received and Southwest's ability to evaluate such proposals effectively.

3. The firm term solicitation requests index-based supply pricing.

4. GRP attempts to evaluate all responsive term proposals received. The primary tool used for evaluating the proposals is a computer-based optimization modeling program. If GRP cannot model a proposal as submitted, GRP will use other available tools to evaluate such proposals. In cases where a supplier submits a proposal with attributes that GRP cannot enter into the model, a surrogate may be used that conforms to the parameters outlined in the bid solicitation guidelines, subject to any model design limitations.

5. If proposals that appear incomplete, unclear, internally inconsistent, or not within the scope of the solicitation, GP&T will seek supplier clarification. Southwest removes proposals that suppliers cannot sufficiently clarify for evaluation from further consideration. GRP and GP&T will maintain appropriate documentation as to the

reason(s) when a proposal is removed from evaluation.

Evaluation of Firm Term Supplies

1. Preparation for Evaluation

   a) Evaluation Engineers from GRP create a new model set-up for each rate jurisdiction that requires modeling. Space is set-aside in the model for existing and future fixed-price contract commitments procured through the VMP or APSP programs. The minimum daily quantities are dependent on each rate jurisdiction's needs. However, the minimum daily quantities are subject to revision at any time during the analysis to reflect changing market conditions and experienced management judgment.

   b) Southwest's interactive bid program creates a database that contains the electronic bid forms submitted by suppliers.

   c) Evaluation Engineers review bids for clarity and convert price statements into modeling equation coefficients. GRP returns any bids that appear incomplete, unclear, or internally inconsistent to GP&T for clarification, as noted above. Any proposal that GP&T cannot sufficiently clarify for evaluation will be removed from further consideration.

   d) All bids accepted for consideration will be sorted by rate jurisdiction, term, and type to facilitate modeling.

   e) Special cases will receive appropriate treatment.

2. At this point, GP&T and GRP presents all offers or surrogates for management and senior management review and an iterative selection and negotiation process begins to identify and secure the best cost portfolio considering price, reliability, and resource mix.

3. Modeling identifies the lowest cost portfolio components from the available bids, based upon portfolio requirements.

   a) GRP uses demand forecasts developed by the Demand Planning department in the modeling, with minor exceptions as deemed necessary to meet supply reliability goals.

b) GRP bases monthly price levels for modeling on forward market conditions with adjustments necessary for specific location or seasonal decision support.

4. The Vice President/Gas Resources is authorized to accept offers for inclusion in the portfolio based upon model results and qualitative considerations with and without negotiated improvement.

5. Southwest shall keep a list of attendees that are present during meetings where the Vice President/Gas Resources selects and approves Firm Term Supplies for inclusion in the portfolio.

6. GRP converts supplies already contracted and bids authorized during the evaluation process to "existing" status in its models. The iterative selection process then continues until Southwest contracts for sufficient gas supplies to meet requirements for each jurisdiction.

VMP and APSP Solicitation Overview

Apart from the Firm Term Supplies, Southwest may request fixed-price proposals for inclusion in the portfolio as part of the Nevada Volatility Mitigation Program (VMP), the California VMP, and Arizona Price Stability Program (APSP), collectively "Volatility Mitigation Purchases." Similar programs may be conducted for Southwest's other rate jurisdictions as management deems appropriate. Volatility Mitigation Purchases are programmatic hedges designed to mitigate the volatility in gas supply prices that Southwest's customers experience when Southwest passes prudently incurred gas costs along to its customers. In late 2013, Southwest suspended Nevada VMP purchases and reviews that decision quarterly. Should Southwest reinstate Nevada VMP purchases, it will utilize the processes and procedures outlined in this document in making those purchases.

Volatility Mitigation Purchases involve periodic solicitations and purchases for various future purchase periods. GP&T and GRP, with Senior Management input, jointly determine the dates for issuing the solicitations and the Volatility Mitigation Purchases plan outlines expected volumes for the next two portfolio years. The scope of the fixed-price Volatility Mitigation Purchase solicitations is limited when compared to the general firm term bid solicitation. Southwest narrowly tailored the structure of Volatility Mitigation Purchase solicitations to minimize evaluation and acceptance response times and permit respondent suppliers to minimize risk, therefore encouraging participation. Further, Southwest designs the Volatility Mitigation Purchase solicitations to allow direct competition between fixed-price physical gas supplies and financial fixed-for-floating index swaps that provide the same level of volatility

mitigation.

GP&T creates solicitations for fixed-price physical gas supplies, indexed-price physical gas supplies, and financial fixed-for-floating index swaps specific to each jurisdiction and delivery period, and distributes such to physical gas and financial product suppliers. These solicitations identify market areas, receipt locations, purchase periods, and applicable indexes for indexed-price physical gas supplies and financial fixed-for-floating index swaps, as well as setting forth the response date and time deadlines. Southwest shall keep a list of attendees that are present during the solicitation process meetings where the Vice President/Gas Resources selects and approves Volatility Mitigation supplies for inclusion in the portfolio. Upon receipt of offers, Southwest ranks those offers by price and contracts for the best-price supplies to meet the Volatility Mitigation Purchase requirements. The Vice President/Gas Resources is authorized to accept the best-priced supply option for inclusion in the portfolio.

Baseload Supply Program (BSP) Overview

The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. Southwest solicits BSP proposals for Northern and Southern Nevada and Arizona service territories. The Company typically schedules solicitations every three to six weeks throughout the year until the projected baseload requirements are met. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Should Southwest reinstate Nevada VMP purchases or Arizona APSP purchases, the level of BSP purchases will be adjusted to prevent a situation where base loaded gas supplies exceed minimum forecasted demands.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

Monthly/Daily Spot Purchases (One month or less)

1. GP&T determines monthly spot gas (baseload for no more than one month) purchase requirements for each service territory prior to the first of each month. The forecasted

minimum day for the month for which GP&T is purchasing monthly supplies is the starting point to determine the monthly spot gas purchase requirement for each service territory. GP&T subtracts the total available baseload supplies (Volatility Mitigation Purchases and Firm Term Portfolio Purchases) from the forecasted minimum day to determine the gross monthly spot purchase requirement. With the exception of the Southern California service territory, the gross monthly spot purchase requirement for each service territory will be zero for the winter months (November through March) because available baseload supplies should equal the forecasted minimum day. After considering economic, contractual, and operational considerations, GP&T then adjusts the gross monthly spot purchase requirement to determine the monthly spot purchase requirement. Authorized personnel may contract for supplies selected to meet the monthly spot purchase requirement for each service territory.

2. GP&T issues a solicitation outlining monthly spot purchase requirements to suppliers. This solicitation identifies the market areas, receipt locations, and purchase periods, as well as setting forth the response date and time deadlines. When GP&T receives the offers from suppliers, GP&T sorts those offers by jurisdiction and ranks the offers by price. GP&T compares the best prices to those prices available on internet trading platform(s). GP&T contracts for the best price supply available to meet the projected purchase requirements. GRP personnel act as an independent observer/participant for the monthly spot gas purchase process.

3. GP&T determines, on a daily basis, the daily spot gas purchase requirements for each jurisdiction based on economic, contractual, and operational considerations. GP&T then gathers market intelligence through communications with prospective suppliers, monitoring internet trading platform(s), and reviewing other industry pricing information to determine daily marketplace price parameters. GP&T continues to monitor market price fluctuations throughout the daily trading period and modifies offer acceptance threshold levels based on these market fluctuations. GP&T reviews available firm term contract supplies/prices and determines what, if any, opportunities are available to flex firm term contract volumes up or down based on prevailing spot market prices. GP&T reviews daily system demand forecast and monitors for upcoming anomalies in weather that could cause potential supply disruptions due to operational constraints. GP&T continues this iterative process until daily spot purchase requirements for each service territory are met. Authorized personnel may contract for

daily spot market supplies to meet the daily spot market requirement, as determined below through the Daily Purchase and Nomination Procedures.

Daily Purchase and Nomination Procedures

The following constitutes a general procedure for acquiring and nominating gas supplies for each nomination and scheduling cycle. GP&T follows these steps after the previously detailed Firm Term Supplies, firm fixed-price Volatility Mitigation Purchases, and monthly spot supplies have been contracted and are available for nomination.

1. Survey current spot market prices. Identify pricing anomalies beyond standard market timing issues and research why the anomalies are occurring. At that time, the GP&T team will determine the best approach to mitigate the cost of unexpected price fluctuations resulting from these anomalies. Modify offer acceptance threshold based on these market fluctuations.

2. Review daily system demand forecast from the GasDay forecasting service for the assigned service territory. The daily forecast is the starting point for determining an authorized personnel's authority to purchase daily supplies. The GasDay forecast is available on demand at: https://gasdayswgas.azurewebsites.net/login.html. Assess the daily system demand forecast for reasonability and adjust expected demand as deemed necessary based on recent performance.

3. Review the available firm term and baseload supplies Southwest currently has contracted for each service territory.

4. Monitor for upcoming critical weather events which could cause operational constraints leading to supply disruptions. When a critical weather event is identified, the GP&T team will determine the best strategy to adjust for the potential operational constraints. Make necessary daily system demand forecast adjustments to account for potential supply disruptions for critical weather events identified.

5. Review pipeline imbalance activity to determine if a deviation from Gas Control's daily system demand forecast is necessary or desired to counteract any imbalance trends.

6. Determine if any further deviation from Gas Control's daily system demand forecast is necessary to accommodate any requests or demands for action communicated from upstream pipelines or to comply with pipeline balancing tariffs.

7. Review available upstream pipeline capacity availability for the flow day for which supplies are being purchased.

8. Review past nomination activity and results.

   a) Review most recent pipeline scheduling reports to identify any instances of nonperformance on nominated supplies.

   b) In cases of nonperformance, identify the cause of the nonperformance.

   c) Determine if it is necessary or desirable to have the involved supplier re-nominate the shortfall.

   d) If re-nomination is desirable, contact supplier to make re-nomination arrangements.

   e) Enter re-nominations into internal nomination systems.

   f) Review pipeline reports for results of any prior re-nomination attempts.

   g) If re-nomination efforts were partially unsuccessful, repeat Steps 6(c) through 6(f), as appropriate.

9. Determine estimated daily spot gas requirements in light of the preceding steps. Authorized personnel may contract for daily spot market supplies to meet the requirements so determined for each assigned service territory.

10. Gather market intelligence by receiving calls from and making calls to prospective suppliers and monitoring electronic messaging, internet trading platform(s), and other industry pricing information to determine daily price parameters available in the marketplace.

11. Monitor market price fluctuations throughout the daily trading period and modify offer acceptance threshold based on these market fluctuations.

12. Review available firm term contract supplies/prices and determine what, if any, nomination changes from prior day should be made in consideration of opportunities to

flex firm term contract volumes up or down based on prevailing spot market prices. authorized personnel are authorized to activate firm term supplies, up to the maximum available contract quantity, to meet the daily requirements of each service territory that is in excess of the baseload supplies.

13. Modify daily spot purchase requirement arrived at in Step 7 based on price observations made in Steps 8, 9, 10, and 11.

14. Enter daily nomination information in internal systems. Generate interstate nomination upload files, upload nomination files to each upstream interstate pipeline, and verify the nominations in the upstream interstate pipelines' scheduling systems. For upstream intrastate nominations, advise Gas Scheduling of the availability of the nomination information for further processing.

15. Print required transaction confirmations, review for accuracy, and sign.

16. Provide signed transaction confirmations to Analyst for further processing.

17. Review any transaction confirmation letters independently sent by supply representatives for accuracy, and follow up with supplier on errors.

18. Repeat all steps, as required, for each gas day's successive nomination and scheduling cycles.

Limits and Controls

Southwest's Gas Purchases & Transportation (GP&T) personnel (Administrator, Sr. Analyst, and Manager), as well as the ~~Directory~~Director/Gas Supply, are authorized to enter into specific gas supply transactions based upon the authority outlined in this document or the Gas Purchasing Authorization and Limits document. With regard to one month or less spot purchases, although each of the authorized personnel are assigned a specific service territory(ies) and generally only purchase gas supplies for the assigned service territory(ies), authorized personnel may complete purchases for any of the Company's service territories. Authorized personnel shall forward any questions concerning the authority to enter into a specific transaction to management or senior management prior to entering into such transaction to ensure authorized personnel do not exceed authority levels. Authorized personnel may not enter into unauthorized gas supply transactions without the approval of management or senior management.

Solicitation of Firm Term Bids

1. GP&T consults with Gas Resources Planning (GRP) to identify the input variables required by the computer model or other analyses GRP will use in the upcoming portfolio evaluation process.

2. In consideration of GRP modeling and other analytical needs, requisite non-modeled contractual details, and concerns for respondent understandability, GP&T fashions a solicitation designed to maximize the quantity, quality, and diversity of proposals received and Southwest's ability to evaluate such proposals effectively.

3. The firm term solicitation requests index-based supply pricing.

4. GRP attempts to evaluate all responsive term proposals received. The primary tool used for evaluating the proposals is a computer-based optimization modeling program. If GRP cannot model a proposal as submitted, GRP will use other available tools to evaluate such proposals. In cases where a supplier submits a proposal with attributes that GRP cannot enter into the model, a surrogate may be used that conforms to the parameters outlined in the bid solicitation guidelines, subject to any model design limitations.

5. If proposals that appear incomplete, unclear, internally inconsistent, or not within the scope of the solicitation, GP&T will seek supplier clarification. Southwest removes proposals that suppliers cannot sufficiently clarify for evaluation from further

consideration. GRP and GP&T will maintain appropriate documentation as to the reason(s) when a proposal is removed from evaluation.

Evaluation of Firm Term Supplies

1. Preparation for Evaluation

   a) Evaluation Engineers from GRP create a new model set-up for each rate jurisdiction that requires modeling. Space is set-aside in the model for existing and future fixed-price contract commitments procured through the VMP or APSP programs. The minimum daily quantities are dependent on each rate jurisdiction's needs. However, the minimum daily quantities are subject to revision at any time during the analysis to reflect changing market conditions and experienced management judgment.

   b) Southwest's interactive bid program creates a database that contains the electronic bid forms submitted by suppliers.

   c) Evaluation Engineers review bids for clarity and convert price statements into modeling equation coefficients. GRP returns any bids that appear incomplete, unclear, or internally inconsistent to GP&T for clarification, as noted above. Any proposal that GP&T cannot sufficiently clarify for evaluation will be removed from further consideration.

   d) All bids accepted for consideration will be sorted by rate jurisdiction, term, and type to facilitate modeling.

   e) Special cases will receive appropriate treatment.

2. At this point, GP&T and GRP presents all offers or surrogates for management and senior management review and an iterative selection and negotiation process begins to identify and secure the best cost portfolio considering price, reliability, and resource mix.

3. Modeling identifies the lowest cost portfolio components from the available bids, based upon portfolio requirements.

   a) GRP uses demand forecasts developed by the Demand Planning department in the modeling, with minor exceptions as deemed necessary to meet supply

reliability goals.

b) GRP bases monthly price levels for modeling on forward market conditions with adjustments necessary for specific location or seasonal decision support.

4. The Vice President/Gas Resources is authorized to accept offers for inclusion in the portfolio based upon model results and qualitative considerations with and without negotiated improvement.

5. Southwest shall keep a list of attendees that are present during meetings where the Vice President/Gas Resources selects and approves Firm Term Supplies for inclusion in the portfolio.

6. GRP converts supplies already contracted and bids authorized during the evaluation process to "existing" status in its models. The iterative selection process then continues until Southwest contracts for sufficient gas supplies to meet requirements for each jurisdiction.

VMP and APSP Solicitation Overview

Apart from the Firm Term Supplies, Southwest may request fixed-price proposals for inclusion in the portfolio as part of the Nevada Volatility Mitigation Program (VMP), the California VMP, and Arizona Price Stability Program (APSP), collectively "Volatility Mitigation Purchases." Similar programs may be conducted for Southwest's other rate jurisdictions as management deems appropriate. Volatility Mitigation Purchases are programmatic hedges designed to mitigate the volatility in gas supply prices that Southwest's customers experience when Southwest passes prudently incurred gas costs along to its customers. In late 2013, Southwest suspended Nevada VMP purchases and reviews that decision quarterly. Should Southwest reinstate Nevada VMP purchases, it will utilize the processes and procedures outlined in this document in making those purchases.

Volatility Mitigation Purchases involve periodic solicitations and purchases for various future purchase periods. GP&T and GRP, with Senior Management input, jointly determine the dates for issuing the solicitations and the Volatility Mitigation Purchases plan outlines expected volumes for the next two portfolio years. The scope of the fixed-price Volatility Mitigation Purchase solicitations is limited when compared to the general firm term bid solicitation. Southwest narrowly tailored the structure of Volatility Mitigation Purchase solicitations to minimize evaluation and acceptance response times and permit respondent suppliers to

minimize risk, therefore encouraging participation. Further, Southwest designs the Volatility Mitigation Purchase solicitations to allow direct competition between fixed-price physical gas supplies and financial fixed-for-floating index swaps that provide the same level of volatility mitigation.

GP&T creates solicitations for fixed-price physical gas supplies, indexed-price physical gas supplies, and financial fixed-for-floating index swaps specific to each jurisdiction and delivery period, and distributes such to physical gas and financial product suppliers. These solicitations identify market areas, receipt locations, purchase periods, and applicable indexes for indexed-price physical gas supplies and financial fixed-for-floating index swaps, as well as setting forth the response date and time deadlines. Southwest shall keep a list of attendees that are present during the solicitation process meetings where the Vice President/Gas Resources selects and approves Volatility Mitigation supplies for inclusion in the portfolio. Upon receipt of offers, Southwest ranks those offers by price and contracts for the best-price supplies to meet the Volatility Mitigation Purchase requirements. The Vice President/Gas Resources is authorized to accept the best-priced supply option for inclusion in the portfolio.

Baseload Supply Program (BSP) Overview

The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. Southwest solicits BSP proposals for Northern and Southern Nevada and Arizona service territories. The Company typically schedules solicitations every three to six weeks throughout the year until the projected baseload requirements are met. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Should Southwest reinstate Nevada VMP purchases or Arizona APSP purchases, the level of BSP purchases will be adjusted to prevent a situation where base loaded gas supplies exceed minimum forecasted demands.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

Monthly/Daily Spot Purchases (One month or less)

1. GP&T determines monthly spot gas (baseload for no more than one month) purchase requirements for each service territory prior to the first of each month. The forecasted minimum day for the month for which GP&T is purchasing monthly supplies is the starting point to determine the monthly spot gas purchase requirement for each service territory. GP&T subtracts the total available baseload supplies (Volatility Mitigation Purchases and Firm Term Portfolio Purchases) from the forecasted minimum day to determine the gross monthly spot purchase requirement. With the exception of the Southern California service territory, the gross monthly spot purchase requirement for each service territory will be zero for the winter months (November through March) because available baseload supplies should equal the forecasted minimum day. After considering economic, contractual, and operational considerations, GP&T then adjusts the gross monthly spot purchase requirement to determine the monthly spot purchase requirement. Authorized personnel may contract for supplies selected to meet the monthly spot purchase requirement for each service territory.

2. GP&T issues a solicitation outlining monthly spot purchase requirements to suppliers. This solicitation identifies the market areas, receipt locations, and purchase periods, as well as setting forth the response date and time deadlines. When GP&T receives the offers from suppliers, GP&T sorts those offers by jurisdiction and ranks the offers by price. GP&T compares the best prices to those prices available on internet trading platform(s). GP&T contracts for the best price supply available to meet the projected purchase requirements. GRP personnel act as an independent observer/participant for the monthly spot gas purchase process.

3. GP&T determines, on a daily basis, the daily spot gas purchase requirements for each jurisdiction based on economic, contractual, and operational considerations. GP&T then gathers market intelligence through communications with prospective suppliers, monitoring internet trading platform(s), and reviewing other industry pricing information to determine daily marketplace price parameters. GP&T continues to monitor market price fluctuations throughout the daily trading period and modifies offer acceptance threshold levels based on these market fluctuations. GP&T reviews available firm term contract supplies/prices and determines what, if any, opportunities are available to flex firm term contract volumes up or down based on prevailing spot market prices. GP&T reviews daily system demand forecast and monitors for upcoming anomalies in weather that could cause potential supply disruptions due to operational constraints. GP&T continues this iterative process until daily spot purchase requirements

for each service territory are met. Authorized personnel may contract for

daily spot market supplies to meet the daily spot market requirement, as determined below through the Daily Purchase and Nomination Procedures.

Daily Purchase and Nomination Procedures

The following constitutes a general procedure for acquiring and nominating gas supplies for each nomination and scheduling cycle. GP&T follows these steps after the previously detailed Firm Term Supplies, firm fixed-price Volatility Mitigation Purchases, and monthly spot supplies have been contracted and are available for nomination.

1. Survey current spot market prices. Identify pricing anomalies beyond standard market timing issues and research why the anomalies are occurring. At that time, the GP&T team will determine the best approach to mitigate the cost of unexpected price fluctuations resulting from these anomalies. Modify offer acceptance threshold based on these market fluctuations.

2. Review daily system demand forecast from the GasDay forecasting service for the assigned service territory. The daily forecast is the starting point for determining an authorized personnel's authority to purchase daily supplies. The GasDay forecast is available on demand at: https://gasdayswgas.azurewebsites.net/login.html. Assess the daily system demand forecast for reasonability and adjust expected demand as deemed necessary based on recent performance.

3. Review the available firm term and baseload supplies Southwest currently has contracted for each service territory.

4. Monitor for upcoming critical weather events which could cause operational constraints leading to supply disruptions. When a critical weather event is identified, the GP&T team will determine the best strategy to adjust for the potential operational constraints. Make necessary daily system demand forecast adjustments to account for potential supply disruptions for critical weather events identified.

~~4.~~5. Review pipeline imbalance activity to determine if a deviation from Gas Control's daily system demand forecast is necessary or desired to counteract any imbalance trends.

~~5.~~6. Determine if any further deviation from Gas Control's daily system demand forecast is necessary to accommodate any requests or demands for action communicated from

upstream pipelines or to comply with pipeline balancing tariffs.

~~6.~~7. Review available upstream pipeline capacity availability for the flow day for which supplies are being purchased.

~~7.~~8. Review past nomination activity and results.

a) Review most recent pipeline scheduling reports to identify any instances of nonperformance on nominated supplies.

b) In cases of nonperformance, identify the cause of the nonperformance.

c) Determine if it is necessary or desirable to have the involved supplier re-nominate the shortfall.

d) If re-nomination is desirable, contact supplier to make re-nomination arrangements.

e) Enter re-nominations into internal nomination systems.

f) Review pipeline reports for results of any prior re-nomination attempts.

g) If re-nomination efforts were partially unsuccessful, repeat Steps 6(c) through 6(f), as appropriate.

~~8.~~9. Determine estimated daily spot gas requirements in light of the preceding steps. Authorized personnel may contract for daily spot market supplies to meet the requirements so determined for each assigned service territory.

~~9.~~10. Gather market intelligence by receiving calls from and making calls to prospective suppliers and monitoring electronic messaging, internet trading platform(s), and other industry pricing information to determine daily price parameters available in the marketplace.

~~10.~~11. Monitor market price fluctuations throughout the daily trading period and modify offer acceptance threshold based on these market fluctuations.

~~11.~~12. Review available firm term contract supplies/prices and determine what, if any, nomination changes from prior day should be made in consideration of opportunities to flex firm term contract volumes up or down based on prevailing spot market prices. authorized personnel are authorized to activate firm term supplies, up to the maximum available contract quantity, to meet the daily requirements of each service territory that is in excess of the baseload supplies.

~~12.~~13. Modify daily spot purchase requirement arrived at in Step 7 based on price observations made in Steps 8, 9, 10, and ~~10~~11.

~~13.~~14. Enter daily nomination information in internal systems. Generate interstate nomination upload files, upload nomination files to each upstream interstate pipeline, and verify the nominations in the upstream interstate pipelines' scheduling systems. For upstream intrastate nominations, advise Gas Scheduling of the availability of the nomination information for further processing.

~~14.~~15. Print required transaction confirmations, review for accuracy, and sign.

~~15.~~16. Provide signed transaction confirmations to Analyst for further processing.

~~16.~~17. Review any transaction confirmation letters independently sent by supply representatives for accuracy, and follow up with supplier on errors.

~~17.~~18. Repeat all steps, as required, for each gas day's successive nomination and scheduling cycles.

MEMORANDUM

To: File

From: Randy Gabe

Date: November 1, 2020

Subject: **Arizona Gas Supply Policy Statement**

This memorandum memorializes Southwest Gas Corporation's (Southwest Gas or Company) Arizona Gas Supply Policy. The scope of this policy includes gas supply acquisition and the utilization of storage resources.

Southwest Gas endeavors to acquire the best-cost portfolio considering price, reliability, flexibility, and protection from short-term market volatility, while still providing and securing supply to meet sales customer demands. Balancing these factors against the costs of competing resource alternatives determines the ever-changing "mix" (flexible and non-flexible, index and fixed-price supplies, with and without interstate capacity, short-term, mid-term, and long-term) of the supply portfolio. The Company's portfolio includes spot market purchases (one month or less) term (firm, terms greater than one month but usually one year or less, including Baseload Supply Program (BSP) purchases), and possible firm Arizona Price Stability Program (APSP) purchases. While most term contracts are annual or seasonal, Southwest Gas may also consider longer-term alternatives.

Background:

As a result of Decision No. 61225 dated October 30, 1998 issued by the Arizona Corporation Commission (ACC) in Docket No. G-00000C-98-0568 Southwest Gas began soliciting and acquiring APSP supplies starting 1999/2000 gas portfolio year. In late 2019, Southwest Gas suspended APSP purchases and replaced the APSP with the BSP. On a quarterly basis, the Company evaluates reinstating APSP purchases.

On January 27, 2014, Southwest Gas filed an application with the ACC in Docket No. G-01551A-14-0024 seeking pre-approval of the cost recovery associated with the construction, operation and maintenance of an LNG storage facility, located in Tucson, AZ. On December 23, 2014, the ACC issued Decision No. 74875 approving the LNG storage facility. The LNG facility was built to enhance system reliability and was placed in service in 2019. Because the LNG facility has no liquefaction equipment, LNG is supplied via tanker trucks.

Arizona Policy:

1. Southwest Gas purchases a portion of its Arizona requirements through the BSP. BSP purchases are priced at First of the Month (FOM) index prices. Solicitations for BSP purchases take place periodically up to one year in

advance of flow.

2. Prior to each gas year (a gas year starts November 1st), Southwest Gas solicits for term index priced gas supply contracts (term portfolio solicitation). Through the term portfolio solicitation, the Company purchases peaking gas supplies needed to meet extreme peak day demands from November through March. The Company may also purchase other term gas supplies (e.g. baseload) during the term portfolio solicitation. Southwest Gas utilizes a portfolio optimization model when analyzing gas supply offers to endeavor to minimize costs. Typically, prices for peaking supply contracts purchased through the term solicitation will be based on daily indices.

3. Southwest Gas may also purchase other term supplies (i.e. purchases greater than one month). Additional term supply purchases may be baseload or peaking purchases, depending upon forecasted requirements, and are generally completed through solicitation processes to help ensure those purchases are made at then-current market prices.

4. Required gas supplies not purchased in the BSP, term portfolio, or other term solicitation will be purchased on the spot market. These spot purchases may occur during any month. To the extent possible, monthly baseload spot supplies will be purchased at FOM index prices and any spot purchases of less than one month in duration will be purchased at daily index prices.

5. Southwest Gas manages the use of its LNG storage subject to the following guidelines:

    a. Southwest Gas will coordinate with division operations and attempt to fill the LNG storage to capacity prior to November 1st of each year. Normal LNG boil off, operational constraints, or other factors outside of the Company's control may result in lower inventories on November 1st.

    b. LNG may be vaporized at any time to avoid service interruptions. LNG vaporization is limited to this use, maintenance and testing activities, and normal boil off. Due to the high variable cost of cycling LNG and the need to reserve inventories for reliability, Southwest Gas will not attempt to realize economic gain from seasonal price differentials or other factors.

Cc: John Olenick
Eric Rost
Steve Williams
Laura Spurlock

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1. System Supply Gas Acquisition Policy Statement

Southwest endeavors to acquire the best-cost portfolio of natural gas supplies considering price, reliability, flexibility, and protection from short-term market volatility while still providing security of supply to meet sales customer demands. Balancing these factors against costs of competing gas resource alternatives determines the ever-changing "mix" (flexible and non-flexible, indexed and fixed-price, with and without interstate capacity short-term, mid-term, and long-term) of Southwest's supply portfolio. Southwest's portfolio has evolved with the industry to include spot market purchases (one month or less, may be firm or interruptible), term (firm, indexed-price, generally one year or less), and firm price stability purchases. While most of the term contractual arrangements are annual or seasonal, Southwest also considers longer-term supply alternatives.

2. Limits and Controls

Southwest's Gas Purchases & Transportation (GP&T) personnel (Administrator, Sr. Analyst, and Manager), as well as the Director/Gas Supply are authorized to enter specific gas supply transactions based upon the authority outlined in this document the Portfolio Selection Procedure document, or the Gas Purchasing Limits document. Regarding one month or less spot purchases, although each of the authorized personnel are assigned specific service territory(ies) and generally only purchase gas supplies for the assigned service territory(ies), each authorized personnel may complete purchases for any of the Company's service territories. Authorized personnel shall forward any questions concerning the authority to enter a specific transaction to management or senior management prior to entering such transaction to ensure authorized personnel do not exceed authority levels. Authorized personnel are not authorized to enter gas supply transactions that are not authorized by this document, the Portfolio Selection Procedure document, or the Gas Purchasing Limits document without the approval of management or senior management.

3. System Supply Gas Acquisition Procedures

For Arizona, Southwest identifies and selects, pursuant to three programs, a portfolio of gas supplies. These three programs are:

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"Arizona Price Stability Purchases" or "APSP" – Fixed-price firm gas supplies and fixed-for-floating index swaps. These supplies provide diversity in supply pricing mechanisms and supply reliability and can mitigate short-term market price volatility. While the fixed-price contracts provide physical gas, the fixed-for-floating index swaps are financial instruments that mitigate the price volatility associated with term first of the month indexed-price purchases. Southwest conducts APSP solicitations periodically throughout the year. For periods through the 2019/2020 Portfolio Period, Southwest hedges approximately a varying percent of the annual average forecasted portfolio quantity through APSP and limits the percent to not exceed twenty-five percent of the annual average forecasted portfolio quantity. Should the Company decide to make APSP above the twenty-five percent limit, it must first notify Arizona Corporation Commission Staff via letter of its intent to exceed the twenty-five percent limit. For periods beginning with the 2020/2021 Portfolio Period, APSP purchases have been suspended.

"Baseload Supply Program" – (BSP) – Firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. A "Portfolio Period" is the period that starts on any particular November 1st and concludes on the following October 31st.

"Term Purchases" – Traditional firm contract supplies that are selected during an annual solicitation. Proposals, or bids, for Term Purchases are evaluated using a cost optimization model. This portion of the portfolio provides the flexible firm peaking supplies that Southwest must have available for reliable service to its sales customers. Term Purchases generally have prices based on a market index.

"Spot Purchases" – The short-term supplies (one month or less, may be firm or interruptible), selected monthly and intra-monthly, that are integral to the "least cost dispatch" efforts. Southwest makes Spot Purchases to fill daily requirements or in lieu of higher cost Term Purchases. Spot Purchases may have either fixed or indexed pricing.

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A. Arizona Price Stability Purchases or APSP

The purpose of APSP is to identify and secure contracts that provide diversity in supply pricing mechanisms and supply reliability, and that can contribute to the mitigation of short-term market price volatility. The APSP is a programmatic hedge. The Vice President/Gas Resources is authorized to approve APSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Southwest solicits volatility mitigation proposals for all of its Arizona service areas. Southwest typically schedules solicitations every three to six weeks throughout the year (excluding the months of September and October).

Southwest's Portfolio Period runs from November of the current year through October of the following year. Southwest solicits APSP bids for the upcoming portfolio year and up to one portfolio year beyond that portfolio year. Individual solicitations may include bid requests for one or both of the upcoming portfolio years.

Beginning in February 2008, Southwest incorporated fixed-for-floating index swaps into the APSP. Swaps have been solicited for all portfolio years since the 2008/2009 gas year. These financial transactions compete directly with, and are an alternative to, firm fixed-price physical transactions. The combination of a financial fixed-for-floating index swap and a purchase of a firm first of month index-priced physical gas supply achieves the same price volatility mitigation Southwest previously achieved purchasing firm fixed-price physical gas supplies.

Southwest receives the physical fixed-price, physical indexed-price, and fixed-for-floating index swap offers via Instant Messaging (IM) and requests that suppliers hold their offer open for five minutes. This period is required to allow the supplier the capability of offering the lowest possible price (i.e., minimum premium for the risk taken on by the seller between the time the supplier makes the offer and an accepted offer is hedged) and provides Southwest sufficient time to determine the most attractive offer.

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Once Southwest receives all of the offers for physical and financial supply alternatives, the five minute window begins and the most attractive offer is identified. In comparing financial and physical offers, Southwest uses any premium or discount to the index identified by the physical indexed-price offer to adjust the fixed-for-floating index swap offer, making a direct comparison with the physical fixed-price offer possible.

Upon review and consideration of current market data, Southwest determines if the most attractive offer is desirable. If Southwest selects an offer, a gas buyer contacts the supplier via a recorded phone line and verbally confirms each purchase. Southwest solicits offers from suppliers with sufficient time before the close of the futures trading to provide suppliers time to hedge their sales before the end of the trading period for that day.

This procedure permits the direct competition of firm fixed-price physical gas supply offers with fixed-for-floating index swap offers. This procedure ensures that Southwest continues to procure the "best-cost" supply alternative currently available at the time of purchase to construct the supply "portfolio."

As previously stated, for periods beginning with the 2020/2021 Portfolio Year, APSP purchases have been suspended.

B. Baseload Supply Program (BSP)

The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums “blowing out” by making purchases periodically during the year preceding the start of a particular Portfolio Period. BSP purchases effectively replaced the Arizona APSP purchases for the 2020/2021 Portfolio Period and beyond. Should Southwest reinstate APSP purchases, it will reduce BSP purchases to ensure that it does not purchase base load supplies in excess of its needs.

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The Company typically schedules solicitations every three to six weeks throughout the year until meeting the projected baseload requirements. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

C. Term Purchases

Southwest solicits proposals from potential suppliers through an annual process held each spring. The Vice President/Gas Resources is authorized to approve Term Purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. The solicitation outlines Southwest's supply needs for a 12-month period beginning the following November 1, which marks the beginning of Southwest's traditional portfolio year. Southwest will also consider longer term proposals, which may span multiple portfolio years. Southwest considers all bona fide proposals that can be practically implemented. Southwest selects the most economically favorable proposals, which are added to the existing supply portfolio, creating the supply "mix." In addition, during this term purchase process, Southwest will also purchase firm first of month indexed-price gas supplies required to match with any fixed-for-floating index swap transactions that were entered into through APSP. Before firm indexed-price supply proposals are evaluated, the existing purchase obligations (primarily from APSP) are confirmed. All offers responsive to the Company's requirements are included among the supply alternatives. Southwest estimates the forward market conditions, including spot market reference prices, for use in evaluating the supply alternatives. This menu of supply alternatives, which includes spot purchases as well as the firm supply proposals, forms the base from which Southwest determines the best-cost mix of gas supplies.

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In addition, transportation costs relevant to the various supply proposals are verified and modeled. Any changes in the logistics of transporting the supply alternatives to market must also be determined, considered, and modeled. Further, the parameters for the distribution system operations must be examined to ensure the supply portfolio is consistent with system operational requirements.

Gas Resources Planning uses a computer model to optimize the supply alternatives. The fluctuating daily forecast demands, which are model inputs, define the flexibility required in the portfolio. Contract term, commodity price, demand charges, peaking and swing capabilities, charges for not taking gas (gas inventory charges, or GIC), and transportation costs are among the cost factors that are optimized by the model. Outside of the model and prior to selecting specific offers, the selection committee considers the following qualitative factors: reliability; geographic and supplier diversity; authorizations to negotiate/accept; and revisions to offers; and opportunities to monetize unused capacity. Model parameters are modified accordingly, given information available at the time, to best represent conditions expected during the upcoming portfolio period.

Supply sources selected as part of the optimized best-cost mix, but not already authorized or under contract, are identified. Once authorized, Southwest negotiates specific contract terms with suppliers. Diversity and reliability of selected potential suppliers are reviewed in conjunction with start-up of negotiations. If negotiated terms or conditions deviate materially from the modeled offer, Southwest re-analyzes the potential supply offer to determine whether it should remain part of the gas supply mix. Additional model runs continue whenever contract terms are finalized, until the portfolio serves all forecasted demands. This iterative process is necessary for evaluating the impact of completed contracts on the remaining supply alternatives.

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D. Spot Purchases

(i) Monthly

Subject to review of anticipated demands and available Term Purchases and APSP, Southwest may acquire monthly baseload supplies from the spot market. Such supplies can be purchased either at a fixed or index-related price. Southwest may solicit offers or may purchase supplies via the Intercontinental Exchange ("ICE") internet-based trading platform. Solicitations, when deemed necessary, are made via e-mail to an extensive list of prospective suppliers, typically during the week before the first of each month. Suppliers send responses via Instant Messaging ("IM"); Southwest's gas buyers, in conjunction with a Gas Resources Planning department observer/participant, review and compare such responses with those available on ICE. Southwest completes purchase arrangements, if any, early enough to make nominations to the respective pipeline(s) for first of the month delivery. Purchase details are confirmed with suppliers via recorded phone line and facsimile. Authorized personnel may approve Spot Purchases of one-month or less in duration up to limits set forth in the Gas Purchasing Authorization and Limits document.

(ii) Daily

Southwest utilizes several methods and sources to monitor daily spot market prices. If daily spot market supplies are required or desired, Southwest strives to obtain the best price(s) available by canvassing the marketplace. Gas buyers maintain direct contact with spot market suppliers, using a process that includes telephone calls and Instant Messaging ("IM") originating from both Southwest's gas buyers and supplier marketing representatives. In addition to the traditional direct contact process, the Southwest's gas buyers also employ the ICE internet –based trading platform. This platform provides real-time next day and same day prices for points on the pipeline grid where Southwest is active in acquiring spot supplies. The direct contact with suppliers and monitoring of ICE is required to stay abreast of price fluctuations in the

market, potential loss of spot supplies and other factors that may either impair or facilitate acquisition of daily supplies. This process is, in large part, conducted and completed daily between 5:00 a.m. and 7:00 a.m. Pacific time.

Pipeline nominating procedures permit additional spot market purchase activities at subsequent intervals during the day, but the morning market remains the primary purchasing period. Because of the very short time in which these purchases must be made and nominations completed, Southwest analyzes market pricing information, volumes required or desired, and completes purchase arrangements with supplier representatives in real-time. Daily spot market purchases are usually for one day only, but may be purchased for multi-day periods up to one-month in duration. Purchase details are confirmed with suppliers via recorded phone line and hard-copy transaction confirmations. Authorized personnel may approve Daily Spot Purchases up to limits set forth in the Gas Purchasing Authorization and Limits document.

E. Use of Financial Instruments

As discussed in Section A, above, Southwest includes fixed-for-floating index swaps in the APSP. The Vice President/Gas Resources is authorized to approve fixed-for-floating index swaps up to limits set forth in the Gas Purchasing Authorization and Limits document. Under a fixed-for-floating index swap, if the index is above the agreed upon swap price, the seller pays the buyer (Southwest) the difference between the actual value of the index and the agreed upon swap price. If the index is below the agreed upon swap price, the buyer (Southwest) pays the seller the difference between the swap price and the actual value of the index.

When Southwest combines a fixed-for-floating index swap with a contract for firm physical baseload gas priced based on the same index as the swap, the combination of the swap and the physical purchase are equivalent to a fixed-price physical contract. Thus, this financial instrument provides Southwest

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with the same level of price mitigation that was previously only available using firm fixed-price physical gas supplies.

In order to manage the use of financial derivatives, Southwest acquired Entegrate software from Sungard. This software allows Southwest to manage and monitor financial and physical deals used to stabilize prices. The system is known at Southwest as the Hedge Capture and Control System (HCCS).

Beginning in 2006, Southwest identified potential suppliers of financial hedging products. Southwest worked with these providers to negotiate contracts conforming to International Swaps and Derivatives Association (ISDA) standards. That process was completed with three financial counter-parties in January 2008. In October 2008, Southwest completed an ISDA contract with a fourth financial counter-party. Southwest continues to work with other potential suppliers of financial hedging products and may complete ISDA agreements with additional counter-parties during calendar 2009.

Fixed-for-floating index swaps (combined with index-priced physical gas) will be substituted for some of the hedges previously completed with fixed-price contracts through the competitive process described previously. Because the two types of hedges behave the same and are in direct competition with each other, the impact on the price volatility mitigation portion of the portfolio is virtually identical. However, through the use of swaps, additional counter-parties have been added into Southwest's potential supplier mix. This reduces Southwest's counter-party credit risk by spreading the agreements among more counter-parties, and also ensures that potential counter-party concerns about credit risk with Southwest would not limit the number of participating suppliers.

Southwest may consider incorporating other derivatives into the portfolio mix, but will consult with ACC Staff prior to implementing any changes to APSP that will integrate other types of derivatives. However, given that the APSP has been suspended for periods beginning with the 2020/2021 Portfolio Period, all gas related derivative transactions have also been suspended for periods beginning with the 2020/2021 Portfolio Period.

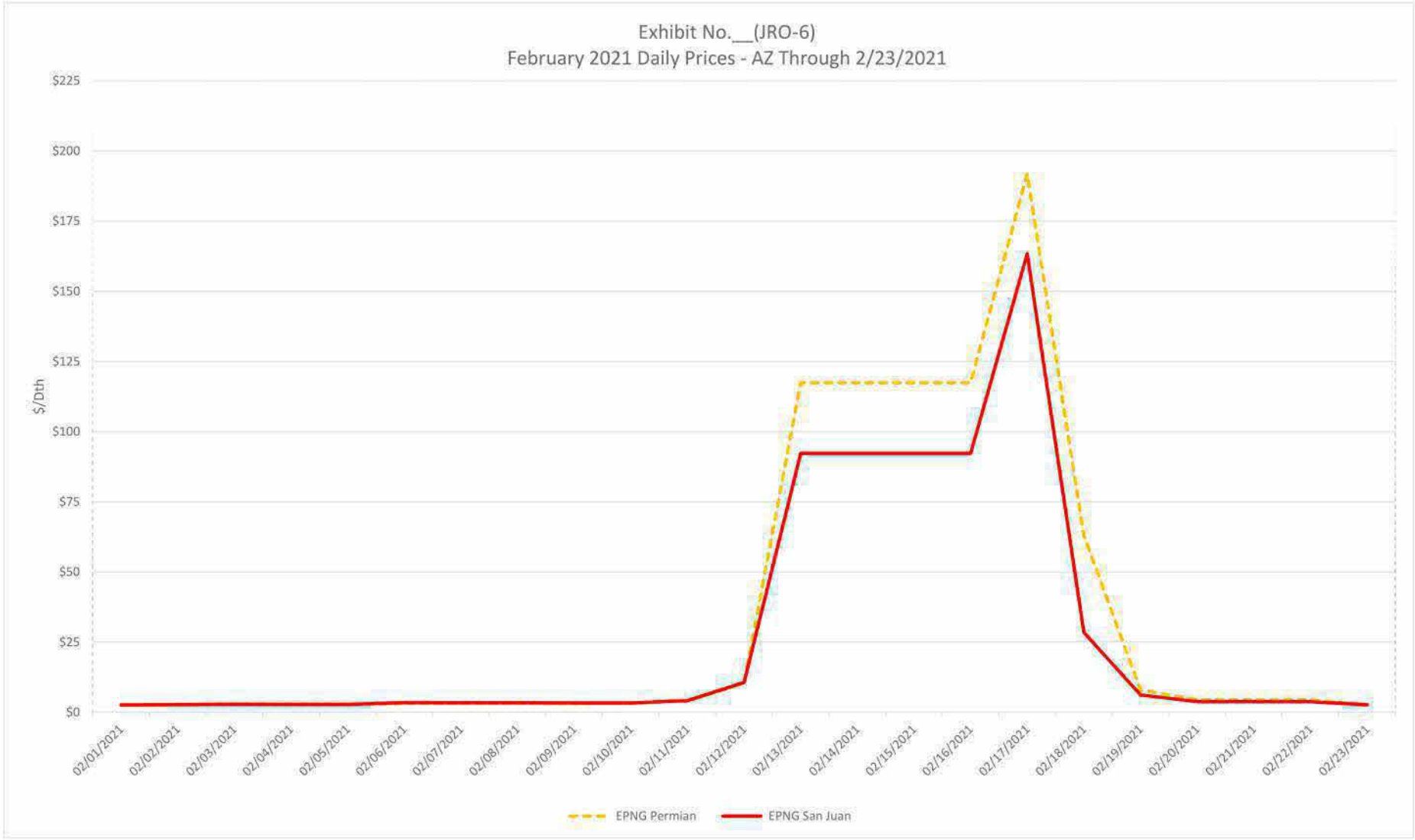
Exhibit No.__(JRO-6)
February 2021 Daily Prices - AZ Through 2/23/2021
$/Dth
$225
$200
$175
$150
$125
$100
$75
$50
$25
$0
02/01/2021
02/02/2021
02/03/2021
02/04/2021
02/05/2021
02/06/2021
02/07/2021
02/08/2021
02/09/2021
02/10/2021
02/11/2021
02/12/2021
02/13/2021
02/14/2021
02/15/2021
02/16/2021
02/17/2021
02/18/2021
02/19/2021
02/20/2021
02/21/2021
02/22/2021
02/23/2021
EPNG Permian
EPNG San Juan

SOUTHWEST GAS

Winter 2021 Arizona Conservation Communications Efforts

Social Media

- Post on Feb. 17, 2021 on Facebook, Instagram and Twitter
- Results:
  - Facebook- 7,697 people reached, 524 engagements
  - Twitter- 1,049 impressions, 419 engagements
  - Instagram- 576 impressions, 48 engagements

SWGas.com Website

- Homepage web banner and announcement activated February 17, 2021

Media Coverage

- Press release issued to AZ media via PR Newswire and targeted media pitching- February 17, 2021
    - 108 mentions via social media, radio, web and television outlets
    - Total reach: 128,461,106
    - Total ad equivalency: $141,33.51
- Sample media hits are below *(for the full list of media coverage see included spreadsheet)*

Southwest Gas asks customers in Arizona to conserve due to weather in Texas

https://www.azfamily.com/news/southwest-gas-asks-customers-to-conserve-as-other-states-are-blasted-by-winter-storm/article_0aee7d66-7151-11eb-a5ae-eb1d2894d429.html?block_id=997197

https://www.kgun9.com/news/local-news/southwest-gas-asks-customers-to-conserve

https://kvoa.com/news/top-stories/2021/02/17/southwest-gas-asks-customers-to-conserve-gas-as-severe-storms-prompt-drastic-rise-in-prices/

https://www.azcentral.com/story/money/business/energy/2021/02/18/arizona-gas-utilities-ask-customers-conserve-amid-texas-energy-crisis/4495617001/?cid=twitter_azcentral

News Release

SOUTHWEST GAS

Immediate Release
February 16, 2021

Southwest Gas Advises Customers to Conserve as States Grapple with Cold Weather

PHOENIX- As many states continue to experience harsh unseasonably cold weather, Southwest Gas is advising customers to conserve. The weather crisis, specifically in Texas, has caused natural gas supplies to become constrained. As with any resource in high demand and constrained supply, natural gas prices have dramatically increased over the past several days.

As a service, Southwest Gas is advising customers to conserve natural gas to help minimize price impacts to their future gas bills. While Southwest Gas does not currently anticipate any supply shortages in Arizona, conservation of natural gas will help support the interstate pipeline system so states where the weather is bitterly cold can meet their demands.

Where possible, we urge customers to curb the use of non-essential natural gas features like:

- Indoor and outdoor fireplaces
- Fire pits
- Pool and spa heaters
- Tiki torches
- Any other decorative fire features

In addition, customers can conserve natural gas by:

- Using cold water whenever possible
- Taking shorter showers
- Setting the thermostat to 65-68 degrees, health permitting
- Dress warmly while inside your home

The price of gas fluctuates based on supply and demand and Southwest Gas does not profit from the cost of natural gas. Natural gas costs are passed straight through to customers. While we cannot predict when costs will return to normal, Southwest Gas recommends customers conserve through the weekend.

Visit SWGas.com and/or follow Southwest Gas on social media for updates as they come available. Southwest Gas Corporation provides safe and reliable natural gas service to over two million customers in Arizona, California, and Nevada.

###

For more information:
Amy Washburn- 602-763-3289

SOUTHWEST GAS CORPORATION

Notice Type:	Warning of a Possible Strained Operating Condition (SOC)
Posting Date:	02/11/2021
Notice Effective Date:	02/11/2021
Notice Effective Time:	8:00 AM, PCT
Duration of Notice:	Until Further Notice
Line Pack Condition:	Within acceptable limits
Extent of the Notice:	Arizona T-1 Customers
Reason for the Notice:	El Paso Warning
Requested Action:	No Drafting- Match projected usage with nominations.

Notice Text:

El Paso Natural Gas (EPNG) has issued a warning regarding a possible Strained Operating Condition (SOC) for concerns of drafting due to winter weather forecast. Southwest Gas Corporation (Southwest) requires transportation customers to match projected usage with nominations.

Southwest requires that transportation customers in Arizona closely monitor their nominations and scheduled quantities versus usage. If conditions do not improve an actual SOC may be declared by EPNG resulting in potential upstream pipeline charges and a reduced imbalance tolerance for all transportation customers who transport natural gas supplies on EPNG.

If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

Notice Type:	Critical Operating Condition (COC)
Posting Date:	02/15/2021
Notice Effective Date:	02/15/2021
Notice Effective Time:	7:00 AM, PCT
Duration of Notice:	Until Further Notice
Line Pack Condition:	Low Line Pack
Extent of the Notice:	Arizona T-1 Customers
Reason for the Notice:	El Paso COC
Requested Action:	No Drafting- Match or nominate more gas than projected usage

Notice Text:

El Paso Natural Gas (EPNG) has declared a **Critical Operating Condition (COC)** due to significant underperformance in the supply basins and extreme winter weather.

EPNG has reduced the daily negative imbalance tolerance to 3% of scheduled quantities. Southwest Gas Corporation requires that transportation customers in Arizona closely monitor their nominations and scheduled quantities and match or nominate more gas than projected usage.

The tolerance stated above may be adjusted by EPNG if pipeline conditions change. Customers who create an imbalance in excess of the specified imbalance tolerance stated above may be subject to a pro rata share of any upstream pipeline charges and/or other charges that were incurred for such excess quantities.

If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

Southwest Gas Cold Weather Advisory

As a reminder there is a nationwide cold weather event that is affecting natural gas supplies that are supporting Arizona. Southwest Gas ("Southwest") is advising customers to conserve. Natural gas prices have dramatically increased over the past several days, which are affecting Southwest gas customers in Arizona. While Southwest Gas does not currently anticipate any supply shortages in Arizona, conservation of natural gas will help support the interstate pipeline system so states where the weather is bitterly cold can meet their demands.

Southwest would like to remind its customers that El Paso Pipeline ("EPNG") issued a Critical Operating Condition which has reduced the negative imbalance tolerance to 3% of scheduled quantities. The tolerance may be adjusted by EPNG if pipeline conditions change. Customers who create an imbalance in excess of the specified imbalance tolerance stated above may be subject to a pro rata share of any upstream pipeline charges.

While we cannot predict when costs will return to normal, Southwest Gas recommends customers conserve through the weekend. If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

GAS DAY *February 17, 2021*

NOTICE TO YUMA COGENERATION ASSOCIATES

Customer Curtailment

Southwest Gas Corporation ("Southwest") will be curtailing the natural gas supplies for Yuma Cogeneration Associates ("Yuma") effective gas day February 17, 2021. Southwest is required to apportion the available gas supply in accordance with Rule 7, Section G of the Arizona Tariff, and Article VI section B of the Special Procurement Agreement.

Southwest, has notified Yuma by phone of the curtailment of natural gas supplies for gas day February 17, 2021. Southwest is requesting Yuma to not utilize their power generation equipment during this curtailment period. Yuma may continue normal operation of non-power generation equipment during this curtailment period. Yuma will be notified by Southwest as to when it may resume normal power generation operations.

Thank you for your prompt cooperation.

Southwest Gas Scheduling

1-800-762-7626

Tab F

Direct Testimony
of
Nick Liu

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
NICK Y. LIU

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Nick Y. Liu

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Appendix A – Summary of Qualifications of Nick Y. Liu

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Nick Y. Liu

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Nick Y. Liu. My business address is 1600 East Northern Avenue, Phoenix, Arizona 85020.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation & Energy Efficiency department. My title is Supervisor.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission) and the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My prepared direct testimony supports the Company's proposed Post Test Year Plant (PTYP) adjustment from a ratemaking perspective. I also address the Company's proposed amortization of the acquisition premium and other ratemaking adjustments associated with the purchase of the natural gas service-related assets of Graham County Utilities, Inc. (GCU).

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- The computation of the Company's PTYP adjustment to determine the appropriate level of cost of service; and
- The development of the Company's proposed amortization of the GCU acquisition premium and adjustments to the revenue requirement from GCU rate base and operating expense.

II. POST TEST YEAR PLANT ADJUSTMENT

Q. 7 Please describe and explain the Company's proposed PTYP adjustment.

A. 7 The Company is proposing a PTYP adjustment (Adjustment No. 19) to the recorded rate base amounts at August 31, 2021. There are two components to the PTYP adjustment. The first includes non-revenue producing projects expected to be closed through August 31, 2022 that are used and useful and will be serving customers during the rate effective period. The Company's twelve-month PTYP adjustment for non-revenue producing plant is consistent with the Commission-approved practice in prior General Rate Cases (GRC) for other Arizona utilities. Non-revenue producing plant represents plant that is constructed to continue to provide service or enhance reliability and safety for existing customers.[1] The Company will not realize any incremental operating revenues from the construction and addition of this plant at the time it is placed into service; in other words, these capital additions are non-revenue producing. The second component of this adjustment addresses System Allocable Miscellaneous Intangible Plant Account 303. To match the portion of Adjustment

[1] In contrast, revenue-producing plant is constructed to serve new customers and is not included in the PTYP adjustment.

No. 13[2] which removed the items with amortizations expiring on or before August 31, 2022, this adjustment addresses the additions that are expected to occur during this same timeframe. These adjustments are consistent with prior GRCs.

Q. 8 What is the purpose of the Company's PTYP adjustment?

A. 8 The purpose of the PTYP adjustment is to more accurately reflect the level of costs Southwest Gas will incur to serve its end of test year customer base during the rate effective period. It is important to note that while the Company's PTYP adjustment reduces regulatory lag, it does not eliminate regulatory lag. By the time rates from this proceeding go into effect, the PTYP investments will range from several months to over one year old. Examples of PTYP in this adjustment include but are not limited to: pipe replacements including replacements under the Company's integrity management programs, franchise-related replacements, pressure reinforcements, measuring and regulating station equipment, intangible and general plant.[3]

Q. 9 What is the total impact of the PTYP adjustment on rate base?

A. 9 This adjustment increases rate base by $197,099,912, which consists of PTYP in the following categories:

- Pipe Replacement: $137,987,736
- Regulation Station / Tap / City Gate / Rectifier: $2,963,720
- Facilities: $17,629,294
- Equipment (Tools / Vehicles): $14,486,415

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[2] As described in the Prepared Direct Testimony of Company witness Randi L. Cunningham's.

[3] The PTYP adjustment only includes plant additions related to the Company's Customer-Owned Yard Line (COYL) Program from September 1, 2021 to December 31, 2021. The Company is proposing that COYL plant additions after December 31, 2021 be recovered through the COYL Cost Recovery Mechanism (CCRM).

- Liquefied Natural Gas (LNG): $1,548,342
- COYL: $7,129,557
- Trailing charges for plant in service by the end of the test year: $2,687,675
- Software: 12,667,173

In addition, the Company proposes to include one half year of the annual depreciation expense calculated for the PTYP using half-year convention, $3,334,953 to the accumulated depreciation, which reduces the rate base by $3,334,953.

Q. 10 Can you explain how PTYP adjustments promote public interest?

A. 10 Regulatory tools, like PTYP adjustments, work to keep utilities financially healthy, while balancing cost impacts on customers, and help to mitigate regulatory lag. Regulatory lag is the difference in time between when a utility spends money and when it recovers those dollars from customers. The use of PTYP adjustments helps avoid the time, cost and resources (on the part of both utilities and the Commission) associated with frequent rate case proceedings needed to adjust rates, mitigates rate shock, promotes gradualism in rates, and helps limit the long-run average capital costs embedded in rates. As a result, it promotes the public interest by ensuring just and reasonable rates, and by allowing utilities to timely recover the costs of providing safe and reliable services to customers.

Q. 11 Can you explain how PTYP adjustments mitigate regulatory lag?

A. 11 The timeframe to prepare and adjudicate a GRC in Arizona and implement new rates can be as great as 2 years. PTYP adjustments help mitigate regulatory lag by decreasing the amount of time between when investments are made and

when the Company can recover the investments in rates. The use of PTYP adjustments provides a better matching of rates with the investment costs utilized to provide service at the time those rates will go into effect. This benefits customers as changes in capital investment costs are included in rates sooner, allowing customers to receive better pricing signals and lessening differences between current customers and future customers, as rates more accurately reflect a utility's true cost of providing service.

Q. 12 What is the current Commission policy on PTYP in rate case proceedings?

A. 12 There is no written policy issued by the Commission regarding the inclusion of PTYP or specifying the associated time periods for eligible PTYP. The Commission currently has a generic investigation docket (Docket No. AU-00000A-19-0080) to evaluate Commission policy on PTYP (PTYP Docket). According to the Commission Utilities Division's (Staff) filed Memorandum[4] in the PTYP Docket, Staff believes that current practice of allowing PTYP to be included in rate base came from prior Commission decisions and the Commission has approved the inclusion of PTYP for periods ranging from 2 to 18 months. Based on Staff's data points provided in the memorandum, out of 22 rate case proceedings since 2014, 6 or more months of PTYP was allowed in 19 cases and 12 months of PTYP was allowed in 11 cases.[5] The Company's twelve-month PTYP adjustment is consistent with these data points.

[4] Dated October 4, 2019.
[5] October 4, 2019 Staff Memorandum, page 2.

Q. 13 What are the authorized time periods for eligible PTYP in the Commission's recent class A GRCs?

A. 13 The Commission has authorized inclusion of PTYP for periods ranging from 6 to 12 months in the recent class A rate cases, most recently authorizing 12 months for Arizona Public Service Company, in Decision No. 78317.

Q. 14 What is Staff's position on the PTYP adjustment?

A. 14 Staff stated in a memorandum[6] filed in the PTYP Docket that, "Staff utilizes prior Commission decisions in formulating its recommendations. At this time. Staff continues to recommend the inclusion of up to 12 months of PTYP beyond the end of the historic test year. Further, Staff recommends a companion adjustment to accumulated depreciation to include one half year of the annual depreciation expense calculated for the PTYP to update the accumulated depreciation to reflect the half-year convention methodology for depreciation."

Q. 15 Is the Company's proposed PTYP adjustment consistent with Staff's stated positions?

A. 15 Yes. The table below provides a summary of Staff and the Company's positions on PTYP:

Staff Positions Based on Staff's Memorandum in Docket 19-0080	Southwest Gas Proposed PTYP Adjustment
Inclusion of up to 12 months of PTYP.	Inclusion of 12-month non-COYL PTYP expected to be closed through August 31, 2022 that are used and useful and 4-month COYL PTYP.
PTYP inclusion is not being made to generate or support system growth or new customers.	The Company's proposed PTYP includes only non-revenue producing plant that is constructed to improve service or enhance reliability and safety for existing customers.
Inclusion of accumulated depreciation of the proposed PTYP using the half-year convention to the recorded test year end accumulated depreciation.	Included.

[6] Dated June 4, 2021.

III. GRAHAM COUNTY UTILITIES ADJUSTMENTS

Q. 16 Please briefly describe the GCU acquisition.

A. 16 On February 22, 2021, GCU and Southwest Gas entered into an Asset Purchase Agreement that provides the terms and conditions for Southwest Gas to purchase the natural gas service-related assets of GCU. On April 23, 2021, Southwest Gas and GCU submitted a joint application to the Commission (Docket Nos.G-01551A-21-0092 and G-02527A-21-0092) requesting approval to transfer the natural gas utility assets of GCU to Southwest Gas, and to extend the Certificate of Convenience and Necessity of Southwest Gas.

Q. 17 Did the Company adjust the revenue requirement in this case to account for GCU rate base and expenses?

A. 17 Yes. The Company made two adjustments in Adjustment No. 20 to the revenue requirement to reflect (1) the inclusion of the GCU rate base that the Company is purchasing in the asset purchase agreement; and (2) expected O&M expenses for the GCU service territory. Adjustment B-2 GCU RB includes the assets purchased in the asset purchase agreement in Company's rate base. This adjustment reflects an increase in rate base of approximately $2.5 million. Adjustment C-2 GCU Expense includes the expected ongoing O&M costs for operating the GCU service territory. This adjustment reflects an increase in O&M expense of approximately $914,000.

Q. 18 Please describe and explain the acquisition premium associated with the purchase of the natural gas service-related assets of GCU.

A. 18 The purchase price for the GCU natural gas system assets is $3.5 million. The GCU Gas Division rate base authorized by the Commission in 2018 for the test year ended December 31, 2016, was approximately $2.3 million. As of

September 30, 2021, the GCU Gas Division's total net utility plant is approximately $2.5 million, which is the amount included in the rate base (Adjustment No. 20) in this proceeding. The acquisition premium of $956,256, or the difference between the $3.5 million purchase price and this original cost of the assets being purchased (net of accumulated depreciation), is what Southwest Gas seeks authority to recover in this GRC.

Q. 19 What is the Company's proposal to recover the acquisition premium?

A. 19 The Company is proposing to amortize the acquisition premium of $956,256 over a three-year period, consistent with Commission-approved amortizations in Southwest Gas' last GRC. The annual amortization expense is approximately $318,752 (Adjustment No. 16), which would result in an overall minimal bill impact.

Q. 20 Are the purchase price and the acquisition premium reasonable?

A. 20 Yes. The purchase price for the GCU natural gas system assets is $3.5 million. The fair market value of GCU's natural gas assets can be estimated by using a Reconstruction Cost New Less Depreciation (RCND) analysis. The RCND is computed by using the Handy-Whitman utility construction indices to trend original cost utility plant and certain other rate base items to obtain the current reconstruction cost new, by vintage year of construction. To apply this methodology to GCU gas facilities, sufficient records would need to be available to perform the calculations, and those records are not available for GCU. In the absence of these records, the ratio of Southwest Gas' RCND rate base to original cost rate base (OCRB) authorized in Southwest Gas' recent general rate case is an appropriate proxy to estimate an RCND value for GCU corresponding to its OCRB. GCU's authorized ORCB as of December 31, 2016, is

approximately $2.3 million. In Decision No. 77850, Southwest Gas' authorized RCND has a ratio of 1.64 over the authorized ORCB.[7] By applying this ratio to the GCU Gas Division's OCRB, GCU's RCND can be estimated as approximately $3.9 million, which is more than the $3.5 million purchase price. Further, GCU informs the Company that the current book value of its Gas Division's rate base is approximately $2.5 million as of September 30, 2021, thereby reducing the amount attributable to the proposed acquisition premium. As such, the purchase price and approval of the acquisition premium are reasonable.

Q. 21 Does this conclude your prepared direct testimony?

A. 21 Yes.

[7] Southwest Gas was authorized a RCND of $3,173,182,227 and an ORCB of $1,930,611,851 in Decision No.77850.

SUMMARY OF QUALIFICATIONS
NICK Y. LIU

I am a graduate of the University of Minnesota, Twin Cities having received a Bachelor of Arts in Economics, Mathematics and Statistics in 2013. In 2015, I earned a Master's in Statistics from the University of California, Berkeley.

In 2015, I joined the Arizona Corporation Commission as a Public Utilities Analyst in the Utilities Division. In June 2019, I joined Southwest Gas Corporation as a Senior Analyst in the Regulation and Energy Efficiency department and was promoted to Supervisor in May 2021. I am responsible for preparing and reviewing regulatory rate filings and revenue requirement analyses for Southwest Gas' Arizona, California and Nevada jurisdictions.

I have been a Certified Rate of Return Analyst (CRRA) by the Society of Utility and Regulatory Financial Analysts (SURFA) since 2018.

Tab G

Direct Testimony
of
Randi L. Cunningham

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
RANDI L. CUNNINGHAM

ON BEHALF OF
SOUTHWEST GAS CORPORATION

December 3, 2021

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Prepared Direct Testimony
of
Randi L. Cunningham

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Appendix A – Summary of Qualifications of Randi L. Cunningham

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Randi L. Cunningham

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Randi L. Cunningham. My business address is 8360 S. Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation and Energy Efficiency department. My title is Senior Regulatory Professional.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission), the California Public Utilities Commission (CPUC), the Public Utilities Commission of Nevada (PUCN) and the Federal Energy Regulatory Commission (FERC).

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor the Company's overall revenue requirement and provide a summary of the test year results of operations and the primary factors contributing to the

Company's deficiency. I provide an overview of Southwest Gas' operations and cost allocation methods. I also sponsor the financial statements and statistical schedules in Schedule E, from Schedule E-1 to E-6 and E-8 and E-9, and the projections and forecasts in Schedule F.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- A summary of the results of operations for the Company's Arizona rate jurisdiction, including test year results, and the revenue deficiency as shown on Schedule A-1;
- The primary factors contributing to the revenue deficiency in this application;
- An overview of Southwest Gas' natural gas utility operations, including a description of the Company's state and federal ratemaking jurisdictions;
- The methodologies employed by Southwest Gas for cost responsibility and allocations (excluding the Company's class cost of service study) contained in Schedule C-1;
- Southwest Gas' adjusted test year income statements included in Schedule C-1, with the exception of Sheet 2, and the majority of the Company's pro forma adjustments included in Schedule C-2;
- The computation of the gross revenue conversion factor and state and federal income tax rates as shown on Schedule C-3; and
- The computation of the Company's rate base, as presented in Schedule B, and the ratemaking adjustments to rate base (with the exception of the Post Test Year (PTY) Plant and Graham County Utilities (GCU) adjustments) needed to determine the appropriate level of cost of service.

II. SUMMARY OF RESULTS OF OPERATIONS

Q. 7 What is the test year in this application?

A. 7 The recorded test year results were adjusted to annualize and normalize the effects of known and measurable changes that occurred through August 31, 2021, and to include certain post-test year costs that were effective after the end of the test year as discussed further below.

Q. 8 How does the Company determine if a revenue deficiency exists?

A. 8 A revenue deficiency is determined to exist when the Company's annualized and normalized revenue at its present rates is less than the Company's adjusted cost of service at its proposed weighted average cost of capital.

Q. 9 What does the term "revenue" mean in the context of the Company's revenue deficiency?

A. 9 The term "revenue" in this instance refers to the non-gas and non-surcharge revenues that Southwest Gas receives through base rates. Because there is a separate purchased gas cost mechanism to ensure that the Company's customers only pay the actual cost incurred by the Company to purchase natural gas (i.e., Southwest Gas earns no profit on the natural gas commodity), these revenues are excluded from the General Rate Case (GRC). Similarly, because Southwest Gas has separate regulatory mechanisms to recover certain other costs outside of base rates, these revenues are also excluded from the GRC. Another term that is used interchangeably with "revenue" in this context is "margin".

Q. 10 What is the Company's revenue deficiency in its Arizona operations, and how was it determined?

A. 10 The Company's revenue deficiency is approximately $90.7 million. Schedule A-1, Sheet 2, Column (e) shows that annualized margin at present rates needs to be adjusted upward to approximately $579.2 million; this yields a rate of return (ROR) of 4.51 percent on rate base of $2,642,067,938. The Company is requesting a fair value rate of return (FVROR) of 5.48 percent on fair value rate base (FVRB) of $3,414,416,189. Accordingly, to produce a 5.48 percent FVROR, a revenue increase of approximately $90.7 million is required. Please refer to the Prepared Direct Testimony of Company witness Ann Bulkley for the Company's requested cost of capital (Schedule No. D-1).

III. FACTORS CONTRIBUTING TO THE DEFICIENCY

Q. 11 What are the primary factors contributing to the Company's revenue deficiency?

A. 11 There was one major change to the Company's cost of service since the last GRC, which was filed with a test year ended January 31, 2019. The Company made a significant amount of capital investments required to serve new customers and to operate and maintain a safe and reliable natural gas distribution system. Rate base increased by approximately $711 million from the rate base authorized in Decision No. (D.) 77850.

The increase in plant is primarily related to various distribution system replacement projects, including those identified under the Company's transmission and distribution integrity management programs, franchise requirements, pressure reinforcements, and cathodic protection. Since January 2019, or the following the end of the Test Year in the Company's last Arizona GRC, the Company invested approximately $178 million in mains and services to serve over 61,000 new customers. The Company also invested

approximately $50 million in meters, a portion of which serve new customers and a portion of which were necessary replacements. Approximately $64.5 million of the increase in rate base is related to the Arizona-allocable portion of the capital expenditure for the Company's new customer billing system, which was placed in service in May 2021. To mitigate regulatory lag, the Company is requesting the timely recovery of approximately $197 million in capital investments in non-revenue producing PTY plant required to operate and maintain a safe and reliable system that will be used and useful prior to the date rates from this proceeding become effective. The proposed PTY plant adjustments are described in the Prepared Direct Testimony of Company witness Nick Y. Liu.

The impact to the cost of service resulting from increased capital investments and related depreciation, amortization and property tax expenses is approximately $87 million.

In addition to updating rates to reflect these reasonable and prudent investments to serve customers, authorized revenues need to be updated to reflect customer growth and the overall changes in the level of operating expenses currently experienced by the Company.

Q. 12 What is the Company's proposed annual percentage increase over revenue at present rates?

A. 12 The proposed annual percentage increase is 11.5 percent, which is calculated by dividing the $90.5[1] million proposed rate increase over revenue at present

[1] This is the portion of the requested increase attributable to test year customers. A small portion of the requested rate increase is attributable to rolling acquired GCU customers into Southwest Gas' base rates.

rates of approximately $789.0 million. Please refer to the Prepared Direct Testimony of Company witness Timothy S. Lyons for the related bill impacts.

Q. 13 Please describe the PTY adjustments the Company included as part of its cost of service in this application.

A. 13 Consistent with prior GRCs, Southwest Gas included select PTY adjustments, primarily consisting of the following: 1) the 2022 wage increase and twelve months of PTY within-grade movement; 2) updating the property tax assessment ratio to incorporate the known and measurable ratio for 2022 for its property tax annualization adjustment; and 3) software projects and non-revenue producing plant additions anticipated through August 31, 2022. The PTY plant adjustment is discussed in the Prepared Direct Testimony of Company witness Nick Y. Liu.

Q. 14 Why has Southwest Gas included these PTY items in its application?

A. 14 In the Company's prior Arizona GRCs, the Commission has allowed adjustments similar to those the Company has proposed in this proceeding if the events are known or reasonably certain to occur and are measurable prior to hearing. By including these PTY adjustments, the proposed cost of service will more accurately reflect the level of costs Southwest Gas will incur to serve its end of test year customer base when the rates approved in this proceeding will be effective.

Q. 15 Do the Company's PTY adjustments adhere to the matching principle?

A. 15 Yes. The Company only includes non-revenue producing plant in its PTY plant adjustment. The Company's customers at the end of the test year are the primary beneficiaries of these capital expenditures and will continue to be the primary beneficiaries during the rate effective period. Consequently, the

inclusion of PTY plant in rate base more accurately matches the Company's investment needed to serve the customers on its system at the end of the test year and results in just and reasonable rates. Please refer to the Prepared Direct Testimony of Company witness Nick Y. Liu for more information on the Company's PTY plant adjustment.

The 2022 property tax assessment ratio was applied to calculate annualized property taxes. This rate is known and measurable and reflects the assessment ratio that will be used during the year rates from this proceeding become effective.

Finally, the PTY wage increases are applied only to employees on the Company's payroll at the end of the test year to update their wages to the level that more closely reflects the wages for these employees when rates from this proceeding are effective.

Based on the foregoing and as discussed more fully below, the Company's PTY adjustments adhere to the matching principle, are consistent with PTY adjustments proposed by the Company in prior GRCs and should be accepted by the Commission.

IV. OVERVIEW OF NATURAL GAS OPERATIONS

Q. 16 Please provide a brief overview of Southwest Gas' natural gas operations.

A. 16 Southwest Gas is a natural gas local distribution company, providing service to over 2.1 million customers in three states. At the end of the test year, Southwest Gas served over 1.1 million customers in Arizona, comprising approximately 53.3 percent of its total customer base. Southwest Gas also has a wholly owned subsidiary, Great Basin Gas Transmission Company (Great Basin), formerly known as Paiute Pipeline Company (Paiute), that operates as an intrastate

pipeline and is regulated by the FERC.

Southwest Gas' operations are divided geographically into five operating divisions: Central Arizona, Southern Arizona, Southern California, Northern Nevada, and Southern Nevada. Each division operates independently of the others and may include portions of multiple ratemaking jurisdictions. All divisions are supported by staff located at the Company's corporate headquarters.

At the state level, Southwest Gas' retail gas utility operations currently consist of six rate jurisdictions: Arizona, subject to the regulation of the Commission; Southern Nevada and Northern Nevada, subject to regulation by the PUCN; and Southern California, Northern California, and South Lake Tahoe, California, subject to regulation by the CPUC. Southwest Gas' remaining two rate jurisdictions, Great Basin and Southwest Gas Transmission Company (SGTC), are both regulated by the FERC.

V. JURISDICTIONAL COST RESPONSIBILITY AND ALLOCATIONS

Q. 17 Briefly describe how costs associated with Southwest Gas' natural gas operations are treated in this application.

A. 17 Both operating and capital costs are incurred at the Arizona district level and at the corporate level. Operating costs are also incurred at the Southwest Gas Holdings Inc. (Holding Company) level. Costs incurred at the district level are charged directly to the appropriate rate jurisdiction. Costs incurred at the corporate level may be charged directly to one or more rate jurisdictions if the cost/activity was incurred on its behalf (i.e., "corporate direct" costs). In instances where corporate costs are beneficial to all the Company's rate jurisdictions, or where the effort of tracking the jurisdictional allocation of the costs is not practical, such costs are allocated to all rate jurisdictions (i.e.,

"common" or "system allocable" costs). Costs that are not retained at the Holding Company level are allocated to Southwest Gas and Centuri Group (Centuri)[2] based on the relative equity of each. The Holding Company costs that are allocated to Southwest Gas are system allocable costs since they benefit all the Company's rate jurisdictions. The Holding Company costs allocated to Southwest Gas include costs related to the Board of Directors, investor and shareholder relations, and financing costs to the extent that Southwest Gas uses the proceeds.

Q. 18 What are system allocable costs?

A. 18 System allocable costs consist primarily of Administrative and General (A&G) expenses, the costs associated with intangible plant (mainly software) and general plant used to support the corporate administrative staff.

Q. 19 How does the Company allocate system allocable costs to Great Basin and SGTC?

A. 19 System allocable A&G expenses (except Account 924, Property Insurance) are first allocated to Great Basin and SGTC using the Modified Massachusetts Formula (MMF), a FERC-authorized methodology that is calculated on Schedule C-1, Sheet 18. Property insurance is allocated using an insurable property factor (WP Schedule C-2, Adjustment No. 11, Sheets 3-4). Great Basin is also charged a rental fee for its use of certain system allocable intangible and general plant.

System allocable costs that are allocated and charged to Great Basin are transferred to and recorded on Great Basin's books monthly, and to SGTC's

[2] Centuri is a non-regulated infrastructure services provider and a wholly owned subsidiary of the Holding Company.

books annually. Consequently, system allocable A&G expenses recorded on Southwest Gas' books are net of the allocations to Great Basin and SGTC.

For this application, the MMF, the insurable property factor, and the Great Basin rental charge were recalculated using end of test year data. The resulting pro forma adjustment is presented in Adjustment No. 11, which is discussed in further detail later in my testimony.

Q. 20 After system allocable costs are allocated to Great Basin and SGTC, how are the remaining costs allocated to Southwest Gas' retail rate jurisdictions?

A. 20 Property insurance costs are allocated to each retail rate jurisdiction using Factor II, average gross plant, and the remaining system allocable costs are allocated using the 4-Factor Allocation Methodology (4-Factor) described below.

Q. 21 Please describe the 4-Factor.

A. 21 The 4-Factor is based on the average of four equally weighted components: (a) direct operating expense; (b) average gross plant; (c) direct operating labor; and (d) average number of customers. The 4-Factor has been used for ratemaking purposes by Southwest Gas since the 1950s and has been accepted and approved by each of the Company's state regulatory commissions. Schedule C-1, Sheet 17 provides the development of the 4-Factor allocation percentages for the test year.

VI. OPERATING EXPENSES

Q. 22 Please describe and explain Southwest Gas' Schedule C-1.

A. 22 Schedule C-1 begins with the Company's adjusted income statement on Sheet 1, and the subsequent sheets summarize recorded and adjusted O&M expenses, A&G expenses, depreciation and amortization expenses, other taxes,

and income taxes. Schedule C-1 is rounded out by the calculations supporting the 4-Factor and MMF allocations discussed above.

Q. 23 Please describe and explain Southwest Gas' Schedule C-2.

A. 23 Schedule C-2 provides a summary, by function, of all the pro forma adjustments proposed in this proceeding. The remaining C-2 schedules provide support for each pro forma adjustment to operating expenses.

Q. 24 Please describe and explain Southwest Gas' Schedule C-3.

A. 24 Schedule C-3 shows the calculation of the gross revenue conversion factor, and the income tax rates used in this application.

Adjustment No. 3 – Labor and Labor Loading Annualization

Q. 25 Please describe and explain Adjustment No. 3 - Labor and Labor Loading Annualization.

A. 25 Adjustment No. 3 annualizes the labor and related labor loadings of Arizona and Corporate employees employed by the Company at the end of the test period – August 31, 2021. This adjustment reduces operating expenses by $77,856.

The labor and labor loading annualization adjustment includes three components. First, a salary annualization is made for all Arizona and corporate employees with salaries in effect at the end of the last pay period beginning prior to August 31, 2021. Second, labor loadings are annualized or normalized at the end of the test year and those costs are applied to the employees on Southwest Gas' payroll at the end of the test year. Finally, the labor adjustment reflects an estimated overall 2.80 percent general wage increase to be effective in June 2022, along with additional wage increases because of within-grade movement during the twelve months subsequent to the end of the test year (i.e., through August 2022).

Q. 26 Were any other adjustments made to annualized labor?

A. 26 Yes. First, the Company did not include vehicle stipends in its annualized labor amounts. Second, the Company is proposing to recover $1,723,707 of test year severance payments made in conjunction with its Voluntary Retirement Incentive Program (VRIP) over three years. The VRIP is further discussed in the Prepared Direct Testimony of Company Witness Frederica Harvey.

Q. 27 Is the Company requesting recovery of the base salaries of former employees that accepted the VRIP payments?

A. 27 No. Since these employees were not on the Company's payroll at the end of August 2021, their salaries were not included in annualized labor.

Q. 28 Why is it appropriate to adjust labor expense for the 2022 general wage increase and twelve months of within-grade movement?

A. 28 Under current Commission guidelines for processing major rate applications, it is not expected that the hearing in this proceeding will be conducted before September 2022. Historically, the Company has generally granted general wage increases effective each June, after being approved by the Company's Board of Directors in May. Therefore, the 2022 general wage increase and PTY within-grade wage increases will be known and measurable prior to the hearing in this proceeding. As such, Staff and other intervenors will have an opportunity to verify and quantify the 2022 general wage increase and PTY within-grade wage movement prior to the hearing on this application.

Q. 29 Does this PTY adjustment adhere to the matching principle?

A. 29 Yes. This adjustment only applies to employees on the Company's payroll as of August 31, 2021, the end of the test year. It does not apply to any employees hired after August 31, 2021. Therefore, the number of employees at the end of

the test year is synchronized with test year customers that those employees serve. Indeed, this adjustment preserves the matching principle by ensuring rates approved in this proceeding better reflect the costs that will be incurred by the Company during the period rates will be effective. This adjustment simply recognizes that by the time rates become effective, test year customers will be served by test year employees who, on average, will be paid more than the wages that were in effect at the end of the test year.

Q. 30 Have previous Commission rulings in the Company's rate applications addressed this adjustment?

A. 30 Yes. The Commission has consistently approved Southwest Gas' PTY wage increases. In Decision No. 70665, the Commission concluded that Southwest Gas' PTY wage increase ". . . should be allowed because it is a known and measurable expense that is being incurred by the Company on a going-forward basis. Because the post-test year wage increase has been applied only to employees who were employed during the test year, there is no resulting mismatch of revenue and expenses." PTY wage increases were not contested in the Company's most recent GRC and were included in the authorized cost of service.

Q. 31 Please describe the labor loading process.

A. 31 Benefits, payroll taxes and the current service cost related to the Company's retirement plans are accumulated at the corporate level. These costs are then distributed among the various rate jurisdictions through a labor loading process. The labor loading rate is adjusted at the beginning of each year, based on budgeted pensions, benefits, paid time off, payroll taxes, and expected employee levels. The labor loading process applies the labor loading rate to

each labor dollar, assigning an appropriate amount of pensions, benefits, paid time off, and payroll taxes to each account to which labor has been charged.

Q. 32 How were labor loadings for Arizona and corporate employees annualized or normalized in this application?

A. 32 Southwest Gas normalized the portion of retirement benefits subject to the labor loading process, which consists of the current service costs for the Pension Plan, post-retirement benefits other than pension (PBOP), and the restorative portion of the SERP, based on a three-year average. The Company used the amounts from the three most recent actuarial studies, which are also used by the Company to accrue related expenses, as the basis for the normalization. Non-service retirement costs are not subject to the labor loading process and are included in A&G expense.

In contrast with prior GRC requests, in this application the Company is only requesting recovery for the portion of SERP benefits that restore the retirement benefits for certain employees to the level of retirement benefits on par with the rest of its employees through the Company's Pension Plan (i.e., the "restorative amount"). Any benefits that the SERP provides in excess of the restorative amount are not requested for recovery in this proceeding.

Consistent with prior Commission decisions, the Company performed an analysis of charges and removed certain items recorded in Account 926 from the cost of service in this proceeding. For example, the Company is not requesting recovery from customers for costs related to service awards, retirement gifts and parties, employee appreciation and employee recognition. The Company also made adjustments to remove out of period charges from the test year, to bring in test year charges that were recorded out of period and to

properly reclassify any costs identified that were recorded incorrectly.

In addition, payroll taxes, employer matching of employee retirement contributions, and indirect time were adjusted for the impact of annualizing payroll and overtime. For the remaining costs in Account 926, recorded test year costs were used as the basis for the annualization. These adjustments are consistent with prior Commission decisions.

Q. 33 How are labor loading costs allocated to Arizona?

A. 33 There were two methods used to allocate labor loading costs to Arizona. First, the requested current service cost of the Pension Plan, PBOP, and the restorative amount of SERP, along with the requested total cost of the executive deferred compensation plan, and employee investment plan (401k) was allocated based on each rate jurisdiction's labor cost as a percentage of total Company labor. Second, for the remaining benefits, a cost per employee was calculated based on the adjusted costs divided by the total number of Company employees at the end of the test year. The cost per employee was multiplied by the number of Arizona jurisdictional employees at the end of the test year to determine the amount allocated to Arizona for ratemaking purposes.

Q. 34 Once the annualized labor and labor loadings were calculated, how was the adjustment determined?

A. 34 The annualized labor and labor loadings were assigned to each account based on the historical test year relationships. For example, during the test year, approximately 66 percent of Arizona direct labor and loadings were charged to O&M accounts. Therefore, 66 percent of the annualized Arizona direct labor and loadings were assigned to O&M accounts. The difference between the annualized labor and loadings assigned to the O&M accounts and the recorded

labor and loadings is the adjustment for that account. Since 66 percent of the annualized Arizona direct labor and loadings were assigned to O&M, the remaining 34 percent were assigned to capital and other non-O&M accounts, and do not impact the revenue requirement requested in this application. A similar assignment was performed for corporate staff annualized labor and loadings to determine the adjustment required. The adjustment described above for non-service retirement benefit costs is included in the total for this adjustment.

Adjustment No. 4 – Call Center and Customer Support Allocation and Annualization

Q. 35 Please explain Adjustment No. 4 - Call Center and Customer Support Allocation and Annualization.

A. 35 This adjustment allocates the proper percentage of this function to Arizona customers. This adjustment reduces operating expenses by $131,769.

Q. 36 Please describe the Company's call center and customer support function.

A. 36 There are presently three customer assistance call centers in Southwest Gas' service territory: Phoenix, Tucson, and Las Vegas, Nevada. The Company also uses contracted remote agents. Customers call a toll-free telephone number, and the call is routed to the next available agent, no matter where that agent is located. The agents are trained to respond to customer inquiries regardless of where the customer is located. There are also Company employees and contract workers who provide back-office customer support. All call centers and customer support locations handle customer inquiries and reporting for the entire Company.

Q. 37 Why is an adjustment necessary to properly allocate these costs to Arizona?

A. 37 Certain call center and customer support function costs may be charged directly to an operating division, while these functions support the entire Company. As such, the test year costs are aggregated on a total company basis, and then reallocated to Arizona based on number of customers, which is the Factor IV component of the 4-Factor discussed earlier in my testimony. The adjustment reflects the difference between the amount recorded on Southwest Gas' books and the reallocated amount.

Adjustment No. 5 – Cost of Service Analysis

Q. 38 Please explain Adjustment No. 5 - Cost of Service Analysis.

A. 38 Southwest Gas conducted an analysis of its operating expenses to: 1) determine if there were costs recorded during the test year for which Southwest Gas is not requesting recovery in this proceeding; 2) adjust recorded expenses so a full year's worth of expense is reflected - no more and no less; 3) annualize items with significant cost changes, including incremental O&M for vendor support and timely software and cyber security updates that will occur after the Radio System Upgrade project is complete; and 4) determine whether the test year contains material, non-recurring costs or costs charged incorrectly and requiring removal or reclassification. Adjustment No. 5 reflects the results of this analysis. The amounts removed from and added to the cost of service are summarized by account in Schedule C-2, Adjustment No. 5, and the supporting workpapers categorize all transactions by the type of cost. Note that any items recorded to Account 926 are addressed in Adjustment No. 3. This adjustment reduces operating expenses by $293,266.

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Adjustment No. 6 – Company-Owned Vehicles

Q. 39 Please explain Adjustment No. 6 - Company-Owned Vehicles.

A. 39 Adjustment No. 6 removes all vehicles assigned to employees at the Director level or above from rate base along with the O&M costs related to these vehicles. This adjustment reduces operating expenses by $1,854 and reduces net plant by $459,746. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Q. 40 Is the Company requesting recovery for the vehicle stipend that it offers employees at a level of Director or above?

A. 40 No. Vehicle stipends were not included in annualized labor as discussed above or in this adjustment.

Adjustment No. 7 – Uncollectible Expense Annualization

Q. 41 Please explain Adjustment No. 7 - Uncollectible Expense Annualization.

A. 41 Adjustment No. 7 annualizes the recorded amounts in Account 904, Uncollectible Expenses, to reflect a three-year average of net closing bill write-offs as a percentage of gross revenues. The write-off percent is applied to present revenues to determine the annualized amount, which is then compared to the recorded uncollectible expense to determine the adjustment amount. The Company used a normalized write-off percentage of 0.2145% to annualize uncollectible expense because the Company believes this better reflects the expected uncollectible expense going forward, as compared to using the test year net write-off percentage of 0.2377%. This adjustment decreases operating expenses by $851,635.

Adjustment No. 8 – Corporate Aircraft

Q. 42 Please explain Adjustment No. 8 – Corporate Aircraft.

A. 42 Adjustment No. 8 removes the rate base and expenses associated with the Company-owned corporate aircraft and replaces those costs with the cost of commercial-equivalent airfare for flights that are allocated to Arizona. This adjustment decreases net plant by $2,843,656 and operating expenses by $426,608 after allocation to Arizona. This adjustment's impact to depreciation expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Adjustment No. 9 – Self-Insured Retention

Q. 43 Please explain Adjustment No. 9 - Self-Insured Retention.

A. 43 Adjustment No. 9 adjusts test year recorded self-insured accruals charged to Account 925 during the test year to a normalized level.

Q. 44 What was the Company's level of self-insurance for general liability claims at the end of the test year?

A. 44 The Company is self-insured for up to $1 million of claims expense for each occurrence (per occurrence component). To the extent that a specific claim exceeds $1 million, the Company is self-insured for the excess over $1 million up to an aggregate (aggregate component) of $4 million. Once the $4 million aggregate is reached, any amount paid above the $4 million is the responsibility of the insurance carrier.

The up to $1 million per occurrence component has no annual limit as to the number of claims, is claim specific, and does not include costs emanating from more than one rate jurisdiction. Indeed, the per occurrence component of injuries and damages expense should be treated as a direct jurisdictional

expense.

Q. 45 Please explain the accounting for the self-insured portion of liability claims.

A. 45 When an incident is identified that may require payment, the Company accrues the estimated payment as a self-insured retention expense. The entry is a debit to Account 925, Injuries and Damages, and a credit to Account 228.2, Accumulated Provision for Injuries and Damages. Once the outcome of the claim becomes final, any costs paid are charged against the accrual in Account 228.2. If the amounts paid are different than the amount accrued, then the net difference is removed from Account 228.2 and charged back against Account 925.

Q. 46 Given the method used to account for the self-insured portion of liability claims, does the test year expense reflect on-going operations?

A. 46 No. It is not unusual to have large fluctuations in the net charges to Account 925 from period-to-period because of the nature of the method used to account for this process, and history has shown that large claims that reach the $4 million aggregate do not generally occur every year. This can result in Account 925 having an expense level during any given recorded period not being representative of on-going operations. For this reason, it is appropriate to normalize this cost based on claims experience over the last ten years.

Q. 47 Please explain the normalized adjustment to self-insured expense.

A. 47 The Company used a ten-year average of self-insured amounts to normalize this expense for ratemaking purposes. Schedule C-2, Adjustment No. 9, shows that the ten-year average of Arizona direct claims is $682,347 compared to the test year amount of $0, requiring a $682,347 adjustment. The ten-year average

system allocable expense is $165,885 compared to the test year amount of $50,000, requiring a $115,885 adjustment. After allocating a portion of this expense to Great Basin, the Arizona portion of the system allocable portion of this adjustment is an increase of $62,464. The total impact of this adjustment on Arizona's operating expenses is $744,811.

Adjustment No. 10 – Industry Dues

Q. 48 Please explain Adjustment No. 10 - Industry Dues.

A. 48 Adjustment No. 10 removes from operating expenses the portion of recorded industry dues identified as lobbying in nature. For the test year, 3.8 percent of American Gas Association (AGA) dues and 40 percent of Coalition for Renewable Natural Gas dues were identified as lobbying in nature. As such, a total of $37,255 of system allocable lobbying-related industry dues were removed. This adjustment reduces Arizona's operating expenses by $20,081.

Adjustment No. 11 – Great Basin/SGTC Allocation Annualization

Q. 49 Please explain Adjustment No. 11 - Great Basin/SGTC Allocation Annualization, which you previously referred to in your response to Question No. 19.

A. 49 Adjustment No. 11 annualizes the system allocable A&G amounts allocated to Great Basin through the MMF allocation methodology, the insurable property factor, and the rent revenue that Southwest Gas received from Great Basin for the test year ended August 31, 2021. The supporting workpapers to Adjustment No. 11 show the detailed calculations needed to derive the Great Basin rent expense and insurable property factor at August 31, 2021. This adjustment is consistent with the methodology approved by the Commission in the Company's last several rate cases.

The annualized MMF allocation factors are also used in the pro forma adjustments that impact system allocable A&G costs, in order to allocate a portion of the adjustment to Great Basin and SGTC before calculating the portion that is allocated to Arizona. This adjustment increases operating expenses by $13,266.

Adjustment No. 12 – Rate Case Expense

Q. 50 Please explain Adjustment No. 12 - Rate Case Expense.

A. 50 The Company estimated the incremental costs that would be incurred to prepare and process this GRC, including but not limited to printing, postage, court reporting, noticing, publication, travel, and outside consultants. The total incremental costs are divided by three, which is roughly equal to the number of years in one rate case cycle, to calculate an annual amortization to Account 928. The adjustment, which increases operating expenses by $86,609, is the difference between this new amortization amount and the amount of rate case expense amortized on the Company's books during the test year.

Adjustment No. 13 – Depreciation and Amortization Expense

Q. 51 Please explain Adjustment No. 13 - Depreciation and Amortization Expense.

A. 51 Adjustment No. 13 annualizes depreciation and amortization expense based on adjusted plant in service on August 31, 2021, using currently approved depreciation rates. The recorded test year amortizations in System Allocable FERC account 303 that will expire on or before August 31, 2022 were removed to synchronize with the PTY Plant adjustment. This adjustment increases operating expenses by $10,478,688.

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Q. 52 Please explain why an adjustment is necessary to annualize depreciation and amortization expense for the test year.

A. 52 This adjustment is necessary to synchronize the depreciation and amortization expense with the plant in service at the end of the test year, as adjusted. Like many utilities, Southwest Gas employs a depreciation convention based on the month the plant was first placed into service. Southwest Gas begins depreciation the month after the plant was first placed in service, and in turn, takes a full month's depreciation in the month it is removed or retired from service. As a result, plant that is placed in service or retired after the beginning of the test year has a partial year's depreciation expense recorded on the books of the Company. To allow Southwest Gas the opportunity to recover its reasonable and necessary operating expenses and to avoid charging customers for assets removed or retired from service, depreciation and amortization must be annualized based on adjusted end of test year plant balances. This adjustment accomplishes those objectives and is consistent with the methodology approved by the Commission in the Company's previous rate cases.

Q. 53 Did the Company make an additional adjustment for the amortizations related to System Allocable Miscellaneous Intangible Plant?

A. 53 Yes. Most of the items in system allocable miscellaneous intangible plant (FERC account 303) are software projects with three to five-year amortization periods. These amortization periods are roughly equivalent to the Company's Arizona rate case cycle. Absent an adjustment, customers may end up double-paying for certain projects through rates, while never paying for other projects. To mitigate this potential outcome, the Company proposes an adjustment to

remove the amortization expense for all projects with an amortization period expiring August 31, 2022 or earlier to match with the Company's PTY Plant adjustment for FERC account 303, where estimated amounts for projects expected to be closed to plant on or before to August 31, 2022 were added to rate base. This is a conservative adjustment because many small software projects spend a relatively short time in construction work in progress before being transferred to plant. Consequently, between the date this rate case was prepared and August 31, 2022, more projects may close to plant than are indicated by the estimated balances included in the Company's application. Indeed, this adjustment strikes a fair balance between project amortizations that will expire shortly after the end of the test year, and projects commencing amortization and serving customers when rates from this proceeding go into effect. Further, the Company's estimated amounts can be verified by Staff and other intervening parties throughout the discovery process, and prior to the hearing.

Q. 54 If a change is made to the 12-month PTY period requested by the Company, is a change necessary to this adjustment?

A. 54 Yes. Only the software amortizations that expire during the PTY period should be removed in this adjustment. If the PTY period is ultimately longer or shorter than the Company's proposal of twelve months at the time of filing, this portion of the adjustment must be recalculated.

Adjustment No. 14 – Taxes Other Than Income

Q. 55 Please explain Adjustment No. 14 – Taxes Other Than Income.

A. 55 Adjustment No. 14 adjusts property taxes to annualize that expense based on the Company's adjusted investment in plant and materials as of the end of the

test year and to update the amortization of the Property Tax Deferral Mechanism based on the test year ended balance.

For Arizona properties, the Company determines an estimated full cash value by using adjusted net plant in service at August 31, 2021, adding materials and supplies, and subtracting transportation equipment and land rights. The estimated full cash value is then multiplied by the 2022 assessment ratio of 17.5 percent to determine the assessed value. The assessed value is then multiplied by the composite property tax rate of 12.66 percent, which is then reduced by capitalized property taxes and increased by the Salt River Tribe Assessment[3] to determine the annualized property tax expense. The Company is proposing an adjusted test year property tax amount of $66,565,734, which would be the authorized amount that the Company would balance to in its Property Tax Deferral Mechanism. This adjustment increases operating expenses by $15,797,895. There is also an adjustment to reduce miscellaneous taxes by $5,633 to remove items expensed during the test year that are non-recurring.

Q. 56 Please explain the amortization for the Property Tax Deferral Mechanism.

A. 56 In D.76069, the Company was authorized to establish a Property Tax Deferral Mechanism. This mechanism allows the Company to defer any changes in property tax expense from the amount authorized and requires that the accumulated balance be recovered or refunded in the Company's next GRC through an amortization. The amortization of the balance included in the prior GRC commenced January 1, 2021, the effective date of rates from that GRC. The annual amortization expense needs to be updated in each GRC based on

[3] The Salt River Tribe Assessment is separately identified since it is not subject to balancing in the Property Tax Deferral Mechanism.

the balance of the Property Tax Deferral Mechanism at the end of the test year.

Q. 57 What was the ending balance of the Property Tax Deferral Mechanism at the end of the test year, and the annual amount being requested for recovery in this GRC?

A. 57 On August 31, 2021 the Company had an under-collected balance of $2,389,365. The Company is proposing that this amount be collected from customers over the next three years consistent with the prior GRC, or $796,555 per year. During the test year, credits totaling $1,499,132 were recorded to FERC account 408.1 between January 1 and August 31, 2021, which was 8/12 of the annual property tax deferral amortization amount authorized in the Company's last GRC. The Property Tax Deferral Mechanism balance was at an over-collected position in the prior GRC, resulting in credits to property tax expense recorded during these months. As such, this adjustment's impact to annual Arizona operating expenses is $2,295,887 to reflect the fact that the Property Tax Deferral Mechanism balance has flipped from an over-collected balance to an under-collected balance.

Adjustment No. 15 – Insurance Annualization

Q. 58 Please explain Adjustment No. 15 – Insurance Annualization

A. 58 The Company annualized its insurance premiums for property insurance, commercial general liability insurance, and Directors and Officers liability insurance to reflect current ongoing expenses as of the end of the test year. This adjustment increases operating expense after allocation to Arizona by $1,202,101.

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Adjustment No. 16 – Regulatory Amortizations

Q. 59 Please explain Adjustment No. 16 – Regulatory Amortizations.

A. 59 Adjustment No. 16 removes recorded test year regulatory amortizations from base rates that are recovered through the Demand Side Management Program (DSM) surcharge and the Transmission Integrity Management Program (TRIMP) surcharge. In addition, the Company is requesting to add two new regulatory amortizations related to: 1) COVID-19 Late Fees Waived and Suppressed; and 2) LNG Facility Deferral, and to amortize these balances over three years, a typical rate case cycle. The Company is also requesting to amortize the GCU Acquisition Adjustment as discussed in the Prepared Direct Testimony of Company Witness Nick Y. Liu. Decision No. 77850 authorized a three-year amortization related to certain unrecovered margin for the Customer-Owned Yardline (COYL) Program and Vintage Steel Pipe (VSP) Replacement Program. However, since there was approximately two years between rate cases, the Company needs to re-amortize the remaining balance for recovery in this proceeding. This adjustment increases operating expenses by $1,376,684 in Account 407.3 and increases operating expenses by $318,752 in Account 406.

Q. 60 Please explain the amortization requested for COVID-19 Late Fees Waived and Suppressed.

A. 60 As explained in the Prepared Direct Testimony of Company Witness Michelle L. Ansani, in response to the COVID-19 pandemic, the Company has tracked approximately $2.5 million in waived and suppressed late payment charges from April 1, 2020 through March 31, 2021. The Company is requesting to recover this amount over a three-year amortization period. During a Special Open

Meeting on May 6, 2020 when discussing Docket No. AU-00000A-20-0094, "Discussion, consideration and possible vote for Blanket/General accounting order for tracking expenses related to the COVID-19 pandemic," it was suggested that companies could track these costs on their own and request recovery in a GRC.[4] The Company agrees and believes this GRC is the appropriate venue to request a regulatory amortization for this item.

Q. 61 Please explain the amortization requested for the LNG Storage Facility Deferral.

A. 61 On January 27, 2014, Southwest Gas filed an application for Commission pre-approval to construct a Liquefied Natural Gas (LNG) storage facility near Tucson, Arizona (LNG Application), pursuant to the Commission's December 18, 2003 Policy Statement Regarding Natural Gas Infrastructure. The Company's LNG Application was approved in D.74875, as amended by D.75860. In D.76069, the Company was authorized to extend the deferral of the revenue requirement associated with all costs flowing from the construction of the LNG storage facility incurred before December 31, 2020.

The Company calculated deferrals on the revenue requirement associated with the LNG storage facility from December 2019, the month the LNG storage facility was placed into service, through December 2020, the month before recovery of the LNG storage facility in general rates began. There was a one-month lag between the calculation of the revenue requirement and when that revenue requirement was booked. The cumulative revenue requirement deferred was $11,951,653. The Company is requesting a three-year

[4] Recording of the May 6, 2020 Special Open Meeting, at 2:09:49 (Staff) and 2:11:00 (Commissioner Olson).

amortization of this balance.

Q. 62 The Company is proposing a three-year amortization for the above-mentioned items. Why is three years appropriate?

A. 62 The Company proposes to clear the above-mentioned regulatory assets over a typical rate case cycle. Consistent with the Company's proposed amortization period for rate case expense discussed above, three years approximates one typical rate case cycle.

Q. 63 Why is the Company proposing to reamortize the COYL and VSP amortizations, but not the Tax Reform Surcredit amortization, granted in its prior GRC?

A. 63 With the Commission's authorization of the Company's Tax Expense Adjustor Mechanism (TEAM) in the Company's last GRC, any remaining balance from the Tax Reform Surcredit when rates from this proceeding are effective can be timelier returned to customers dollar for dollar through the TEAM, rather than through base rates.

Adjustment No. 17 – Corporate Headquarters

Q. 64 Please explain Adjustment No. 17 – Corporate Headquarters.

A. 64 Adjustment No. 17 consists of two sections. The first allocates a portion of rate base and maintenance expenses associated with the Company's corporate headquarters at 8360 S Durango Drive in Las Vegas to Centuri based on each entity's relative equity. For purposes of this rate case this building is treated similarly to how certain Holding Company expenses are allocated to Southwest Gas, but the allocation methodology may change in the future based on detailed studies of how the space in the building is used. This adjustment also removes the rate base and non-recurring expenses related to the Company's former

Spring Mountain headquarters since it is no longer used and useful.

This adjustment reduces net plant by $20,209,922 and operating expenses by $1,394,145 after allocation to Arizona. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Adjustment No. 18 – SAP and CSS Costs

Q. 65 Please explain Adjustment No. 18 – SAP and CSS Costs.

A. 65 Adjustment No. 18 is necessary to reflect a normalized level of expected ongoing costs related to the new SAP system (also referred as Project Horizon) that was part of the Company's Customer Data Modernization Initiative (CDMI) and the legacy customer service system (CSS) based on a three-year average, and to recover the incremental O&M associated with the implementation costs for the new SAP system over three years. Please refer to the Prepared Direct Testimony of Company witness Michelle L. Ansani for testimony on the benefits of Project Horizon. This adjustment reduces operating expenses by $662,858 after allocation to Arizona.

Q. 66 Can you please explain the SAP and CSS-related O&M costs the Company is requesting for recovery in this proceeding?

A. 66 Yes. The Company incurred $9,679,064 of O&M to support the implementation and ongoing operations and maintenance of SAP and $3,520,387 of O&M related to the legacy CSS system during the test year. The Company anticipates incurring approximately $5,583,733 annually to operate and maintain SAP and will incur approximately $2,059,495 on a normalized basis of ongoing CSS costs. The ongoing CSS costs are required to maintain the legacy system in

inquiry mode for 18-24 months after the May 2021 go-live date of Project Horizon to allow the Company access to certain historical data that is not available in the new system but is necessary to serve customers for the aforementioned period following Project Horizon's go-live date. As such, the Company believes it is appropriate to make a downward adjustment of $2,962,103 to test year recorded O&M to reflect the average ongoing level of annual costs in the next three-year rate case cycle after allocation to Arizona.

Q. 67 Please explain the incremental O&M associated with the implementation costs for the new SAP system.

A. 67 The Company incurred $6,897,735 of incremental project implementation costs that were charged to O&M because certain project implementation activities were not eligible for capitalization under generally accepted accounting principles, even though those activities resulted in used and useful software that is estimated to have a fifteen-year life. While these costs were valid business expenses, the amounts recorded during the test year are non-recurring and should not be recovered in full on an ongoing basis each year rates from this proceeding are effective. As such, the Company requests to recover $2,299,245 per year over a three-year rate case cycle, rather than the amount that was recorded during the test year for project implementation costs.

Q. 68 Why is the Company requesting incremental O&M associated with the new SAP system in this proceeding?

A. 68 In D. 77918, the Commission denied the Company's request for a regulatory asset to track and defer the revenue requirement associated with the SAP system (or CDMI). In that Decision, the Commission found that, "... the

traditional rate case setting is the most appropriate venue for SWG to request recovery of the costs associated with the CDMI project."[5] Accordingly, consistent with the Commission's finding in D. 77918, the Company is requesting recovery of these incremental costs in this proceeding.

Q. 69 Were any incremental O&M associated with the implementation costs for the new SAP system requested for recovery in the last GRC?

A. 69 No, there were no project implementation costs for Project Horizon recorded to O&M during the test year in the last GRC. These costs were inadvertently capitalized (i.e., charged to a work order) during that time, and the Arizona portion of those costs have never been recorded to O&M. That work order remains open and has never been included in rate base.

Adjustment No. 21 – Variable Pay Normalization

Q. 70 Please explain Adjustment No. 21 – Variable Pay Normalization.

A. 70 Adjustment No. 21 normalizes the expense associated with the Company's Performance Share Plan and Restricted Stock plan over three years. It also normalizes the Company's Management Incentive Plan based on a three-year average of awarded percent of target multiplied by eligible test year salaries. Finally, amounts for these plans associated with the non-utility measure that only applies to strategy executives were excluded from the cost of service. This adjustment reduces operating expenses by $391,462 after allocation to Arizona.

Adjustment No. 22 – Interest on Customer Deposits

Q. 71 Please explain Adjustment No. 22 - Interest on Customer Deposits.

A. 71 Adjustment No. 22 synchronizes interest expense on customer deposits based

[5] D. 77918 at 14.

on the interest rate at the end of the test year with the amount of customer deposits used as a rate base reduction. The difference between the adjusted amount and the recorded amount is the adjustment. Consistent with prior Commission decisions, interest expense is treated as an above-the-line expense. This adjustment decreases operating expenses by $766,669.

Q. 72 Why is this adjustment so large in relation to test year recorded interest on customer deposits?

A. 72 In D.77850, the Commission authorized the Company to update the interest rate to calculate interest on customer deposits annually based on the US Treasury one-year CMT, rather than the previously effective six percent fixed rate. Rates from that decision were effective on January 1, 2021, so four months of the test year were still recorded at the six percent rate. The rate at the end of the test year was 0.11%.

Adjustment No. 23 – Remittance Processing and Print to Mail

Q. 73 Please explain Adjustment No. 23 – Remittance Processing and Print to Mail

A 73 Adjustment No. 23 is necessary to reflect the level of expected ongoing costs related to the Company's outsourcing of bill print and mail function, and to remove the remittance processing and print to mail assets no longer serving customers from rate base. Company witness Michelle L. Ansani describes the bill print and mail function in her Prepared Direct Testimony. This adjustment increases operating expenses by $286,150 and reduces net plant by $257,998 after allocation to Arizona. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

VII. RATE BASE

Q. 74 Please describe and explain Schedules B-1 and B-2.

A. 74 Schedule B-1 is a high-level summary of the various components that comprise rate base. Rate base is presented on this schedule at original cost, reconstruction cost new, and at fair value. Schedules B-2 shows a summary of original cost gas plant by function, and the Company's pro forma adjustments to rate base, as further described below.

Q. 75 Please describe and explain Southwest Gas' Schedules B-3 and B-4.

A. 75 Schedule B-3 is a summary of the reproduction cost new less depreciation (RCND) study. The schedule contains both the direct and system allocable plant assigned to Arizona. The reproduction cost new data is utilized to develop the FVRB. The detail supporting Schedule B-3 is contained in Schedule B-4 which contains the Handy-Whitman indices that were used to trend original cost plant and deferred taxes to obtain the reproduction cost new data, and the reproduction cost new data by vintage year, by FERC account.

Q. 76 Please describe and explain the other rate base items contained in Southwest Gas' Schedule B-5 and B-6 that use the 13-month average balance rather than the end of test year balance.

A. 76 Schedules B-5 and B-6 contain four items that employ the 13-month average balance method for inclusion in rate base: 1) materials and supplies; 2) prepayments; 3) customer deposits; and 4) customer advances for construction. The use of the 13-month average balance as the method of calculation has been accepted by the Commission in the Company's past several rate cases.

Q. 77 Please describe and explain the items contained in Schedule B-5 and B-6 that do not employ the 13-month average balance method.

A. 77 The cash working capital allowance and the accumulated balance of deferred income taxes do not use the 13-month average balance method of calculation.

The cash working capital allowance in Schedule B-5 was determined through a comprehensive lead/lag study. The Company used the lead/lag study days presented in this GRC[6] and applied this information to adjusted test year amounts.

Deferred taxes in Schedule B-6 are based on the recorded balance at the end of the test year for state and federal deferred income taxes in Account 282 and the excess accumulated deferred income taxes (EADIT) in Account 254. The recorded amounts are adjusted as explained further below.

Q. 78 Please explain the revenue requirement impact related to EADIT.

A. 78 The Company is proposing to adjust the revenue requirement by the test period amount of amortization allowed by the IRS for the plant related protected EADIT. The Company is also proposing to continue to amortize the non-plant EADIT over the ten years authorized in its last GRC. The EADIT regulatory liability amounts are shown on Schedule B-6, Sheet 5, and the proposed annual EADIT amortization amounts are shown on Schedule B-6, Sheet 6. The methodology for EADIT amortization is consistent with what was authorized by the Commission in the Company's last GRC.

From a rate base perspective, the EADIT regulatory liability continues to be a rate base reduction, just as when it was a component of Accumulated Deferred Income Taxes. The amount of the regulatory liability will decline as

[6] Consistent with the 2019 AZ GRC, the Company utilized the lag day results from the lead lag study prepared in its recent Nevada GRC. In this case, the Company used the results from Nevada Docket No. 21-09001, test year ended May 31, 2021, for its Other O&M and Benefits tests. The Company calculated lead and lag days with test year ended August 31, 2021 data for the remaining items in its lead lag study.

EADIT is returned to customers. As EADIT is amortized, income taxes are reduced in the amount of the annual amortization, while an equal reduction is made to the EADIT regulatory liability.

Q. 79 Is the Company proposing any adjustments to the recorded rate base amounts on August 31, 2021?

A. 79 Yes. The Company is proposing seven adjustments to recorded rate base amounts: 1) Company-Owned Vehicles[7]; 2) Corporate Aircraft[8]; 3) Corporate Headquarters[9]; 4) PTY Plant; 5) GCU 6) Remittance Processing[10], and 7) Deferred Tax Adjustments. Please refer to the Prepared Direct Testimony of Company witness Nick Y. Liu for the Company's adjustment for PTY plant, and for the Company's adjustment to roll in the rate base from the GCU asset acquisition.

Adjustment No. 24 – Deferred Tax Adjustments

Q. 80 Please describe and explain Adjustment No. 24 - Deferred Tax Adjustments.

A. 80 There are two adjustments to recorded test year deferred tax balances, as summarized on WP B-6. The first adjustment was made to align deferred taxes to recorded plant at the end of the test year. The second adjustment was made to remove the deferred taxes associated with the Company's proforma rate base adjustments: Company-Owned Vehicle adjustment, Corporate Aircraft

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[7] The Company-owned vehicle adjustment is addressed in the operating expenses section in Adjustment No. 6.
[8] The Corporate Aircraft adjustment is addressed in the operating expenses section in Adjustment No. 8.
[9] The Corporate Headquarters adjustment is addressed in the operating expenses section in Adjustment No. 17.
[10] The Remittance Processing and Print to Mail adjustment is addressed in the operating expenses section in Adjustment No. 23.

adjustment, Corporate Headquarters adjustment, and Remittance Processing and Print to Mail adjustment from rate base.

Q. 81 What is the total impact of the Deferred Tax adjustment on rate base?

A. 81 This adjustment increases rate base by $1,261,540.

VIII. CONCLUSION

Q. 82 Does this conclude your prepared direct testimony?

A. 82 Yes.

SUMMARY OF QUALIFICATIONS
RANDI L. CUNNINGHAM

I graduated from the University of Washington in Seattle, Washington with a Bachelor of Arts in Business Administration, Accounting. My areas of concentration were accounting and finance. I graduated from the University of Nevada, Las Vegas with a Masters in Business Administration (MBA), with Beta Gamma Sigma honors. I am a Certified Management Accountant (CMA) and have the Certified in Strategy and Competitive Analysis (CSCA) credential, and a member of the Institute of Management Accountants.

One year before completing my bachelor's degree, I accepted employment at Washington Mutual Savings Bank in Seattle, Washington as an Asset/Liability Management intern. Upon graduation in 1993, I accepted a full-time position as a Financial Analyst Trainee in the Financial Forecasting Department. In 1994, I was promoted to Financial Analyst I. My responsibilities included assisting in the budget and forecasting process and various financial analyses.

In February 1995, I accepted a position as a Budget Analyst in the Budget and Forecasting Department at PriMerit Bank in Las Vegas, Nevada, which was a subsidiary of Southwest Gas at the time. In April 1996, I transferred to Southwest Gas as a Corporate Accountant I in the Accounting Control Department. In January 1998, I was promoted to Analyst I/Accounting. In February 1998, I transferred to the Revenue Requirements department as an Analyst. In January 2001 I was promoted to Specialist, in July 2003 I was promoted to Senior Specialist, in May 2007 I was promoted to Supervisor, and in April 2009 I was promoted to Manager. Subsequent to a reorganization in October 2014, I worked

in the Regulation and Energy Efficiency department as a Regulatory Professional. In February 2021 I was promoted to my current position, in which I am responsible for developing and ensuring compliance with regulatory cost accounting standards, am involved in complex and technical analyses and a subject matter expert on all Company regulatory matters.

I have attended numerous training and technical conferences related to utility ratemaking, regulatory, and accounting issues.

I served as instructor for the Cost of Service Problem course at “The Basics” conference presented by the Center for Public Utilities at New Mexico State University and the National Association of Regulatory Utility Commissioners from 2003 to 2014.

Tab H

Direct Testimony
of
Michelle L. Asani

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
MICHELLE L. ANSANI

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Michelle L. Ansani

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Appendix A – Summary of Qualifications of Michelle L. Ansani

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Michelle L. Ansani

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Michelle L. Ansani. My business address is 8360 S. Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company). My title is Vice President/Customer Engagement.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the California Public Utilities Commission and the Public Utilities Commission of Nevada. I have also provided testimony to the Office of the Comptroller of Currency (OCC) and the Consumer Financial Protection Bureau (CFPB), while working for Capital One as a Sr. Director, Ombudsman for the Credit Card division. In 2017, I drafted a written response, submitted pursuant to a congressional inquiry, regarding the Sales Practices Investigation into the sales operations of the 49 largest, domestic financial institutions.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My testimony provides an overview of the Company's focus on its customers and the related initiatives to improve customer engagement and interactions with Southwest Gas.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- Southwest Gas' customer support focus and initiatives;
- Support and assistance offered to customers in response to the COVID-19 Pandemic (COVID-19 or Pandemic);
- Economic assistance provided through government programs to customers affected by COVID-19;
- Statistics demonstrating customers' resiliency during the Pandemic and specifically how it relates to financially maintaining their Southwest Gas account;
- The outsourcing of the Company's bill print function; and
- Benefits of the Customer Data Modernization Initiative (CDMI).

II. CUSTOMER SERVICE AND CUSTOMER SUPPORT INITIATIVES

Q. 7 Please discuss the Company's customer-focused approach.

A. 7 The Company has provided safe and reliable service in Arizona since 1957.[1] As the officer with responsibility for customer care, my group places a high priority on working with customers and providing excellent customer service. As a Company, we are proud of our strong customer service ratings, with over 95%

[1] Southwest Gas expanded its service into Pinal and Greenlee Counties after acquiring Natural Gas Service of Arizona.

of our customers saying they are pleased with the Company's service. The Company works with customers, whether it be on payment arrangements during hard times, or through our actions during the Pandemic, while providing safe and reliable natural gas to the Arizona communities we serve.

Q. 8 How does the Company prioritize customer support and what are some customer focus initiatives currently in place?

A. 8 Prior to the Pandemic, the Company put in place several new initiatives to improve the customer experience, and to better support customers with stronger account management strategies. These initiatives include:

- Each month, approximately 2,300 customers participate in a voluntary post-call customer satisfaction survey asking "*Was your issue resolved?", "Was the agent knowledgeable?",* and "*Did we make it easy for you?*";
- Improved call center, agent handling requirements which includes a review of the customer account related to each inbound call to identify opportunities to educate the customer on optional servicing methods (e.g., digital self-service), stronger payment management strategies (e.g., Automatic Payment Plans and Equal Payment Plans), and internal and external support available to assist with financial hardships (e.g., installment plans, Low Income Rate Assistance (LIRA), and state agencies);
- Improved call center resources by replacing contract vendors with new vendors known for strong standards and performance; and

- A complete redesign of the Company's quality monitoring program and agent new hire training program, designed to focus on requiring and monitoring stronger customer servicing practices.

III. SUPPORT AND ASSISTANCE OFFERED TO CUSTOMERS IN RESPONSE TO COVID-19

Q. 9 Please provide an overview of the support and assistance the Company provided to its customers in response to the Pandemic.

A. 9 Starting in mid-March 2020, the Company took various voluntary steps to help customers navigate the challenges that were abruptly brought on by the Pandemic including:

- Proactive suspension of disconnections of service for non-payment;
- Suppression of Late Payment Charges (LPC) on past due account balances;
- Deferred payment plans in excess of the required six months;
- Suppression of deposits on commercial accounts;
- Waived deposits on residential accounts with customer requests;
- Proactive outreach on delinquent customer accounts to provide available programs and resources to secure financial assistance;
- Multi-channel communications focused on account management and resources available, including installment plans, LIRA, and referrals to federal and state agencies; and
- Collaboration and coordination with state and local government entities to facilitate the availability of economic assistance offered

through the Federal Coronavirus Aid Relief and Economic Security (CARES) Act (2020).

Q. 10 Please provide an overview of the costs and amounts recorded with respect to suppressed or waived fees, including LPC suppression.

A. 10 The Company recorded approximately $2.6 million in suppressed LPCs from April 1, 2020, through March 31, 2021. Additionally, the Company waived approximately $2,133 in Service Establishment Fees and $1,027 in Returned Item Fees (for Non-Sufficient Funds/Returned Checks), for any customer impacted by COVID-19. The Company proposal for recovery of costs related to the suppressed LPCs is discussed by Company witness Randi L. Cunningham.

Q. 11 Has the Company tracked any other costs of maintaining service to customers affected by the Pandemic?

A. 11 Yes. The Company recorded approximately $2.08 million in commercial deposits suppressed and/or waived, and approximately $186,267 in residential deposits waived, for customers who informed the Company of COVID-19 impacts. The Company is not seeking recovery of these waived deposits.

Q. 12 Please describe the support the Company provided with respect to account management.

A. 12 Effective April 1, 2020, the Company updated its inbound Interactive Voice Response (IVR) messaging to include the addition of a COVID-19 inbound hotline option. What this did was to immediately transfer customers impacted by COVID-19 to a highly trained, payment management specialist. Additionally, the Company added three questions to its voluntary post-call survey, including:

- Do you have confidence that Southwest Gas is there to support you and your family in this time of need? 92% of customers who responded, answered yes;
- Excluding your rent or mortgage, do you prioritize your natural gas bill over other monthly expenses? 73% of customer who responded, answered yes; and
- Would you like Southwest Gas to provide you with information on how we may be able to assist you with managing your account? 13% of customers who responded, answered yes. The Company followed up with 100% of customers with either a phone call and/or an email to provide additional information.

The Company updated its website to make information on payment assistance, including available programs and resources, more prominent. Additionally, the Company added a feature that specifically states, "I need assistance making my payment" that directly routes the customer to available resources, including receiving personal assistance from the Call Center department.

On June 1, 2020, the Company launched an outbound message campaign offering customers information about available programs and information on how to reach us and/or dial 211 to learn about more options.

On July 1, 2020, the Company launched an outbound dialing campaign to place direct outbound calls (from a team of highly trained financial assistance specialists) to provide education on available resources and programs to manage their account. During this campaign, the Company placed calls to

18,018 Arizona customers, and personally spoke to 2,728 of them. Of these 2,728 customers, the Company assisted 1,494 in making payment arrangements (or 55% success rate). Additionally, the Company enrolled 268 (or 10%) of the customers in the Equal Payment Plan (EPP), 109 (or 4%) in the Automatic Payment Plan (APP), established 78 (or 3%) in installment payment plans, and referred 454 (or 17%) of customers to agencies to assist with federal or state funding.

Q. 13 Did the Company see an increase in the number of installment payment plans that were entered into since March 2020?

A. 13 Yes, prior to the Pandemic, the Company averaged 500 active, customer-initiated installment plans annually. Since April 1, 2020, approximately 2,000 installment plans were requested and executed by customers.

Q. 14 Did the Company take any additional proactive steps to assist customers in managing their accounts?

A. 14 Yes, the Company identified that only a small portion of its customers with delinquent accounts were proactively calling Southwest Gas to seek payment assistance related to their balances in arrears. Based on this observation, the Company decided to proactively enroll customers in an installment plan payment arrangement to help them and continue to offer peace of mind as the state began its recovery. The Company began to automatically enroll all customers whose accounts were at least 60 days delinquent with a balance of at least $20 into an installment plan, spreading their past due balance into 6 equal payments, reducing their monthly amount due. From February 2021 through April 2021, the Company auto-enrolled 39,088 accounts representing a total balance of approximately $9.7 million, in an installment plan. All customers enrolled

received a corresponding letter informing them of the terms associated with the installment plan, encouraging customers to pay more than the reduced amount if financially able.

IV. ECONOMIC ASSISTANCE PROVIDED THROUGH GOVERNMENT ASSISTANCE PROGRAMS

Q. 15 Please provide an overview of the CARES Act (2020).

A. 15 The CARES Act was passed by Congress and signed into law by President Trump on March 27, 2020.[2] The CARES Act provided fast and direct economic assistance for American workers, families, small businesses, and industries.

Q. 16 Please explain the efforts put forth by the Company to facilitate the allocation of CARES funds for its customers

A. 16 In an effort to help customers who informed the Company of a financial hardship related to COVID-19, the Company partnered with the City of Tucson to provide the City information on customer balances in arrears in their respective jurisdictions. The Company followed all data security requirements in this process to protect customer information. As a result of this effort, the City of Tucson used internal policies and guidelines to issue checks to Southwest Gas for qualifying customers which were applied to the respective customer accounts. The Company is continuing to pursue and engage in similar partnerships with other Arizona communities within its service territory.

[2] https://home.treasury.gov/policy-issues/coronavirus/about-the-cares-act.

Q. 17 Has the Company received funds from these programs on behalf of its Tucson customers?

A. 17 Yes, the Company received $978,467 and applied the received funds to 6,426 customer accounts in Tucson.

V. BENIFITS OF PROJECT HORIZON

Q. 18 Please provide an overview of Project Horizon.

A. 18 Project Horizon involved the replacement of the Company's legacy Customer Service System (CSS) as a part of the Customer Data Modernization Initiative (CDMI), initiated to modernize the Company's legacy CSS and Gas Transaction System (GTS) systems by incorporating up to-date technology and integrated, scalable features to allow for improved functionality and increased operational efficiencies. Modernization of the Company's critical customer data systems also enables Southwest Gas to improve information security and provide enhanced customer service offerings that today's consumers have come to expect.

Q. 19 What are the customer benefits of Project Horizon?

A. 19 Several key benefits exist, including:

- A modernized customer information system to replace aging systems and technology that do not provide the ease of use for customer servicing needs, or the data security to protect our customers' sensitive data, including personally identifiable information.
- Improved design to make customer education more prominent and self-service more efficient.

- Improved internal efficiencies that will directly impact call handle and wait times, improving the customer experience.
- Enhanced data collection and reporting capabilities allowing the Company to more closely monitor customer trends and behaviors to evolve practices and programs to be more predicative which, in turn, allows the Company to engage in specific outreach and messaging to its customers.
- Improved functionality for local and state agencies by allowing for closer customer monitoring and ease of individual and/or bulk customer assistance payment processing.
- Flexible and expandable systems that will support customer growth, and enhanced products, programs, and services.
- The ability to expand bill print functionality to include Spanish bill capabilities, targeted to launch by year end.
- Replaced several manual processes and paper filing with automated and/or workflow capabilities, improving accuracy, quality and speed of service as well as tracking and reporting. Ability to upload documents within the system for improved servicing response time and data security
- Lays the foundation to further enhance edge (connected) systems capabilities to increase functionality and efficiency

Q. 20 Are the costs for Project Horizon reasonable and prudent and is the Company requesting cost recovery for Project Horizon in this case?

A. 20 Yes. Given the system improvements and customer benefits outline above, the investment in the new SAP system is reasonable and prudent. Project Horizon does, and will continue to, benefit customers. Company witness, Randi L.

Cunningham, addresses recovery of the incremental O&M costs related to this project in her prepared direct testimony.

VI. OUTSOURCING OF THE BILL PRINT AND MAIL FUNCTION

Q. 21 Please describe the Company's bill print and mail function.

A. 21 Customer bills are generated nightly for the respective meter reading cycle for that given day. The bills are printed onsite and inserted along with any bill inserts, and mailed the same day and/or the following morning to the customer's address of record.

Q. 22 Please describe the Company's decision to outsource this function.

A. 22 Southwest Gas was able to leverage external expertise with an outside vendor and made the decision to outsource the customer bill print and mail function because it was not core to the business of the organization. The paper bill quantities are decreasing and are expected to decrease more with new payment options such as electronic and mobile payments. Company-wide enrollment in paperless statements have increased 37 percent from approximately 863,000 customers to approximately 1.18 million. Further, customer payments were previously delivered directly to the Company's corporate office. The Company redesigned its bill presentation, and the Company's bill print and mailing hardware and software would have required upgrades, if not replacement, to continue operation and to accommodate the new bill format. The Company's onsite equipment was at its end of life and could not have supported the Company's new paper size, print format, envelopes, or color graphics and graphs. The Company now has redundancy in that the Company's outsource vendor has multiple sites that our bill print functionality can fail over to if/when there are technical or equipment issues. The Company's in-house process did

not have this capability and if/when issues occurred, the bill print operation would stop until the system could be recovered, or the equipment could be repaired. Finally, the Company's outsource vendor has the ability to ensure over 70% of the bills are printed and mailed the same day whereas in-house, bills could only be mailed the following day.

Q. 23 Why did the Company decide to change its bill presentment?

A. 23 The Company's bill had been in the same format since the 1990's and was using non-standard paper size. The prior systemic configurations did not allow for customer friendly presentation. The new bill presentment allows for multiple on-bill messages and comparison data for monthly usage. Finally, the Company's print vendor has state-of-the-art equipment and capabilities, and the Company can now target sub populations in order to provide tailored messaging to impacted and/or selected customers. For example, the Company plans to utilize this by having on bill messaging for Graham County Utility customers when they become part of the Southwest Gas family after Commission approval.

Q. 24 What are the expected annual costs for the outsourcing of the bill print and mail function?

A. 24 The Company anticipates a cost of approximately $9.5 million per year in O&M expense.

Q. 25 Are the costs for outsourcing the bill print and mail function reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 25 Yes. As discussed above, the bill print and mail function is an essential part of

the Company's business processes. Company witness Randi L. Cunningham addresses the adjustment to the Company's cost of service in her prepared direct testimony.

VII. CONCLUSION

Q. 26 Does this conclude your prepared direct testimony?

A. 26 Yes.

Summary of Qualifications
Michelle L. Ansani

I graduated from University of Phoenix, with a Bachelor of Science in Management and graduated from Boston University, with a Master of Science in Risk Management. I am currently attending Walden University, at the dissertation stage of a PhD in Industrial/Organizational Psychology. I am a member of the Society for Industrial and Organizational Psychology, I have a certification in Human Resource Management and am certified in Business Process Management. In the community, I serve as the chairperson of the board of directors of Junior Achievement.

Prior to joining Southwest Gas, I worked in Financial Services for 24 years. I was employed at HSBC while earning my bachelor's degree, working in the Credit Card division as Director of Customer Service. In 2012, Capital One purchased the domestic credit card portfolio and I became the Credit Card Ombudsman for the acquired HSBC portfolio and the Capital One portfolio. In this position I was the key business point of contact for federal agencies, including the Department of Treasury, Department of Justice, Office of the Comptroller of Currency, and the Consumer Financial Protection Bureau. I was also the main business contact for all state government agencies, as well as the office of attorneys general. In this role, I was directly responsible for approximately 2,500 tier 2/escalated complaint analysis employees and 200 tier 3/legal and regulatory complaint analysis employees. For the entire company (including Credit Cards, Retail Bank, Commercial and Mortgage Loans), I oversaw all complaint research, analysis, and response for the Sales Practices Exam conducted by the Office of the Comptroller of Currency, launched in 2016, after the Wells Fargo fraudulent sales practices issue occurred. This role included participating in depositions and providing testimony on

findings, as well as determining and conveying strategies and next steps for remediation and for future account handling practices.

In 2019, I joined Southwest Gas as the Director of Call Center and Back Office. A few months later, I assumed responsibility for managing bill print operations and became the key business lead and stakeholder for Project Horizon. My roles and responsibilities include managing the day-to-day operations of the call center, exceptions processing, and bill print production. Included in this role is serving as a key member of leadership responsible for the strategy and oversight of the end user/customer experience, account handling practices. Additionally, my team partners across the organization to coordinate account related messaging to customers in all channels including the Company's website, IVR, monthly bills, outbound calling, letters, social media, and MyAccount.

As the lead business stakeholder, I was responsible for decisions concerning system functionality and customer experience. I was also the lead for the Business Readiness team responsible for ensuring all 1,400 users were trained and all 52 departments had necessary practices and protocol in place for the conversion and post-conversion implementation.

When the COVID-19 pandemic began, I also assumed oversight of account handling practices, focused on customer education and support, as it relates to financial needs and account management. Additionally, I have the responsibility of tracking, reporting, and analyzing customer account trends and behaviors. This oversight helps the Company understand customer needs and resiliency, as well as help provide proactive, predictive customer interventions and outreach.

In August 2021, I was promoted to my current position of Vice President/Customer Engagement where I assumed responsibility for the Energy Solutions, Customer Engagement and Corporate Communications functions in addition to the Call Center and Back Office function discussed above.

Tab I

Direct Testimony
of
Ann E. Bulkley

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
Docket No. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
ANN E. BULKLEY

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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of
Prepared Direct Testimony
of
Ann E. Bulkley

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Exhibit No._(AEB-18)	Fair Value Rate of Return

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony

of

Ann E. Bulkley

I. INTRODUCTION AND OVERVIEW

Q. 1 What is your name, business address, and position?

A. 1 My name is Ann E. Bulkley. I am employed by Concentric as a Senior Vice President. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. 2 On whose behalf are you submitting this prepared direct testimony?

A. 2 I am submitting this prepared direct testimony (Direct Testimony) before the Arizona Corporation Commission (the ACC or Commission) on behalf of Southwest Gas Corporation (Southwest Gas or Company).

Q. 3 Please describe your educational background, as well as your business and professional experience.

A. 3 I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with more than 25 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. I have included

my resume and a summary of testimony that I have filed in other proceedings as Appendix A to this testimony.

Q. 4 Please describe Concentric's activities in energy and utility engagements.

A. 4 Concentric provides financial and economic advisory services to many and various energy and utility clients across North America. Our regulatory, economic, and market analysis services include utility ratemaking and regulatory advisory services; energy market assessments; market entry and exit analysis; corporate and business unit strategy development; demand forecasting; resource planning; and energy contract negotiations. Our financial advisory activities include buy and sell-side merger, acquisition and divestiture assignments; due diligence and valuation assignments; project and corporate finance services; and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues on behalf of clients throughout North America.

Q. 5 Please describe the purpose of your Direct Testimony.

A. 5 The purpose of my Direct Testimony is to present evidence and provide a recommendation regarding the appropriate Return on Equity (ROE)[1] and to provide an assessment of the capital structure to be used for ratemaking purposes. My Direct Testimony also provides evidence and a recommendation as to the appropriate Fair Value Rate of Return (FVROR) and to the reasonableness of the Company's proposed Fair Value Rate

[1] Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "cost of equity."

Base (FVRB). My analyses and recommendations are supported by the data presented in Exhibit No. ___(AEB-1) through Exhibit No._(AEB-18), which I or others under my supervision have prepared.

Q. 6 Please provide a brief overview of the analyses that led to your ROE recommendation.

A. 6 As discussed in more detail in Section VI, in developing my ROE recommendation, I applied the Discounted Cash Flow (DCF) model, the Capital Asset Pricing Model (CAPM), and a Risk Premium approach. I also considered several additional risk factors that affect the Company's required ROE, including: (1) Flotation costs; (2) the Company's capital expenditure requirements; (3) the regulatory environment in which the Company operates; and (4) the Company's adjustment mechanisms. Finally, I considered the Company's proposed capital structure as compared to the capital structures of the proxy companies. While I did not make any specific adjustments to my ROE estimates for any of these factors, I did take them into consideration in aggregate when determining where the Company's cost of equity falls within the range of analytical results.

Q. 7 Are you sponsoring any required filing schedules?

A. 7 Yes. I sponsor Schedules A-3, and Schedules D-1 through D-4.

Q. 8 What are your conclusions regarding the appropriate cost of equity and FVROR for Southwest Gas?

A. 8 My analyses indicate that Southwest Gas's Cost of Equity should be within a range from 9.90 percent to 10.50 percent. Considering the results of the analyses summarized in Figure 1 and discussed in greater detail in the

remainder of my Direct Testimony, I believe that the Company's requested ROE of 9.90 percent is reasonable and may be a conservative estimate of the cost of equity. The Company's proposed return on the Fair Value Increment of 0.00 percent is well below reasonable estimates of the minimum rate of return that should be applied to the fair value increment and results in an FVROR of 5.48 percent.

Q. 9 How is the remainder of your Direct Testimony organized?

A. 9 Section II provides a summary of my analyses and conclusions. Section III reviews the regulatory guidelines pertinent to the development of the cost of capital. Section IV discusses current and projected capital market conditions and the effect of those conditions on Southwest Gas's cost of equity in Arizona. Section V explains my selection of a proxy group of natural gas utilities. Section VI describes my analyses and the analytical basis for the recommendation of the appropriate ROE for Southwest Gas. Section VII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for Southwest Gas in this case. Section VIII discusses the capital structure of the Company as compared with the proxy group. Section IX presents my conclusions and recommendations for the market cost of equity. Section X discusses my analysis of the FVROR as recently applied by the Commission. Section XI discusses the estimation of the FVROR.

II. SUMMARY OF ANALYSES AND CONCLUSIONS

Q. 10 Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A. 10 In developing my recommended ROE for Southwest Gas, I considered the following:

- The *Hope* and *Bluefield* decisions[2] that established the standards for determining a fair and reasonable allowed ROE, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.
- The effect of current and projected capital market conditions on investors' return requirements.
- The results of several analytical approaches that provide estimates of the Company's cost of equity, including the Constant Growth form of the DCF model, the CAPM, and the Risk Premium Approach. The Company's regulatory, business, and financial risks relative to the proxy group of comparable companies, and the implications of those risks.[3] This includes: (1) Flotation Costs; (2) the Company's capital expenditure requirements; (3) the regulatory environment in which the Company operates; and (4) the Company's adjustment mechanisms.

Q. 11 Please explain how you considered those factors.

A. 11 After considering these factors and the results of my analyses, I relied on the range of results produced by the Constant Growth DCF model, the CAPM and ECAPM and a Risk Premium analysis. As shown in Figure 1, these ROE estimation models produce a wide range of results. My

[2] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944); Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia, 262 U.S. 679 (1923).

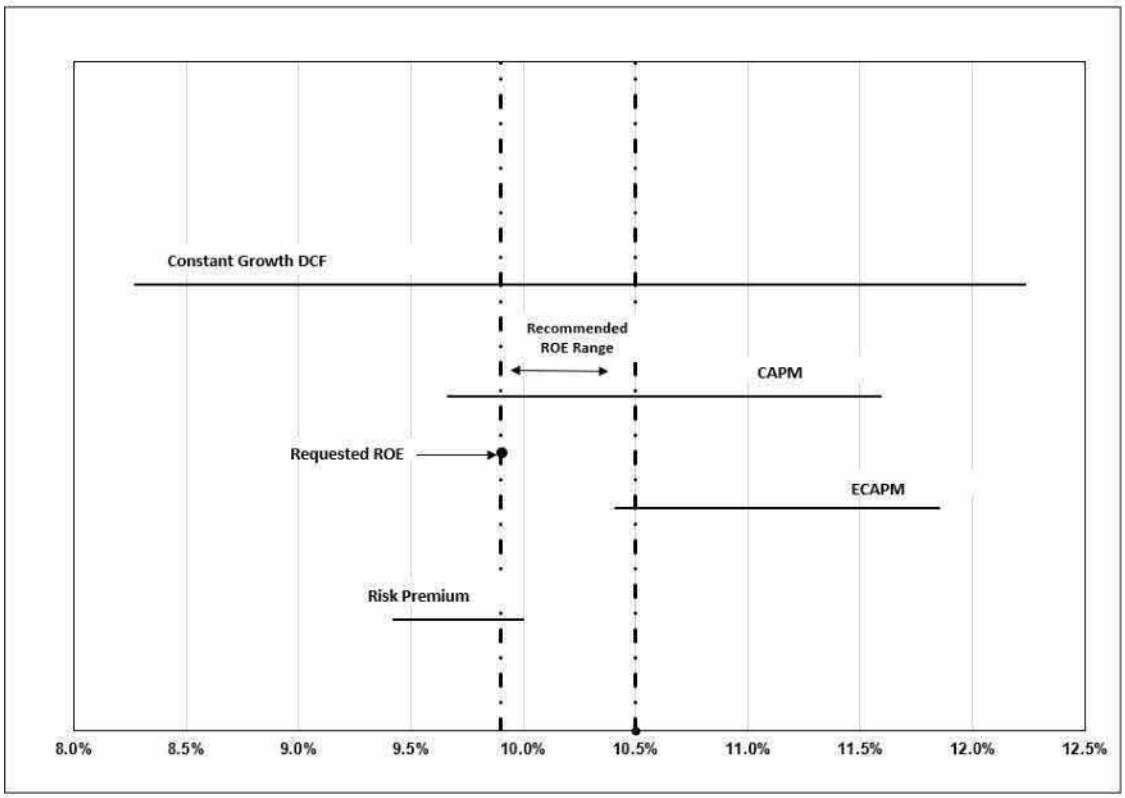
[3] The selection and purpose of developing a group of comparable companies will be discussed in detail in Section V of my Direct Testimony.

conclusion as to where, within that range of results, Southwest Gas's cost of equity falls is based on my assessment of market conditions, and the Company's business and financial risk relative to the proxy group. Although the companies in my proxy group are generally comparable to Southwest Gas, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's business and financial risk in the aggregate in comparison to that of the proxy group companies when determining where the Company's ROE falls within the reasonable range of analytical results to account for any residual differences in risk.

Q. 12 Please summarize the results of the ROE estimation models that you considered to establish the range of ROEs for Southwest Gas.

A. 12 Figure 1 summarizes the range of results produced by the Constant Growth DCF, CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses.

Figure 1: Summary of Cost of Equity Analytical results [4]



As shown in Figure 1 (and in Exhibit Nos._(AEB-3) through (AEB-8), the range of results across all methodologies is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies. As a result, my ROE recommendation considers the range of results of the Constant Growth DCF model, as well as the results of the CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses. My ROE recommendation also considers Southwest Gas's company-specific risk factors and current and prospective capital market conditions.

[4] The analytical results reflect the results of the Constant Growth DCF analysis excluding the results for individual companies that did not meet the minimum threshold of 7.00 percent.

Q. 13 What is your recommended ROE for Southwest Gas?

A. 13 Considering the analytical results presented in Figure 1, as well as the level of regulatory, business, and financial risk faced by Southwest Gas's natural gas operations in Arizona relative to the proxy group, I believe a range from 9.90 to 10.50 percent is reasonable. This recommendation reflects the mean to mean-high range of the DCF models for the proxy group companies, the range of other analytical approaches and the relative risk of Southwest Gas's natural gas operations in Arizona as compared to the proxy group, and current capital market conditions. Within that range, the Company is requesting an ROE of 9.90 percent, which is the low end of my recommended range and is reasonable based on current market conditions, the results of the ROE estimation models, and the risk factors discussed throughout my Direct Testimony.

Q. 14 Please summarize the analysis you conducted in determining that Southwest Gas's requested capital structure is reasonable and appropriate.

A. 14 Based on the analysis presented in Section VIII of my Direct Testimony, I conclude that Southwest Gas's proposed 51.00 percent common equity is reasonable. To determine if Southwest Gas's requested capital structure was reasonable, I reviewed the capital structures of the utility subsidiaries of the proxy companies. As shown in Exhibit No._(AEB-16), the results of that analysis demonstrate that the average equity ratios for the utility operating companies of the proxy group range from 47.44 percent to 60.04 percent, with an average of 55.56 percent. Comparing the recommended equity ratio to the proxy group demonstrates that the Company's requested

equity ratio is significantly below the average equity ratio for the utility operating subsidiaries of the proxy group companies. The increased leverage in the Company's capital structure as compared with the proxy group companies demonstrates greater overall risk than the proxy group companies which would reasonably be reflected in the investor-required ROE. Further, the Company's proposed equity ratio is reasonable considering the negative effect of federal tax reform legislation and COVID-19 on the cash flows and credit metrics of regulated utilities.

Q. 15 How did you estimate the FVROR?

A. 15 I estimated the FVROR using the approach relied on by the Commission in several recent rate cases. In applying that method, I also conclude that the minimum rate of return that should be applied to the fair value "increment" of rate base is the real risk-free rate of return. As discussed in more detail in Section VI, I estimate the real risk-free rate of return to be approximately 1.07 percent. However, the Company is proposing a return of 0.00 percent on the FVI, which is significantly lower than reasonable estimates of the minimum rate of return that should be applied to the fair value increment. As shown in Figure 2 and Figure 3, the result of that analysis is a FVROR of 5.48 percent.

Figure 2: Estimation of the FVRB

Capital	$ Millions	Percent	Weighted FVRB
OCRB	$2,642.068	50.00%	$ 1,321.034
RCND	$4,186.764	50.00%	$ 2,093.382
FVRB			$ 3,414.416

Figure 3: Estimation of the FVROR

Capital	$ Millions	Percent	Cost Rate	Weighted Cost Rate
Long-Term Debt	$1,294.613	37.92%	4.15%	1.57%
Common Equity	$ 1,347.455	39.46%	9.90%	3.91%
Fair Value Increment	$ 772.348	22.62%	0.00%	0.00%
Total	$ 3,414.416			5.48%

III. REGULATORY GUIDELINES

Q. 16 Please describe the guiding principles to be used in establishing the cost of capital for a regulated utility.

A. 16 The United States Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the result reached, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[5]

Q. 17 Has the Commission provided similar guidance in establishing the appropriate return on common equity?

A. 17 Yes. The Commission has noted that under the Arizona Constitution, a public utility is entitled to a fair return on the fair value of its property devoted to public uses. The Commission is required to find the fair value of the utility's property and to use that value to establish just and reasonable rates.[6]

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[5] *Hope*, 320 U.S. 591 (1944); *Bluefield*, 262 U.S. 679 (1923).
[6] *See, e.g., Arizona Corp. Comm'n v. Ariz. Water Co.*, 85 Ariz. 198, 203, 335 P.2d 412, 415 (1959).

Q. 18 Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A. 18 An ROE that is adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable natural gas service while maintaining its financial integrity. To the extent the Company is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders are disadvantaged.

Q. 19 Is a utility's ability to attract capital also affected by the ROEs that are authorized for other utilities?

A. 19 Yes. Utilities compete directly for capital with other investments of similar risk, which include other natural gas and electric utilities. Therefore, the ROE awarded to a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for other investments of comparable risk, investors have an incentive to direct their capital to those investments. Thus, an authorized ROE significantly below authorized ROEs for other natural gas and electric utilities can inhibit the utility's ability to attract capital for investment in Arizona.

Furthermore, because Southwest Gas has natural gas operations in Arizona, Nevada and California, Southwest Gas's operations in Arizona compete with the operations in Nevada and California for discretionary investment capital. In determining how to allocate its finite discretionary capital resources, it would be reasonable for Southwest Gas to consider

the authorized ROE of each of its state operations. As shown in Figure 4, the Commission approved an ROE of 9.10 percent (along with a return on FVI of 0.18 percent) for Southwest Gas's natural gas operations in Arizona in Docket No. G-01551A-19-0055 which is the lowest authorized ROE of the states where Southwest Gas has natural gas operations.

Figure 4: Authorized ROE for Southwest Gas[7]

Company	State	Service Type	Order Date	ROE
Southwest Gas Corporation	Arizona	Natural Gas	12/9/20	9.10%
Southwest Gas Corporation	California	Natural Gas	3/25/21	10.00%
Southwest Gas Corporation	Nevada	Natural Gas	9/25/20	9.25%

Q. 20 What are your conclusions regarding regulatory guidelines?

A. 20 The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility services, a utility must have the opportunity to recover the return of, and the market-required return on, its invested capital. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions; doing so balances the long-term interests of the utility and its customers.

The financial community carefully monitors the current and expected financial condition of utility companies, and the regulatory framework in which they operate. In that respect, the regulatory framework is one of the most important factors in both debt and equity investors' assessments of risk. The Commission's order in this proceeding, therefore, should

[7] Sources: S&P Capital IQ Pro.

establish rates that provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms under a variety of economic and financial market conditions; (2) sufficient to ensure good financial management and firm integrity; and (3) commensurate with returns on investments in enterprises with similar risk. To the extent Southwest Gas is authorized the opportunity to earn its market-based cost of capital, the proper balance is achieved between customers' and shareholders' interests.

IV. CAPITAL MARKET CONDITIONS

Q. 21 Why is it important to analyze capital market conditions?

A. 21 The ROE estimation models rely on market data that are either specific to the proxy group, in the case of the DCF model, or to the expectations of market risk, in the case of the CAPM. The results of the ROE estimation models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE that is established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates and interest rates, in the ROE estimation models to estimate the required return for the subject company.

As discussed in the remainder of this section, analysts and regulatory commissions have concluded that current market conditions have affected the results of the ROE estimation models. As a result, it is important to consider the effect of these conditions on the ROE estimation models when determining the appropriate range and recommended ROE for a future period. If investors do not expect current market conditions to be sustained

in the future, it is possible that the ROE estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is very important to consider projected market data to estimate the return for that forward-looking period.

Q. 22 What factors are affecting the cost of equity for regulated utilities in the current and prospective capital markets?

A. 22 The cost of equity for regulated utility companies is being affected by several factors in the current and prospective capital markets, including: (1) the dramatic shifts in market conditions during 2020, the economic recovery in 2021, and the expectations for 2022, and the effect of these changes on the assumptions used in the ROE estimation models; and (2) effects of Federal tax reform on utility cash flows. In this section, I discuss each of these factors and how they affect the models used to estimate the cost of equity for regulated utilities.

Q. 23 What effect do current and prospective market conditions have on the cost of equity for Southwest Gas?

A. 23 The economy is currently in the recovery phase of the business cycle. During the recovery phase, interest rates are expected to increase, and investors are expected to rotate into cyclical sectors that stand to benefit the most from the economic recovery. In fact, over the past few months, the yield on the 30-year Treasury bonds and inflation have increased from the pandemic lows seen in 2020. Utilities, which are a defensive sector, have historically underperformed the market during periods of economic expansion. Therefore, investors are currently expecting utilities to underperform over the near-term, which means the share prices of utilities

will likely decline. A decline in share prices will increase the dividend yields of utilities and thus the cost of equity for utilities is expected to increase over the near-term. This is important because the cost of equity in this proceeding is being estimated for the period that Southwest Gas's rates will be in effect. Since the cost of equity is expected to increase over the near-term for utilities, ROE estimates based on current market conditions will understate the ROE during the period that the Company's rates will be in effect. For example, the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity for Southwest Gas over the near term.

A. Economic Recovery and Performance of the Utility Sector

Q. 24 Do recent economic projections indicate the expectation for a continued strong economic recovery in 2022?

A. 24 Yes. The Federal Open Market Committee ("FOMC") issued its Summary of Economic Projections in June 2021, where the FOMC's median projection for GDP growth from Q4 2021 to Q4 2022 is 3.8 percent.[8] The Congressional Budget Office ("CBO") issued an update to its outlook on economic conditions on July 1, 2021. In that report, the CBO projected strong GDP growth for 2021 and significant strength in overall economic conditions:

- Real GDP growth of 7.4 percent in 2021 and 3.1 percent in 2022, which is a significant change from the negative 2.4 percent growth rate in 2020;
- Inflation indicators at or above the 2.0 percent threshold in 2021 and continuing through 2031;

[8] Federal Open Market Committee, Summary of Economic Projections, September 22, 2021, at 2.

- Labor force expected to be restored to pre-pandemic levels in 2022; and
- Interest rates on federal borrowing increasing through 2031.[9]

Finally, investors expect increased inflation levels to persist into 2022. Goldman Sachs forecasts consumer price inflation, excluding food and energy costs, to still be above 4 percent when the Federal Reserve ends their tapering of bond purchases in 2022 which Goldman Sachs expects will result in the Federal Reserve increasing the Federal Funds rate twice in 2022.[10] Similarly, respondents to the recent CNBC Fed Survey, indicated the CPI is expected to rise 3.5 percent in 2022 which is an increase from the September Survey of 3.0 percent, and the yield on the 10-year Treasury Bond is expected to increase to 2.2 percent.[11] U.S. bond yields have already rebounded considerably in the past year, with 30-year Treasury bond yields up 81 basis points between April 1, 2020, and September 30, 2021. These trends indicate strong economic recovery over the next year, with robust consumer spending expected.

Q. 25 Please summarize the recent monetary policy of the Federal Reserve.

A. 25 In response to the COVID-19 pandemic, the Federal Reserve has:

- Decreased the Federal Funds rate twice in March 2020, resulting in a target range of 0.00 percent to 0.25 percent;
- Increased its holdings of both Treasury and mortgaged-back securities;

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[9] Congressional Budget Office, An Update to the Budget and Economic Outlook 2021 to 2031, July 2021.

[10] Kennedy, Simon. "Goldman Now Sees Fed Hiking Rates in July as Inflation Lingers." Bloomberg.com, Bloomberg, 30 Oct. 2021, https://www.bloomberg.com/news/articles/2021-10-30/goldman-now-sees-fed-hiking-rates-in-july-as-inflation-lingers.

[11] Liesman, Steve. "Investors Expect a Faster Pace for Fed Rate Hikes, CNBC Survey Shows." CNBC, CNBC, 2 Nov. 2021, https://www.cnbc.com/2021/11/02/investors-expect-a-faster-pace-for-fed-rate-hikes-cnbc-survey-shows.html.

- Started expansive programs to support credit to large employers – the Primary Market Corporate Credit Facility to provide liquidity for new issuances of corporate bonds; and the Secondary Market Corporate Credit Facility to provide liquidity for outstanding corporate debt issuances; and
- Supported the flow of credit to consumers and businesses through the Term Asset-Backed Securities Loan Facility.

In addition, Congress also passed the Coronavirus Aid, Relief, and Economic Security ("CARES") Act in March 2020, the Consolidated Appropriations Act, 2021 in December 2020, and the American Rescue Plan Act in March 2021, which included $2.2. trillion, $900 billion and $1.9 trillion, respectively, in fiscal stimulus aimed at also mitigating the economic effects of COVID-19. These expansive monetary and fiscal programs mitigated the economic effects of the COVID-19 pandemic and are currently providing additional support as the economy recovers from the COVID-19 recession.

Q. 26 Has the Federal Reserve indicated that it will start to slowly end some of the accommodative policy tools that were used to support the economy during COVID-19?

A. 26 Yes. Most recently, at the November 3, 2021 meeting, the Federal Reserve noted that given the substantial improvement in the economy, it plans to begin reducing asset purchases of Treasuries by $10 billion and mortgage-backed securities by $5 billion on a monthly basis starting in November.[12] This follows several Federal Reserve statements that demonstrate the intention to end accommodative policies. Specifically, at the September

[12] Federal Reserve, Press Release, November 3, 2021.

22, 2021 meeting, half of the 18 members of the FOMC forecasted once increase in the federal funds rate by the end of 2022 with a median federal funds rate projection of 1.0 percent by 2023 (i.e., three to four increases in the federal funds rate).[13]

Further, on June 2, 2021, the Federal Reserve announced that it plans to start selling the corporate bonds and exchange-traded funds (ETF) that it purchased to support the corporate bond market during the COVID-19 pandemic.[14] The process will be gradual, but the Federal Reserve expects to complete the sale of its corporate bond holdings by the end of 2021.

Q. 27 What effect, if any, will the Federal Reserve's accommodative monetary policy have on long-term interest rates over the near-term?

A. 27 The Federal Reserve has acknowledged that they will keep the federal funds rate near zero for at least the next year with, as noted above, the possibility of rate increases towards the second half of 2022. The goal of the accommodative monetary policy is to achieve the Federal Reserve's dual mandate of maximum employment and stable prices. However, while the current accommodative monetary policy will keep short-term interest rates low for at least the next year, it does not have a direct effect on long-term interest rates. Long-term interest rates can increase even though monetary policy is accommodative. In fact, one of the leading indicators used by investors to determine what stage of the business cycle the economy is in is to review the yield curve which shows the difference

[13] Federal Reserve, Summary of Economic Projections, September 22, 2021.

[14] Scaggs, Alexandra. "The Federal Reserve Is Going to Sell Its Corporate Bond Portfolio. What It Means." The Federal Reserve Will Sell Its Corporate Bond Portfolio. What It Means., Barrons, 3 June 2021, www.barrons.com/articles/federal-reserve-corporate-bond-portfolio-51622679701.

between long-term and short-term interest rates. A flat or inverted yield curve is when long-term interest rates are equivalent to or less than short-term interest rates and usually occurs prior to a recession. Conversely, a steepening yield curve is when the difference between long-term interest rates and short-term interest rates is increasing and indicates that the economy is entering a period of economic expansion and inflation following a recession.[15]

Q. 28 Have you reviewed the yield curve to determine investors' expectations regarding the economy over the near-term?

A. 28 Yes, I have. I reviewed the yield curve, calculated as the difference between the yield on the 10-year Treasury Bond and the yield on the 2-year Treasury Bond from January 2015 through October 2021. I selected the 10-year Treasury Bond yield to represent long-term interest rates and the yield on the 2-year Treasury Bond to represent short-term interest rates. As shown in Figure 5, the yield curve has been steepening, with the spread increasing to approximately 160 basis points in April 2021, which is a level not seen since the middle of 2015. The 30-day average spread as of October 31, 2021, was 118 basis points. The 30-day average yield spread as of December 9, 2020, the date of the Commission's decision in the Company's last rate case, was approximately 72 basis points. Comparing these two periods indicates the expectations for greater inflation in the current economic conditions, as compared to that seen in

[15] "What is a yield curve", Fidelity.com. https://www.fidelity.com/learning-center/investment-products/fixed-income-bonds/bond-yield-curve

capital markets at the time of the Commission's decision in the Company's last general rate case proceeding.

The steepening of the yield curve indicates that investors expect economic growth and inflation to increase in the near-term, and as a result they are rotating out of long-term government bonds to avoid being locked into to low interest rates for the long-term. The steep yield curve signals that higher yields are required by investors to invest in long-term government bonds. Over the near and long-term, long-term interest rates are still expected to continue to increase and thus the yield curve will continue to steepen.[16]

[16] *See* Landsman, Stephanie. "Inflation Breakout Will Drive 10-Year Treasury Yields above 2% in Coming Months, Wells Fargo Predicts." CNBC, CNBC, 18 June 2021, www.cnbc.com/2021/06/18/inflation-breakout-will-soon-drive-10-year-yields-above-2percent-wells-fargo.html and Domm, Patti. "The Mystifying Bond Market Behavior Could Last All Summer." *CNBC*, CNBC, 17 July 2021, www.cnbc.com/2021/07/16/the-mystifying-bond-market-behavior-could-last-all-summer.html.

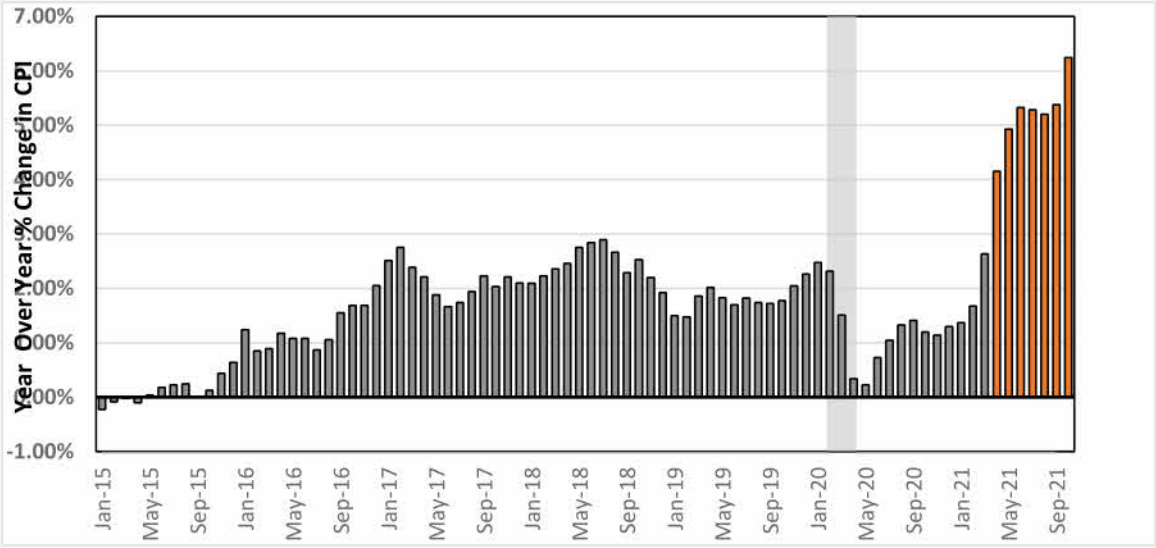
Figure 5: 10-year Treasury Bond Yield Minus 2-year Treasury Bond Yield – January 2015 – October 2021[17]

Q. 29 Has inflation increased as predicted by the steepening of the yield curve?

A. 29 Yes, it has. As shown in Figure 6, the year over year (YOY) change in the Consumer Price Index (CPI) published by the Bureau of Labor statistics has increased steadily in 2021 rising from 1.37 percent in January to 6.24 percent in October. The 6.24 percent YOY in the CPI in October 2021 is significantly greater than any level seen since January 2015. Therefore, inflation has increased as predicted by the steeping of the yield curve. If inflation continues to increase as expected, then long-term interest rates will also increase as investors require higher yields to compensate for the increased risk of inflation.

[17] Federal Reserve Bank of St. Louis, 10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity [T10Y2Y], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/T10Y2Y, October 31, 2021.

Figure 6: Consumer Price Index – Year over Year Percent Change – January 2015 – October 2021[18]



Q. 30 What have equity analysts said about long-term government bond yields?

A. 30 Several equity analysts have noted that they expect economic conditions to continue to improve and thus the yields on long-term government bonds to continue to increase through the end of 2021 and into 2022. For example, Bloomberg recently noted that forecasters were projecting the yield on the 10-year Treasury Bond will increase to approximately 1.8 percent by the end of 2021.[19] Similarly, strategists at CitiGroup Inc. recently noted that they expect the yield of the 10-year Treasury Bond to increase to 2 percent in 2022.[20]

In terms of equity recommendations considering the expected increase in long-term government bond yields, Federated Hermes prefers cyclical

[18] Source: Bureau of Labor Statistics, shaded area indicates the COVID-19 pandemic recession.
[19] Galouchko, Ksenia. "Citi Cuts Tech-Heavy U.S. Stocks on Treasury Yield Surge Call." Bloomberg.com, Bloomberg, 4 Aug. 2021, https://www.bloomberg.com/news/articles/2021-08-04/citi-cuts-tech-heavy-u-s-stocks-on-treasury-yield-surge-call.
[20] *Ibid.*

industries such as financials and industrials. When cyclical stocks are favored, historically the utility sector underperforms.

> "We like financials and industrials and materials and small cap and yes, international stocks in that environment," he said. "But I think the overall equity index will have every ability to move higher in that pro-cyclical, higher inflationary environment just like it did last September through April." [21]

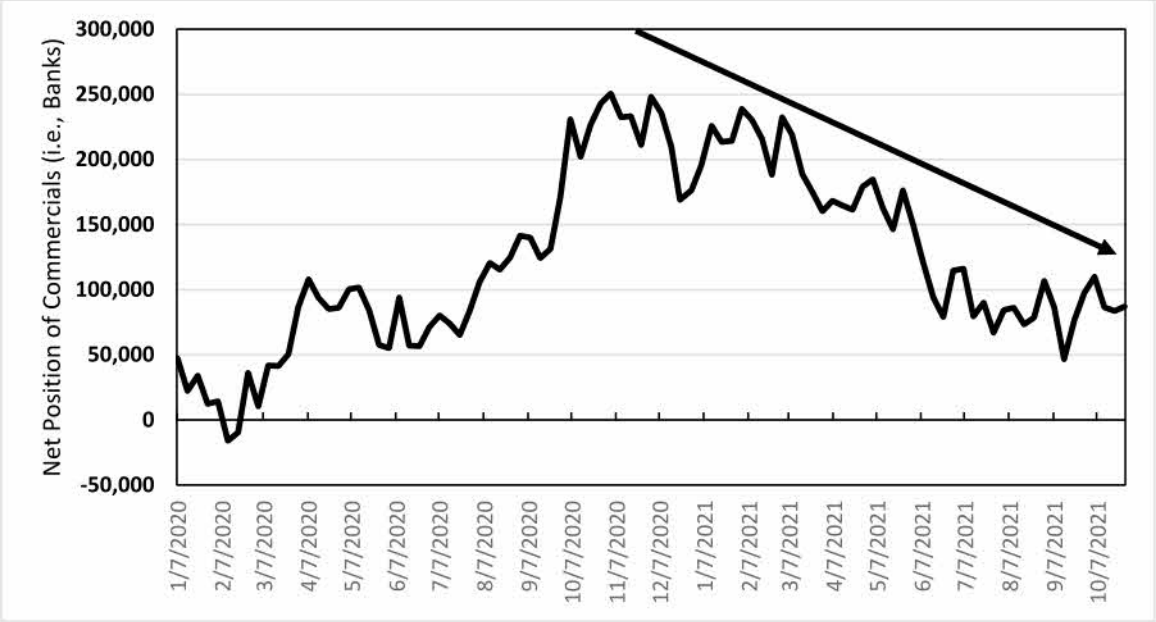
Q. 31 Have you considered any additional indicators which may imply long-term interest rates are expected to increase?

A. 31 Yes, I have. I considered the net position of commercials (i.e., banks) in U.S. Treasury Bond futures contracts as reported in the Commitment of Traders (COT) Report produced by the Commodity Futures Trading Commission (CFTC). A net position is defined as the total number of long positions in a futures contract minus the total number of short positions in a futures contract. A long position means that an investor agrees to purchase an asset in the future at a specified price today and therefore profits if the price of the underlying asset increases. Conversely, short position is when an investor agrees to sell an asset at a time in the future at a specified price today and profits if the price of the asset declines. Therefore, if banks are increasing the number of short positions and thus have a declining net position, the banks are assuming that the price of the asset will decline. As shown in Figure 7, the net position of banks in U.S. Treasury Bonds has been decreasing since the end of 2020. Therefore, banks are forecasting a decrease in the price of long-term government

[21] Gurdus, Lizzy. "Citi Calls for 10-Year at 2%. Here Are Ways to Play a High-Rate Environment." CNBC, CNBC, 5 Aug. 2021, www.cnbc.com/2021/08/05/citi-calls-for-10-year-at-2percent-here-are-ways-to-play-a-high-rate-environment.html.

bonds and thus the yields (which are inversely related to the price) to increase over the near-term.

Figure 7: Commitment of Traders Report – Net Position of Commercials (i.e., Banks) in U.S. Treasury Bond Futures Contracts[22]



Q. 32 How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A. 32 Equity analysts project that utilities are expected to continue to underperform the broader market as interest rates increase. For example, in a recent article, Barron's conducted its Big Money poll of professional investors regarding the outlook for the next twelve months. Approximately 60 percent of respondents projected the yield on the 10-year Treasury Bond will be 2.00 percent or greater at the end of the next twelve months which is an increase from the current 30-day average 10-year Treasury

[22] Commitment of Traders Report, as of October 30, 2021 - https://www.cftc.gov/MarketReports/CommitmentsofTraders/HistoricalCompressed/index.htm

Bond yield as of September 30, 2021 of 1.35 percent.[23] Furthermore, the professional investors surveyed by Barron's selected the utility sector as the sector which will perform the worst over the next twelve months indicating they are projecting that utilities will underperform the broader market in 2022.

Other equity analysts concur with this conclusion. Fidelity recently recommended underweighting the utility sector and noted that "[w]eak fundamentals and high valuations could be headwinds for utilities and real estate, especially if rates increase."[24] In its 2021 Midyear Outlook, Wells Fargo classified the utility sector as "most unfavorable" as economic growth continues to rebound.[25] Finally, Charles Schwab has classified the utilities sector overall as "Underperform," noting negatives for the sector that include "interest rates are expected to recover from recent decline" and "economic recovery makes the sector less attractive, relative to other sectors".[26]

Q. 33 How has the utility sector performed historically during periods where the yield curve is steepening, and the economy is in the early stage of the business cycle?

A. 33 In a recent report, Fidelity noted that the utility sector has historically been one of the worst performing sectors during the early phase of the business

[23] Jasinski, Nicholas. Stocks Are Still the Place to Be, Our Exclusive Big Money Poll Finds. Barron's, 16 Oct. 2021, https://www.barrons.com/articles/stock-market-covid-economy-outlook-51634312012?mod=hpsubnav&tesla=y.

[24] Fidelity, "Q4 2021 sector scorecard," October 27, 2021.

[25] Well Fargo Investment Institute, 2021 Midyear Outlook, June 2021.

[26] Charles Schwab, "Schwab Sector Insights: A view on 11 Equity Sectors," September 30, 2021.

cycle with a geometric average return of -10.5 percent.[27] This conclusion is further supported by studies conducted by both Goldman Sachs and Deutsche Bank that examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (i.e., increases in bond yields resulted in the decline of utility share prices).[28] This is important because if the utility sector underperforms over the near term, and prices of utility stocks decline, then the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity for Southwest Gas over the near term or the period that Company's rates will be in effect.

Q. 34 Why do utilities historically underperform in the early stage of the business cycle?

A. 34 Utilities are considered a defensive sector and are therefore affected less by changes in the business cycle relative to other market sectors since consumers need energy during all phases of the business cycle. Therefore, utilities tend to perform well during periods of uncertainty where the prospect of slowing economic growth increases. As Fidelity noted, historically utilities outperform the market in latter and recession phases of the business cycle.[29] This relationship mostly held during the past few years as the share prices of utilities were bid up to unsustainable levels as

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[27] Fidelity Investments, "The Business Cycle Approach to Equity Sector Investing," 2020.

[28] Lee, Justina. "Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks." Bloomberg.com, 11 Mar. 2021, www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks.

[29] Fidelity Investments, "The Business Cycle Approach to Equity Sector Investing," 2020.

investors responded to economic uncertainty due to the trade war between the U.S. and China and ultimately the COVID-19 pandemic.

Q. 35 How do the recent valuations of utilities compare to historical averages?

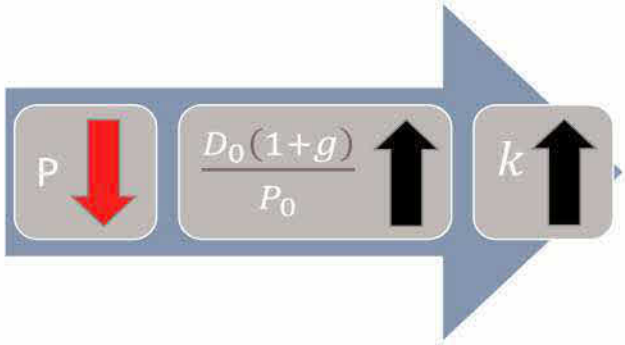
A. 35 The utility sector's valuations remain above the long-term historical average. According to a recently published report by Yardeni Research, Inc., the forward price-to-earnings ("P/E") ratio for the S&P Utilities Index is approximately 20.3 which is higher than it has been historically.[30] It is not reasonable to expect utilities to maintain P/E ratios that are above long-term averages over the long term.

Q. 36 What is the effect of expected market conditions on the DCF model?

A. 36 If the utility sector underperforms over the near term as expected, and prices of utility stocks decline, then the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity. For example, Figure 8 below summarizes the effect of a decline in share price on the dividend yield and thus the cost of equity estimated by the Constant Growth DCF model.

[30] Yardeni Research, Inc. "S&P 500 Industry Briefing: Utilities." September 15, 2021, p. 5.

Figure 8: The Effect of a decline in Stock Prices on the Constant Growth DCF model



A decline in stock prices will increase the dividend yields and thus the estimate of the ROE produced by the Constant Growth DCF model. Therefore, this expected change in market conditions supports consideration of the range of ROE results produced by the mean to mean-high DCF results since the mean DCF results would likely understate the cost of equity during the period that the Company's rates will be in effect. Moreover, prospective market conditions warrant consideration of other ROE estimation models such as the CAPM, ECAPM and Risk Premium, which may better reflect expected market conditions. For example, two out of three inputs to the CAPM (i.e., the market risk premium and risk-free rate) are forward-looking.

B. Effect of Tax Reform on the ROE and Capital Structure

Q. 37 Should the effect of tax reform be considered in determining the cost of equity for the Company?

A. 37 Yes. The credit rating agencies have commented on the adverse effect of the Tax Cuts and Jobs Act (TCJA) on the cash flows of regulated utilities.[31] Specifically, the TCJA has reduced utility revenues due to lower federal income taxes in the revenue requirement, the end of bonus depreciation, and the requirement to return "unprotected" excess accumulated deferred income taxes. This change in revenue reduced funds from operations metrics across the sector, and absent regulatory mitigation strategies, has led to weaker credit metrics and negative ratings actions for some utilities.[32]

Q. 38 What has been the effect of the TCJA on utility financial risk?

A. 38 The TCJA reduced utilities' financial flexibility through the loss of bonus depreciation and the return of excess ADIT to customers. After the TCJA was passed, credit rating agencies initially revised the outlook on utilities.

Q. 39 Does tax reform continue to present challenges for utilities?

A. 39 Yes. The TCJA resulted in a permanent change in the cash flow metrics of utilities. Credit rating agencies have recognized this change in metrics and have proposed that increasing ROEs and the use of thicker equity layers can improve credit metrics. Since 2018, Moody's has downgraded the

[31] Standard & Poor's Ratings, "Industry Top Trends 2019, North America Regulated Utilities", November 8, 2018; FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.

[32] Ibid.

credit ratings of more than 30 utilities related in part to the TCJA beginning in June 2018 and continuing into 2021.

Q. 40 Did the Company experience a downgrade related to cash flow metrics resulting from tax reform?

A. 40 Yes. Southwest Gas was downgraded in January of 2021. Moody's downgrade of Southwest Gas was due to increasing debt needed to fund the Company's capital expenditures, regulatory lag as a result of the Company's most recent rate case decision in Arizona and the cash flow effects of the passage of tax reform in December 2017.[33] The downgrade of Southwest Gas by Moody's highlights the fact that the financial performance of Southwest Gas is heavily reliant on the financial performance of its natural gas operations in Arizona. As Moody's noted in its recent ratings action on Southwest Gas, Arizona is the Company's largest regulatory jurisdiction.[34] Thus, it is important that the Commission authorize an ROE and equity ratio for Southwest Gas in this proceeding that is considered credit supportive so as to avoid the possibility of future credit downgrades for Southwest Gas and its holding company, Southwest Gas Holdings, Inc.

[33] Moody's Investors Service, Rating Action: Moody's downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable, January 29, 2021.
[34] Ibid.

Q. 41 Have state regulatory commissions recognized that the TCJA has had an adverse impact on utility cash flows?

A. 41 Yes. The Oregon Public Utilities Commission ("Oregon PUC"),[35] the Wyoming Public Service Commission ("Wyoming PSC")[36] and the Utah Public Service Commission ("Utah PSC")[37] have acknowledged the negative effect of the TCJA on the cash flow of utilities.

Further, in a December 2019 order for Georgia Power Company, the Georgia Public Service Commission found it appropriate to authorize a higher equity ratio as a means to address the negative impacts of the TCJA:

> As pointed out by the Company, in April 2018, this Commission adjusted the Company's equity ratio upward from the 51%, which was previously approved in the 2013 Rate Case, to 55% as part of the Tax Cuts and Jobs Act settlement between the Company and Commission PIA Staff in Docket No. 36989 ("Tax Reform Settlement"). The equity adjustment approved in the Tax Reform Settlement was implemented to address the negative implications of tax reform, provide support for maintaining the Company's credit profile, and allow the Company timely access to capital markets and the ability to borrow at reasonable interest rates. Based on the evidence presented, the Commission finds and concludes that the Settlement Agreement's proposed capital structure of 56% common equity level is just and reasonable considering all the evidence presented and is necessary to avoid a credit rating downgrade.[38]

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[35] See In the Matter of Avista Corporation, dba Avista Utilities, Application for Authorization to Issue 3,500,000 Shares of Common Stock, Docket UF 4308, Order No. 19-067 (Feb. 23, 2019); In the Matter of Avista Corporation, dba Avista Utilities, Application for Authorization to Issue and Sell $600,000,000 of Debt Securities, UF 4313, Order No. 19-249 (July 30, 2019); In the Matter of Portland General Electric Company, Request for Authority to Extend the Maturity of an Existing $500 Million Revolving Credit Agreement, Docket UF 4272(3), Order No. 19-025 (Jan. 23, 2019).

[36] In the Matter of Questar Gas Company dba Dominion Energy Wyoming's Application for Approval of Amended Stipulation Previously Approved in Docket No. 30010-150-GA-16, Docket No. 30010-180-GA-18 (Record No. 15138) (Aug. 20, 2019).

[37] Report and Order, Docket No. 19-057-02, Dominion Energy Utah, February 25, 2020, at 6.

[38] Georgia Public Service Commission Docket No. 42516, Short Order Adopting Settlement Agreement as Modified, December 17, 2019, at 7-8.

C. Conclusion

Q. 42 Have state regulatory commissions considered market events and the utility's ability to attract capital in determining the equity **return?**

A. 42 Yes. In a recent rate case for Consumers Energy Company, the Michigan Public Service Commission ("Michigan PSC") noted that it is important to consider how a utility's access to capital could be affected in the near-term as a result of market reactions to global events like those that have occurred in the recent past.[39] Specifically, the Michigan PSC noted that:

> [i]n setting the ROE at 9.90%, the Commission believes there is an opportunity for the company to earn a fair return during this period of atypical market conditions. This decision also reinforces the belief, as stated in the Commission's March 29 order, "that customers do not benefit from a lower ROE if it means the utility has difficulty accessing capital at attractive terms and in a timely manner." These conditions still hold true based on the evidence in the instant case. The fact that other utilities have been able to access capital despite lower ROEs, as argued by many intervenors, is also a relevant consideration. *It is also important to consider how extreme market reactions to global events, as have occurred in the recent past, may impact how easily capital will be able to be accessed during the future test period should an unforeseen market shock occur. The Commission will continue to monitor a variety of market factors in future rate cases to gauge whether volatility and uncertainty continue to be prevalent issues that merit more consideration in setting the ROE.*[40]

The Michigan PSC references "global events" and the overall effect the events could have on the ability of a utility to access capital. Consistent with the Michigan PSC's views, it is important to consider current market conditions and the impact of those conditions on the access to and cost of

[39] Michigan Public Service Commission Order, Cause No. U-20697, Consumers Energy Company, December 17, 2020, at 165.
[40] *Id.*, at 43 (emphasis added).

capital, and to position utilities to be able to maintain access in rapidly changing market conditions.

Q. 43 What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A. 43 The important conclusions regarding capital market conditions are:

- As markets continue to rebound from the uncertainty and volatility that characterized capital markets in 2020 and interest rates continue to increase from the market lows in August 2020, it is reasonable that equity investors would require a higher return on equity to compensate for the additional risk associated with owning common stock. Likewise, if natural gas utilities continue to underperform the broader market, as expected by analysts, this will indicate additional risk associated with these investments.

- Investors' current expectations regarding the economy highlights the importance of using forward-looking inputs in the models used to estimate the cost of equity. Current utility valuations are still well above the long-term average. The current high valuations result in low dividend yields for utilities, which means that DCF models using recent historical data likely underestimate investors' required return over the period that rates will be in effect.

- Credit rating agencies have demonstrated concern about the cash flow metrics of utilities, related to the negative effects of both current market conditions and the TCJA, which increases investor risk expectations for utilities. Therefore, it is increasingly important to consider a rate of return and capital structure that support the Company's cash flow metrics to enable Southwest Gas the ability to attract capital at reasonable terms during the period that rates will be in effect.

V. PROXY GROUP SELECTION

Q. 44 Why have you used a group of proxy companies to estimate the cost of equity for Southwest Gas?

A. 44 In this proceeding, we are focused on estimating the cost of equity for a natural gas utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and because Southwest Gas's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that is both publicly traded and comparable to Southwest Gas in certain fundamental business and financial respects to serve as its "proxy" in the ROE estimation process. Even if Southwest Gas was a publicly-traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to the Company, and thus provide a reasonable basis to derive and estimate the appropriate ROE for Southwest Gas.

Q. 45 Please provide a brief profile of Southwest Gas.

A. 45 Southwest Gas is a wholly owned subsidiary of Southwest Gas Holdings, Inc. ("Southwest Gas Holdings") and provides natural gas distribution service to 2,133,000 customers in Arizona, Nevada and California.[41] The Company's natural gas operations in Arizona represent approximately 53

[41] Southwest Gas Holdings, Investor Presentation, AGA Financial Forum, May 19-20, 2021, at 6.

percent (approximately 1,130,000 customers) of the Company's total natural gas customer base.[42] Similarly, Southwest Gas's natural gas operations in Arizona represent 53 percent of Southwest Gas's total operating margin[43] and 48.49 percent of the Company's total authorized rate base.[44] Southwest Gas's and Southwest Gas Holdings' long-term corporate or issuer ratings are shown in Figure 9 below.

Figure 9: Long-Term Corporate/Issuer Credit Ratings[45]

Company	S&P Rating (Outlook)	Moody's Rating (Outlook)
Southwest Gas	BBB (Negative)	Baa1 (Stable)
Southwest Gas Holdings	BBB- (Negative)	Baa2 (Stable)

Q. 46 How did you select the companies included in your proxy group?

A. 46 I began with the group of 10 companies that Value Line classifies as Natural Gas Distribution Utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, because companies that do not cannot be analyzed using the Constant Growth DCF model;
- have investment grade long-term issuer ratings from S&P and/or Moody's;
- are covered by at least two utility industry analysts;
- have positive long-term earnings growth forecasts from at least two utility industry equity analysts;

[42] *Id.*, at 7.
[43] Ibid.
[44] *Id.*, at 49.
[45] S&P Global Market Intelligence, September 17, 2021.

- derive more than 60.00 percent of their total operating income from regulated operations;
- derive more than 60.00 percent of regulated operating income from gas distribution operations; and
- were not parties to a merger or transformative transaction during the analytical periods relied on.

Q. 47 Did you include Southwest Gas Holdings in your analysis?

A. 47 No. It is my practice not to include the subject company or its parent holding company in the proxy group in order to avoid the circular logic that otherwise would occur. Furthermore, Southwest Gas Holdings is currently the subject of a transformative transaction that would cause this company to be excluded from the proxy group on that basis.

Q. 48 What is the composition of your proxy group?

A. 48 The screening criteria discussed above are shown in Exhibit No._(AEB-2) and resulted in a proxy group consisting of the companies shown in below Figure 10.

Figure 10: Proxy Group

Company	Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
NiSource Inc.	NI
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
South Jersey Industries, Inc.	SJI
Spire, Inc.	SR

Q. 49 Do your screening criteria result in a proxy group that is risk comparable to Southwest Gas?

A. 49 Yes, they do. The overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of Southwest Gas and that investors would view as comparable to the Company. I developed the screens and thresholds for each screen based on judgment with the intention of balancing the need to maintain a proxy group that is of sufficient size with establishing a proxy group of companies that are comparable in business and financial risk to Southwest Gas. This resulted in the group of seven companies shown in Figure 10 which have business and financial risks that are comparable to Southwest Gas.

Q. 50 Did you adjust the operating income data for any of the companies included in your proxy group to remove the effects of a one-time financial event?

A. 50 Yes, I did. As shown in Exhibit No._(AEB-2), I relied on the three-year average of operating income from 2018 to 2020 for two of my proxy group screening criteria: a) the total operating income from regulated operations; and b) regulated operating income from gas distribution operations. The operating income data from 2018 through 2020 for NiSource Inc. ("NiSource") was affected by a one-time financial event. The event was related to the company's former operating subsidiary, Columbia Gas of Massachusetts. On September 13, 2018, Columbia Gas of Massachusetts, experienced a significant event as a result of over pressured lines on their system. The incident resulted in immediate financial ramifications for

NiSource in 2018 with NiSource reporting operating income for its natural gas distribution operations segment in 2018 of -$254,100.[46] In addition, NiSource incurred impairment charges associated with the Massachusetts assets in 2019 and 2020. The 2019 impairment charges were incurred because the fair value of the Massachusetts assets was determined to be less than the book value[47] while NiSource incurred an impairment charge in 2020 due to a loss on the sale of the Massachusetts assets to Eversource Energy which closed on October 9, 2020.[48] The inclusion of the impairment charges and the financial effect of the incident in 2018 would have resulted in NiSource deriving less than 60 percent of its regulated operating income from the natural gas distribution operations segment.

Q. 51 Why is it appropriate to adjust the operating income data for NiSource to remove the financial effects of the incident associated the company's Massachusetts assets?

A. 51 The incident in 2018 and the impairment charges in 2019 and 2020 will likely only affect the Company's financials in 2018, 2019 and 2020 because NiSource sold the Massachusetts assets to Eversource Energy in October of 2020. Therefore, reported operating income from 2018 to 2020 for the company's natural gas distribution operations segment is not indicative of the segment's contributions to earnings in the future. As a result, the company will still derive a majority of its operating income from natural gas

[46] NiSource Inc., 2020 10-K, at 114.
[47] *Id.*, at 71.
[48] *Id.*, at 60.

distributions operation and thus, investors would view the company as comparable to Southwest Gas.

Q. 52 How did you adjust the operating income data for NiSource?

A. 52 As shown in Exhibit No._(AEB-9), I obtained the total cost of the incident in 2018 and the total value of the impairment charges in 2019 and 2020 and added those values to the total operating income reported for the natural gas distribution operations segment for 2018 through 2020. Additionally, I also adjusted the corporate and other business segment for another impairment charge that NiSource realized in 2019 related to the Massachusetts assets. The adjustments resulted in NiSource deriving 63.49 percent to 68.83 percent of its operating income from the natural gas operations segment for period of 2018 through 2020.

Q. 53 Did you calculate NiSource's operating income by business segment prior to 2018?

A. 53 Yes, I did. I calculated the percentage of operating income derived from regulated natural gas operations for NiSource from 2010 through 2017. As shown in Exhibit No._(AEB-9), the only year where NiSource's percentage of operating income from natural gas operations was below 60 percent was 2017; however, the percentage in 2017 was 59.72 percent, only slightly less than 60 percent. In fact, the average for 2010 through 2017 for NiSource is 64.67 percent. Therefore, it is evident from my analysis of 2010 through 2017 and my adjustment to the remove the one-time financial event from 2018 through 2020, that NiSource does derive a majority its operating income from natural gas operations and would be considered

comparable to Southwest Gas. Thus, I have included NiSource in my proxy group.

VI. COST OF EQUITY ESTIMATION

Q. 54 Please briefly discuss the ROE in the context of the regulated rate of return.

A. 54 The ROE is the cost rate applied to the equity capital in the ROR. The ROR for a regulated utility is the weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q. 55 How is the required ROE determined?

A. 55 The required ROE is estimated by using one or more analytical techniques that rely on market-based data to quantify investor expectations regarding required equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company (in the context of the proxy group), in particular.

Q. 56 What methods did you use to determine Southwest Gas's ROE?

A. 56 I considered the results of the Constant Growth DCF model, the CAPM model, the ECAPM model and the Bond Yield Plus Risk Premium methodology. As discussed in more detail below, a reasonable ROE

estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

A. Importance of Multiple Analytical Approaches

Q. 57 Why is it important to use more than one analytical approach?

A. 57 Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all of the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[49] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski [50] recommend the CAPM, DCF, and Bond Yield Plus Risk Premium approaches.

Q. 58 Is it important given the current market conditions to use more than one analytical approach?

A. 58 Yes. Low interest rates and the effects of the investor "flight to quality" can be seen in high utility share valuations, relative to historical levels and

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[49] Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed. (New York: McKinsey & Company, Inc., 2000), at 214.

[50] Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed. (Orlando: Dryden Press, 1994), at 341.

relative to the broader market. Higher utility stock valuations produce lower dividend yields and result in lower cost of equity estimates from a DCF analysis. Low interest rates also affect the CAPM in two ways: (1) the risk-free rate is lower, and (2) because the market risk premium is a function of interest rates, (i.e., it is the return on the broad stock market less the risk-free interest rate), the risk premium should move higher when interest rates are lower. Therefore, it is important to use multiple analytical approaches to moderate the impact that the current low interest rate environment is having on the ROE estimates for the proxy group and, where possible, consider using projected market data in the models to estimate the return for the forward-looking period.

Q. 59 Has the Commission recognized that it is important to consider the results of multiple ROE estimation models?

A. 59 Yes. In its order for UNS Electric in Docket No. E-04204A-15-0142, the Commission authorized an ROE of 9.50 percent which the Commission noted was supported by the evidence in the case.[51] Specifically, the Commission noted that:

> [t]he estimates for the Cost of Equity in this proceeding range from 8.75 percent by TASC to UNSE's 10.35 percent. The agreed 9.5 percent is within the range and supported by the evidence. Although UNSE's financial metrics, such as its bond rating and capitalization, have improved since its last rate case due to the Financial support of its parent Fortis, interest rates are rising, and UNSE faces significant risks from challenging economic conditions in its service area, declining energy sales, and a current rate design that requires substantial modification in order to comply with traditional

[51] Decision No. 75697 (August 18, 2016), at 18.

principles of cost causation. A Cost of Equity of 9.5 percent is not unreasonable in this case.[52]

Therefore, the Commission considered the results of the various models presented by the parties in the case such as the DCF, CAPM and Risk Premium and capital market conditions as the Commission noted that interest rates were rising at the time of the decision. Thus, the Commission has recognized the importance of considering the results of each model presented in the rate case and market conditions since changes in market conditions can affect the model results.

Q. 60 What are your conclusions about the results of the DCF and CAPM models?

A. 60 Recent market data that is used as the basis for the assumptions for both models have been affected by market conditions. As a result, relying exclusively on historical assumptions in these models, without considering whether these assumptions are consistent with investors' future expectations, will underestimate the cost of equity that investors would require over the period that the rates in this case are to be in effect. In this instance, relying on the historically low dividend yields that are not expected to continue over the period that the new rates will be in effect will underestimate the ROE for Southwest Gas.

Furthermore, as discussed in Section IV above, long-term interest rates have increased since August 2020 and this trend is expected to continue over the near-term as the economy enters the recovery phase of the business cycle. Therefore, the use of current averages of Treasury bond

[52] Ibid.

yields as the estimate of the risk-free rate in the CAPM is not appropriate since recent market conditions are not expected to continue over the long-term. Instead, analysts should rely on projected yields of Treasury Bonds in the CAPM. The projected Treasury Bond yields results in CAPM estimates that are more reflective of the market conditions that investors expect during the period that the Company's rates will be in effect.

B. Constant Growth DCF Model

Q. 61 Please describe the DCF approach.

A. 61 The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_\infty}{(1+k)^\infty} \qquad [2]$$

Where P0 represents the current stock price, D1…D∞ are all expected future dividends, and k is the discount rate, or required ROE. Equation [2] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [1]$$

Equation [1] is often referred to as the Constant Growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q. 62 What assumptions are required for the Constant Growth DCF model?

A. 62 The Constant Growth DCF model requires the following four assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are violated, considered judgment and/or specific adjustments should be applied to the results.

Q. 63 What market data did you use to calculate the dividend yield in your Constant Growth DCF model?

A. 63 The dividend yield in my Constant Growth DCF model is based on the proxy companies' current annualized dividend and average closing stock prices over the 30-, 90-, and 180-trading days ended October 31, 2021.

Q. 64 Why did you use 30-, 90-, and 180-day averaging periods?

A. 64 In my Constant Growth DCF model, I use an average of recent trading days to calculate the term P_0 in the DCF model to ensure that the ROE is not skewed by anomalous events that may affect stock prices on any given trading day. The averaging period should also be reasonably representative of expected capital market conditions over the long-term. However, the averaging periods that I use rely on historical data that are not consistent with the forward-looking market expectations. Therefore, the results of my Constant Growth DCF model using historical data may underestimate the forward-looking cost of equity. As a result, I place more weight on the mean to mean-high results produced by my Constant Growth DCF model.

Q. 65 Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A. 65 Yes, I did. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected first-year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. 66 Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A. 66 In its Constant Growth form, the DCF model (*i.e.*, Equation [2]) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, one must assume that the payout ratio remains constant and that earnings per share, dividends per share and book value per share all grow at the same constant rate. Over the long run, however, dividend growth can only be sustained by earnings growth. Therefore, it is important to incorporate a variety of sources of long-term earnings growth rates into the Constant Growth DCF model.

Q. 67 Which sources of long-term earnings growth rates did you use?

A. 67 My Constant Growth DCF model incorporates three sources of long-term earnings growth rates: (1) Zacks Investment Research; (2) Thomson First Call (provided by Yahoo! Finance); and (3) Value Line Investment Survey.

Q. 68 How did you calculate the range of results for the Constant Growth DCF Models?

A. 68 I calculated the low result for my DCF models using the minimum growth rate (*i.e.*, the lowest of the First Call, Zacks, and Value Line earnings growth rates) for each of the proxy group companies. Thus, the low result reflects the minimum DCF result for the proxy group. I used a similar approach to calculate the high results, using the highest growth rate for each proxy group company. The mean results were calculated using the average growth rates from all sources.

Q. 69 What were the results of your DCF analyses?

A. 69 Figure 11 summarizes the results of my DCF analyses. As shown in Figure 11, the median DCF results range from 10.06 percent to 10.12 percent, and the median high results (using the high growth rate scenarios) are in the range of 10.88 percent to 11.19 percent. The median low results range from 8.83 percent to 9.23 percent. However, given the expected underperformance of utility stocks and thus the likelihood that the DCF model is understating the cost of equity, I do not believe it is appropriate to consider the median low DCF results at this time.

Figure 11: Median Discounted Cash Flow Results[53]

	Mean Low	Mean	Mean High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%

[53] *See* Exhibit No._(AEB-3).

Q. 70 What are your conclusions about the results of the DCF models?

A. 70 As discussed previously, one primary assumption of the DCF models is a constant P/E ratio. That assumption is heavily influenced by the market price of utility stocks. Since utility stocks are expected to underperform the broader market over the near-term as interest rates increases, it is important to consider the results of the DCF models with caution. This means that the results of the current DCF models are below where they would otherwise be under more normal market conditions. Therefore, while I have given weight to the results of the Constant Growth DCF model, my recommendation also gives weight to the results of other ROE estimation models.

C. CAPM Analysis

Q. 71 Please briefly describe the Capital Asset Pricing Model.

A. 71 The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security. This second component is the product of the market risk premium and the Beta coefficient, which measures the relative riskiness of the security being evaluated.

The CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market ROE;

β = Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market.

In this specification, the term (rm – rf) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Non-diversifiable risk is measured by Beta, which is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \quad [4]$$

The variance of the market return (i.e., Variance (r_m)) is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the general market (i.e., Covariance (r_e, r_m)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, Beta represents the risk of the security relative to the general market.

Q. 72 What risk-free rate did you use in your CAPM analysis?

A. 72 I relied on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds of 2.13 percent;[54] (2) the projected 30-year Treasury yield for Q1 2022 – Q1 2023 of 2.50 percent;[55] and (3) the average projected 30-year Treasury bond yield for the period 2023 through 2027 of 3.50 percent.[56]

[54] Bloomberg Professional as of October 31, 2021.
[55] Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2.
[56] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.

Q. 73 Would you place more weight on one of these scenarios?

A. 73 Yes. Based on current market conditions, I place more weight on the results of the projected yields on the 30-year Treasury bonds. As discussed previously, the estimation of the cost of equity in this case should be forward-looking because it is the return that investors would receive over the future rate period. Therefore, the inputs and assumptions used in the CAPM analysis should reflect the expectations of the market at that time. While I have included the results of a CAPM analysis that relies on the current average risk-free rate, this analysis fails to take into consideration the effect of the market's expectations for interest rate increases on the cost of equity.

Q. 74 What Beta coefficients did you use in your CAPM analysis?

A. 74 As shown on Exhibit No._(AEB-4), I used the Beta coefficients for the proxy group companies as reported by Bloomberg and Value Line. The Beta coefficients reported by Bloomberg were calculated using ten years of weekly returns relative to the S&P 500 Index. Value Line's calculation is based on five years of weekly returns relative to the New York Stock Exchange Composite Index.

Additionally, as shown in Exhibit No._(AEB-5), I also considered an additional CAPM analysis which relies on the long-term average utility Beta coefficient for the companies in my proxy group. The long-term average utility Beta coefficient was calculated as an average of the Value Line Beta coefficients for the companies in my proxy group from 2011 through 2020.

Q. 75 How did you estimate the market risk premium in the CAPM?

A. 75 I estimated the Market Risk Premium (MRP) as the difference between the implied expected equity market return and the risk-free rate. The expected return on the S&P 500 Index is calculated using the Constant Growth DCF model discussed earlier in my Direct Testimony for the companies in the S&P 500 Index. In my calculation of the market return, I included companies in the S&P 500 that: 1) had either a dividend yield or Value Line long-term earnings projection; and 2) had a Value Line long-term earnings growth rate that was greater than 0 percent and less than or equal to 20 percent. As shown in Exhibit AEB-7, based on an estimated market capitalization-weighted dividend yield of 1.75 percent and a weighted long-term growth rate of 10.79 percent, the estimated required market return for the S&P 500 Index is 12.64 percent.

Q. 76 Have other regulators endorsed the use of a forward-looking MRP?

A. 76 Yes, they have. For example, the Minnesota Department of Commerce (Minnesota DOC) relied on a forward-looking market return (estimated using a Constant Growth DCF model) in the CAPM for Great Plains Natural Gas Company (Docket No. G-004/GR-19-511). Specifically, the Minnesota DOC used the dividend yield reported by S&P for the S&P 500 and the three- to five-year earnings growth estimate for the State Street Global Advisors S&P 500 exchange traded fund (ETF), which resulted in a projected market return of 13.44 percent.[57] The Minnesota DOC has historically relied on the Constant Growth DCF model to estimate a

[57] Docket No. G-004/GR-19-511, In the Matter of the Petition By Great Plains Natural Gas Co., a Division of Montana-Dakota Utilities Co., for Authority to Increase Natural Gas Rates in Minnesota (March 3, 2020), at Ex. DER-9, CMA-S-8.

forward-looking market return for the CAPM, and that market return has been considered by the Minnesota Public Utilities Commission (Minnesota PUC) in prior proceedings.[58] In addition, the Federal Energy Regulatory Commission (FERC) has relied on a forward-looking market return estimated using a Constant Growth DCF model) in recent Opinions including Opinion No. 569.[59]

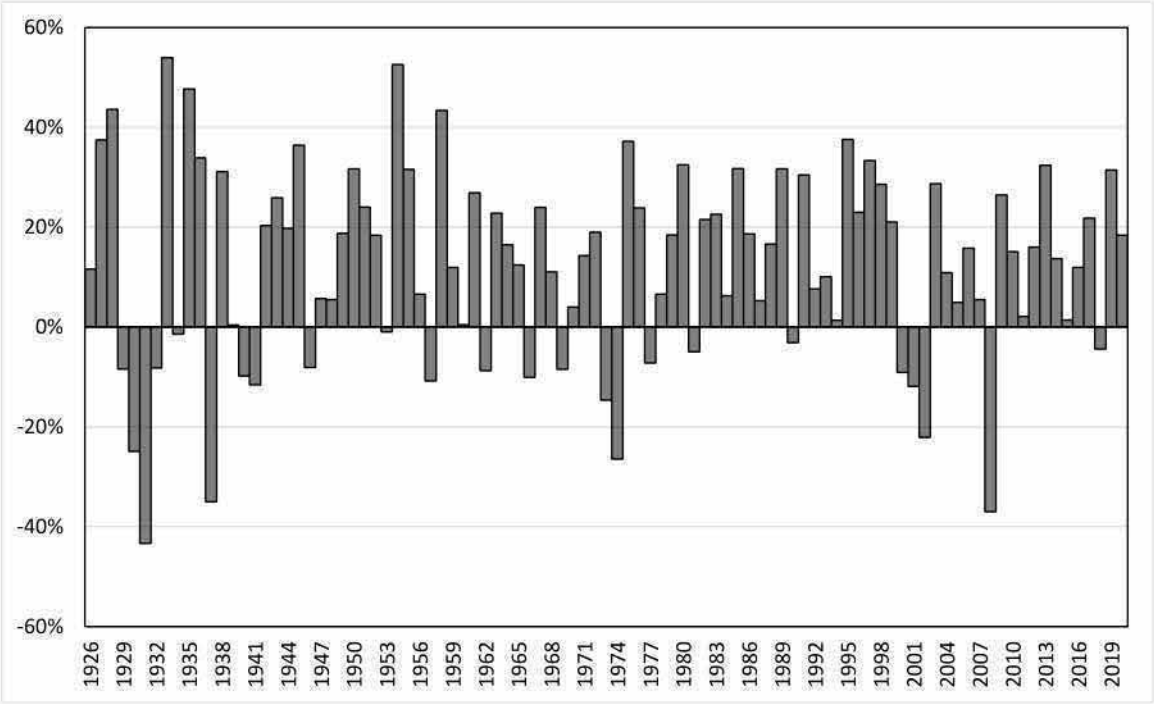
Q. 77 How does the current expected market return of 12.64 percent compare to observed historical market returns?

A. 77 Given the range of annual equity returns that have been observed over the past 94 years (shown in Figure 12 below), a current expected return of 12.64 percent is not unreasonable. In 48 of the past 94 years (i.e., more than half of all observations), the realized total equity return was at least 12.64 percent or greater.

[58] *See* Docket No. E017/GR-15-1033, Findings of Fact, Conclusions and Order, May 1, 2017, at 54-56; and Docket No. E015/GR-16-664, Findings of Fact, Conclusions and Order, March 12, 2018, at 60-61.

[59] Federal Energy Regulatory Commission Opinion 569, Order on Briefs, Rehearing and Initial Decision, November 21, 2019, para 260 through 273.

Figure 12: Realized U.S. equity market returns (1926-2020)[60]



Q. 78 Is it reasonable to rely on a single stage DCF model to calculate the market return used to estimate the market risk premium?

A. 78 Yes. This issue was specifically addressed by the FERC in Opinion 569. In addition to citing to academic articles where the return on the S&P 500 was based on a single stage DCF model using 5-year IBES growth rates,[61] the FERC stated that:

> Because dividend paying members of the S&P 500 constitute a large portfolio of stocks, they include companies at all stages of growth. Some are relatively young companies with new products that have not yet fully penetrated the markets and thus are likely to have quite high IBES growth rates. However other companies are mature companies with limited growth potential which are likely to have quite low IBES growth rates. The

[60] Depicts total annual returns on large company stocks, as reported in the 2021 Duff & Phelps SBBI Yearbook.

[61] Federal Energy Regulatory Commission Opinion 569, Order on Briefs, Rehearing and Initial Decision, November 21, 2019, para 260 through 273.

inclusion of the IBES growth rates of such mature companies in the overall average IBES growth rate of all the dividend paying members of the S&P 500 performs the same role as the inclusion of the long-term GDP growth rate in the DCF analysis of a single utility: it reflects the fact that companies cannot maintain the indefinitely high growth rates of their early years. Thus, using the IBES growth rates of all dividend paying S&P 500 companies, without using a long-term GDP growth projection can reasonably reflect investors' consensus expectation about the market as a whole.[62]

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[W]hile it may be unreasonable to expect an individual company to have a high short-term growth rate in perpetuity, the same cannot be true for a broad representative market index that is regularly updated to include new companies. Put differently, a portfolio of companies behaves differently than an individual company.[63]

Q. 79 Did you consider another form of the CAPM in your analysis?

A. 79 Yes, I did. I have also considered the results of an Empirical CAPM ("ECAPM")[64] in estimating the cost of equity for Southwest Gas. The ECAPM calculates the product of the adjusted Beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [5]$$

Where:

[62] *Id.*, at para 265.
[63] *Id.*, at para 266.
[64] *See* e.g., Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 189.

k_e = the required market ROE;

β = Adjusted Beta coefficient of an individual security;

rf = the risk-free rate of return; and

r_m = the required return on the market as a whole.

In essence, the Empirical form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low Beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted Betas; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[65]

As with the CAPM, my application of the ECAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted earlier as the risk-free rate, and the Bloomberg, Value Line and long-term average Beta coefficients.

Q. 80 What are the results of your CAPM and ECAPM analyses?

A. 80 As shown in Figure 13 (*see* also Exhibit No._(AEB-4) and Exhibit No._(AEB-5)), my traditional CAPM analysis produces a range of returns from 9.66 percent to 11.59 percent. The ECAPM analysis results range from 10.41 percent to 11.85 percent.

[65] *Id.*, at 191.

Figure 13: CAPM and ECAPM Results

	Current Risk-Free Rate (2.13%)	Q1 2022–Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
CAPM			
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-term Avg. Beta	9.66%	9.77%	10.05%
ECAPM			
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-term Avg. Beta	10.41%	10.49%	10.70%

D. Bond Yield Plus Risk Premium Analysis

Q. 81 Please describe the Bond Yield Plus Risk Premium approach.

A. 81 In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Risk premium approaches, therefore, estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I used actual authorized returns for natural gas utility companies as the historical measure of the cost of equity to determine the risk premium.

Q. 82 Are there other considerations that should be addressed in conducting this analysis?

A. 82 Yes. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach)

is inversely related to the level of interest rates. That is, as interest rates increase (decrease), the equity risk premium decreases (increases). Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. Such an analysis can be developed based on a regression of the risk premium as a function of U.S. Treasury bond yields. If we let authorized ROEs for natural gas utilities serve as the measure of required equity returns and define the yield on the long-term U.S. Treasury bond as the relevant measure of interest rates, the risk premium simply would be the difference between those two points.[66]

Q. 83 Is the Bond Yield Plus Risk Premium analysis relevant to investors?

A. 83 Yes. Investors are aware of ROE awards in other jurisdictions, and they consider those awards as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because my Bond Yield Plus Risk Premium analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors.

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[66] *See e.g.*, S. Keith Berry, *Interest Rate Risk and Utility Risk Premia during 1982-93*, Managerial and Decision Economics, Vol. 19, No. 2 (March, 1998), in which the author used a methodology similar to the regression approach described below, including using allowed ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates. *See also* Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholders Required Rates of Return*, Financial Management, Spring 1986, at 66.

Q. 84 What did your Bond Yield Plus Risk Premium analysis reveal?

A. 84 As shown in Figure 14 below, from 1992 through October 2021, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + b(T) \text{ [6]}$$

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year U.S. Treasury bonds)

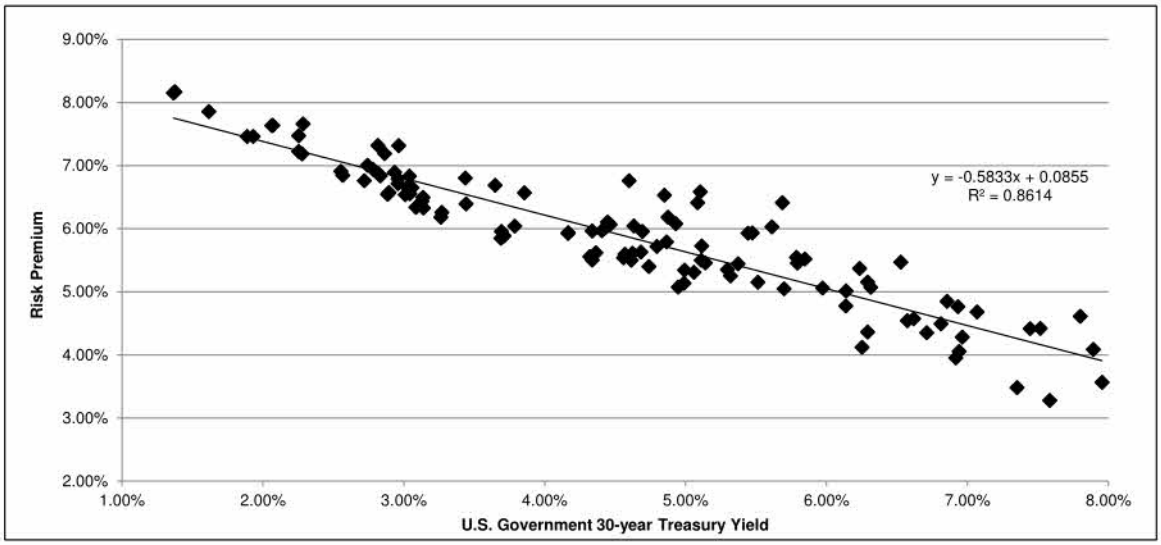
a = intercept term

b = slope term

T = 30-year U.S. Treasury bond yield

Data regarding allowed ROEs were derived from 700 natural gas utility rate cases from 1992 through October 2021 as reported by Regulatory Research Associates ("RRA"). This equation's coefficients were statistically significant at the 99.00 percent level.

Figure 14: Risk Premium Results



As shown on Exhibit No._(AEB-8), based on the current 30-day average of the 30-year U.S. Treasury bond yield (i.e., 2.03 percent), the risk premium would be 7.37 percent, resulting in an estimated ROE of 9.40 percent. Based on the near-term (Q1 2022 – Q1 2023) projections of the 30-year U.S. Treasury bond yield (i.e., 2.50 percent), the risk premium would be 7.09 percent, resulting in an estimated ROE of 9.59 percent. Based on longer-term (2023-2027) projections of the 30-year U.S. Treasury bond yield (i.e., 3.50 percent), the risk premium would be 6.51 percent, resulting in an estimated ROE of 10.01 percent.

Q. 85 How did the results of the Bond Yield Risk Premium inform your recommended ROE for Southwest Gas?

A. 85 I have considered the results of the Bond Yield Risk Premium analysis in setting my recommended ROE for Southwest Gas. As noted above, investors consider the ROE award of a company when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions. The risk premium analysis takes into account this

comparison by estimating the return expectations of investors based on the current and past ROE awards of natural gas utilities across the US.

VII. REGULATORY AND BUSINESS RISKS

Q. 86 Do the mean DCF, CAPM, and ECAPM results for the proxy group, taken alone, provide an appropriate estimate of the cost of equity for Southwest Gas?

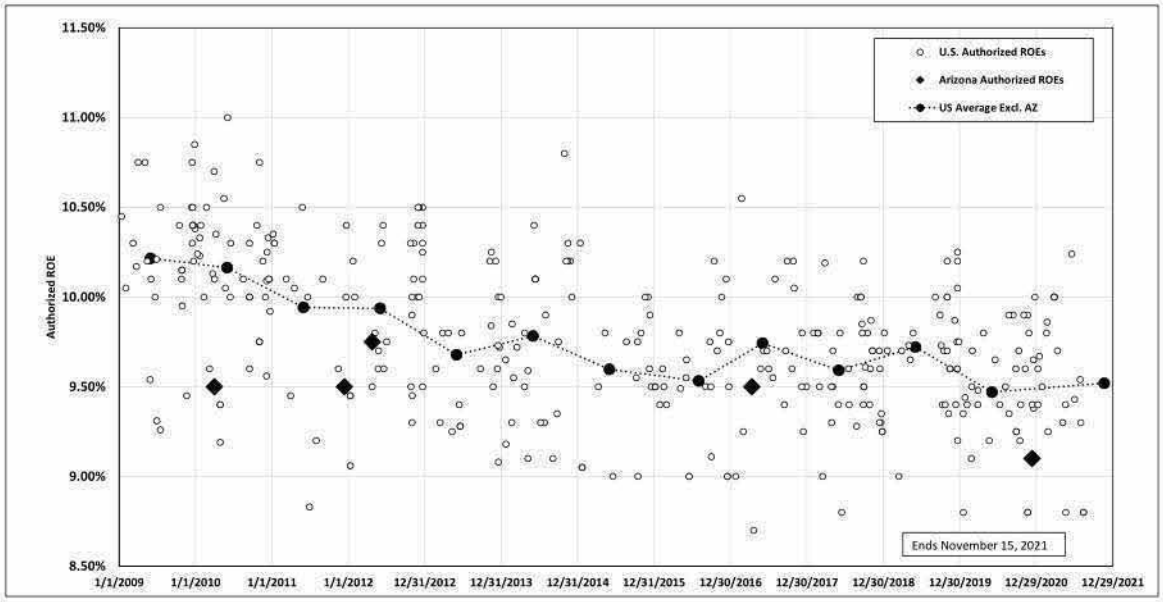
A. 86 No. These results provide only a range of the appropriate estimate of the Company's cost of equity. There are several additional factors that must be taken into consideration when determining where the Company's cost of equity falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Arizona Allowed ROEs

Q. 87 How do recent returns in Arizona compare to the authorized returns in other jurisdictions?

A. 87 As shown in Figure 15, the recent authorized ROEs established by the Arizona Commission have been well below the national average. Specifically, the authorized returns for natural gas utilities in Arizona have been at the bottom of the range produced by the authorized ROEs from other state jurisdictions. The Commission authorized an ROE of 9.10 percent in Decision No. 77850 for Southwest Gas in December 2020 which was significantly below the average authorized ROE of 9.52 percent for natural gas utilities from January 1, 2021, through November 19, 2021.

Figure 15: Comparison of Arizona and U.S. Authorized Natural Gas Returns



Q. 88 Considering the return on the fair value increment awarded to natural gas utilities in Arizona, are the authorized ROEs in Arizona still below the average authorized ROE for natural gas utilities in other jurisdictions across the U.S.?

A. 88 Yes. For example, in Decision No. 77850 for Southwest Gas, the Commission noted that the authorized ROE of 9.10 percent included a reduction of 20 basis points to account for the reduced risk associated with awarding a return on the fair value increment.[67] Thus, the Commission found the ROE for Southwest Gas to be 9.30 percent excluding the fair value return increment. However, an ROE of 9.30 percent is still 18 basis points below the authorized ROE for natural gas utilities from January 1, 2020, through August 31, 2021, of 9.48 percent.

[67] Decision No. 77850 (December 17, 2020), at 70.

Q. 89 Do investors consider the relative returns awarded in jurisdictions across the U.S.?

A. 89 Yes, they do. In fact, in a recent article from Barron's, an equity analyst from KeyBanc Capital Markets, Inc. recommended buying shares in Duke Energy as opposed to Consolidated Edison for reasons which included that the regulatory outcomes in the jurisdictions where Duke Energy operates were more favorable. Specifically, KeyBank analyst Sophie Karp noted:

> The regulatory environment is favorable in Duke's major markets: the Carolinas, Florida, and Indiana. "There's not so much of the utility bashing that goes on down there as it is in New York routinely," says KeyBanc's Karp. "So they have more constructive outcomes. They have better returns." A starting point of below-average customer bills helps. So does healthy population growth. New York has neither.[68]

Q. 90 Is there any reason that the Commission should be concerned about authorizing equity returns that are at the low end of the range established by other state regulatory jurisdictions?

A. 90 Yes, for several reasons. First, as noted previously, Arizona utility subsidiaries must compete for capital within their own corporate structures, which must in turn compete for capital with other utilities and businesses. Since investors consider the relative returns of state jurisdictions in their investment decisions, placing Southwest Gas at the low end of authorized ROEs outside Arizona over the longer term can negatively impact the Company's access to capital. Second, as noted in Sections IV and VI, the economy is in the expansion phase of the business cycle; thus, interest

[68] Hough, Jack. 3 Electric Utility Stocks to Give Your Portfolio a Jolt. Barron's, 26 July 2021, www.barrons.com/articles/-utility-stocks-duke-energy-51627080936?mod=hp_columnists.

rates are expected to increase, and utilities are expected to underperform over the near-term. If utility stocks underperform over the near-term then utility dividend yields will increase resulting in higher estimates of the ROE results produced by the DCF model. Therefore, the current results of the DCF model will underestimate investors' expected ROE over the period in which Southwest Gas's rates will be in effect. As a result, it is important that the Commission consider the results of alternative methods such as the forward looking CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses and the returns that have been authorized by other jurisdictions where Southwest Gas operates and other natural gas utilities across the U.S.

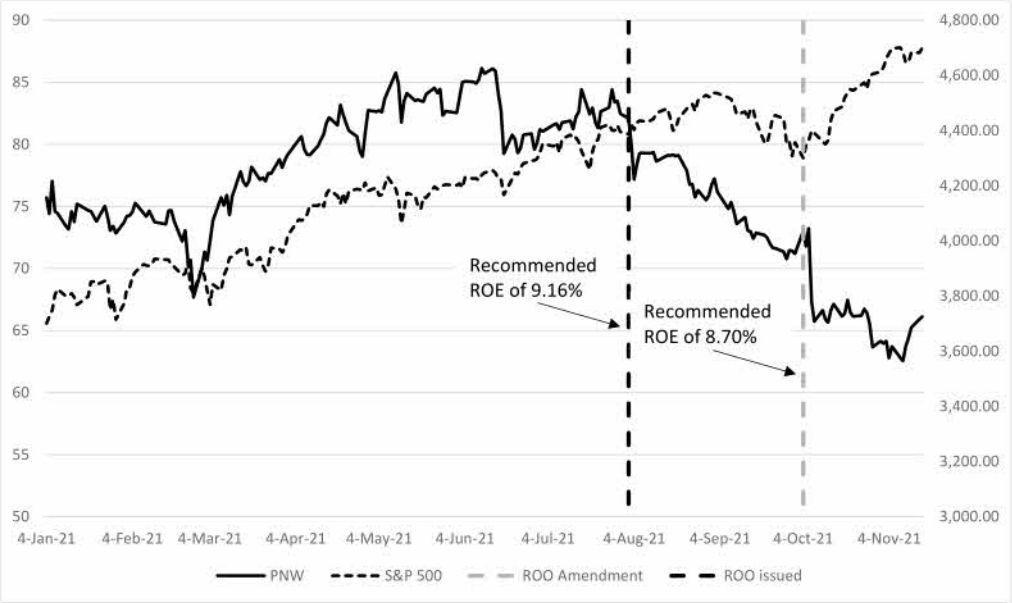
Q. 91 How has the market responded to the returns that have recently been authorized by the Arizona Commission?

A. 91 The market has had a strong negative response to recent returns authorized by the ACC, including the most recent ROE determination of an 8.70 percent ROE for Arizona Public Service Company, in Decision No. 78313.

S&P Global Market Intelligence (Regulatory Research Associates) noted that this decision was "among the lowest ROEs RRA had encountered in its coverage of vertically integrated electric utilities in the past 30 years".

As shown in Figure 16 below, shares of Pinnacle West stock, the parent company of APS, have experienced a significant decline since the Commission first introduced its proposal to authorize an ROE that was well below the national average.

Figure 16: Pinnacle West Capital Stock Price vs. S&P 500 utilities.



Finally, Standard & Poor's downgraded Pinnacle West Capital's long-term from A- to BBB+ and put the company on credit watch negative following the Commission's November vote which officially authorized the 8.70 percent ROE.[69] In October, prior to the final commission vote on the APS proceeding, Moody's placed the ratings of Pinnacle West and APS on review for downgrade, prompted by the "deteriorating regulatory framework as evidenced by last week's hearings where the Arizona Corporation Commission (ACC) voted to lower the utility's ROE and to consider cost recovery disallowances."[70]

[69] S&P Global Market Intelligence, November 9, 2021.
[70] Moody's Investor Service, Rating Action: Moody's places Pinnacle West and Arizona Public Service ratings on review for downgrade, October 12, 2021.

Q. 92 What are your conclusions surrounding the recently authorized ROEs in Arizona?

A. 92 The market response to the recently authorized ROEs in Arizona strongly suggests that the rate case determinations, including the authorized ROEs, do not meet the *Hope* and *Bluefield* standards and the most recent Commission decisions have resulted in a perception by investors of significantly increased regulatory risk in Arizona.

B. Flotation Cost

Q. 93 What are flotation costs?

A. 93 Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

Q. 94 Why is it important to consider flotation costs in the allowed ROE?

A. 94 A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. 95 Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. 95 Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and, therefore, are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority

of a utility's flotation cost is incurred prior to the test year but remains part of the cost structure that exists during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, it is irrelevant whether an issuance occurs during the test year or is planned for the test year because failure to allow recovery of past flotation costs may deny Southwest Gas the opportunity to earn its required ROR in the future.

Q. 96 Please provide an example of why a flotation cost adjustment is necessary to compensate investors for the capital they have invested.

A. 96 Suppose Southwest Gas Holdings issues stock with a value of $100, and an equity investor invests $100 in Southwest Gas Holdings in exchange for that stock. Further suppose that, after paying the flotation costs associated with the equity issuance, which include fees paid to underwriters and attorneys, among others, Southwest Gas Holdings ends up with only $97 of issuance proceeds, rather than the $100 the investor contributed. Southwest Gas Holdings invests that $97 in plant used to serve its customers, which becomes part of rate base. Absent a flotation cost adjustment, the investor will thereafter earn a return on only the $97 invested in rate base, even though she contributed $100. Making a small flotation cost adjustment gives the investor a reasonable opportunity to earn the authorized return, rather than the lower return that results when the authorized return is applied to an amount less than what the investor contributed.

Q. 97 Is the date of Southwest Gas Holdings' last issued common equity important in the determination of flotation costs?

A. 97 No. As shown in Exhibit No._(AEB-10), Southwest Gas Holdings closed on an equity issuance of approximately $259 million (for a total of 3.57 million shares of common stock) in November 2018. The vintage of the issuance, however, is not particularly important because the investor suffers a shortfall in every year that he should have a reasonable opportunity to earn a return on the full amount of capital that he has contributed. Returning to my earlier example, the investor who contributed $100 is entitled to a reasonable opportunity to earn a return on $100 not only in the first year after the investment, but in every subsequent year in which he has the $100 invested. Leaving aside depreciation, which is dealt with separately, there is no basis to conclude that the investor is entitled to earn a return on $100 in the first year after issuance, but thereafter is entitled to earn a return on only $97. As long as the $100 is invested, the investor should have a reasonable opportunity to earn a return on the entire amount.

Q. 98 Is the need to consider flotation costs recognized by the academic and financial communities?

A. 98 Yes. The need to reimburse shareholders for the lost returns associated with equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair ROR. According to Dr. Shannon Pratt:

> Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm's required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[71]

Q. 99 How did you calculate the flotation costs for Southwest Gas?

A. 99 My flotation cost calculation is based on the costs of issuing equity that were incurred by Southwest Gas Holdings in its most recent common equity issuance. These issuance costs were applied to my proxy group. Applying the actual issuance costs for Southwest Gas Holdings provided in Exhibit No._(AEB-10), to the DCF analysis, the flotation costs are estimated to be 0.15 percent (i.e., 15 basis points).

Q. 100 Do your final results include an adjustment for flotation cost recovery?

A. 100 No. I did not make an explicit adjustment for flotation costs to any of my quantitative analyses. Rather, I provide the above result for consideration in my recommended ROE, which reflects the range of results from my Constant Growth DCF, CAPM, ECAPM and Risk Premium.

[71] Shannon P. Pratt, Cost of Capital Estimation and Applications, Second Edition, at 220-221.

C. Capital Expenditures

Q. 101 Please summarize the Company's capital expenditure requirements.

A. 101 The Company's current projections for 2022 through 2026 include approximately $1.7 billion in capital investments for the period in Arizona.[72] Based on the Company's net utility plant in Arizona of approximately $2.94 billion as of December 31, 2020,[73] the anticipated capital expenditures are approximately 57.89 percent of Southwest Gas's net utility plant as of December 31, 2020.

Q. 102 How is the Company's risk profile affected by their substantial capital expenditure requirements?

A. 102 As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q. 103 Do credit rating agencies recognize the risks associated with elevated levels of capital expenditures?

A. 103 Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an

[72] Data provided by Southwest Gas for Capital Expenditures 2022-2026.
[73] Data provided by Southwest Gas.

> important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[74]

Therefore, to the extent that Southwest Gas's rates do not permit the opportunity to recover its capital investments on a regular basis, the Company will face increased recovery risk and thus increased pressure on its credit metrics.

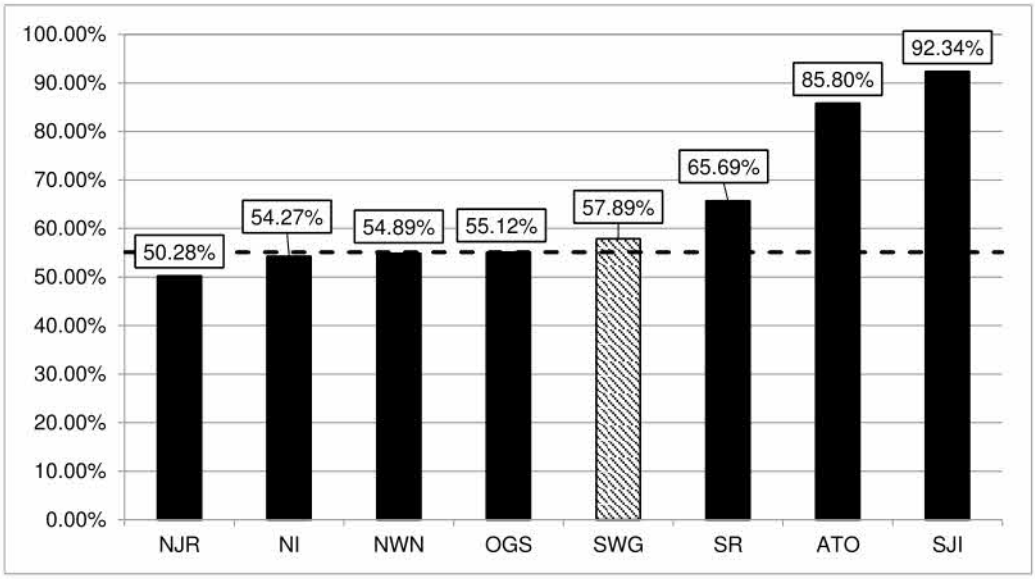
Q. 104 How do Southwest Gas's capital expenditure requirements compare to those of the proxy group companies?

A. 104 As shown in Exhibit No._(AEB-11), I calculated the ratio of expected capital expenditures to net utility plant for Southwest Gas's natural gas operations in Arizona and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2022-2026 by its total net utility plant as of December 31, 2020. As shown in Exhibit No._(AEB-11) (*see* also Figure 17 below), Southwest Gas's ratio of capital expenditures as a percentage of net utility plant is 57.89 percent, which is

[74] S&P Global Ratings, "Assessing U.S. Investor-Owned Utility Regulatory Environments," August 10, 2016, at 7.

approximately 1.05 times the median for the proxy group companies of 55.12 percent, generally consistent with the proxy group.

Figure 17: Comparison of Capital Expenditures – Proxy Group Companies



Q. 105 Have credit rating agencies commented on the size of Southwest Gas's capital spending program?

A. 105 Yes. Moody's has noted the sizeable capital spending program at Southwest Gas and has indicated that the Company's credit metrics have weakened as a result which Moody's expects to persist in the coming years. Specifically, Moody's writes:

> Southwest Gas' capital expenditures remain robust, with approximately $700 million planned annually over the next two years, close to the annual average of about $720 million over the last three years. The utility intends to finance this capital spending with operating cash flow and a mix of debt and equity. However, largely debt financed cash shortfalls over the 2018-2019 period, together with cash flow that has not kept pace with this higher debt, have resulted in a deterioration in financial metrics that we expect to persist. The utility's CFO preW/C to debt ratio has fallen from 20% in 2017

to below 15% in both 2019 and 2020, and we do not expect it to recover materially in coming years.[75]

Q. 106 Does Southwest Gas have a comprehensive capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A. 106 Currently, Southwest Gas has one capital tracking mechanism, the Customer-Owned Yard Line (COYL) replacement program. The COYL program allows Southwest Gas to recover the annual revenue requirement associated with repairing and replacing the customer-owned exterior service line which connects the meter to the customer's premise. However, it is important to note that the majority of the costs included in Southwest Gas's capital expenditures plan do not qualify for cost recovery through the COYL. It is my understanding that the capital expenditures that would be covered under the COYL represents less than 3.00 percent of projected capital expenditures for 2022 through 2026 in Arizona. As a result, Southwest Gas still depends on general rate case filings for the majority of its capital cost recovery. Additionally, as shown in Exhibit No._(AEB-12), 76 percent of the proxy group utilities recover costs through capital tracking mechanisms. Therefore, Southwest Gas arguably has somewhat greater risk from a capital expenditure standpoint than the proxy group companies.

[75] Moody's Investors Service, Rating Action: Moody's downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable, January 29, 2021.

Q. 107 What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A. 107 The Company's capital expenditure requirements as a percentage of net utility plant are significant and are anticipated to continue at this level over the next few years. Credit rating agencies have noted the Company's significant capital expenditure plan which is expected to weaken credit metrics in the coming years. Although Southwest Gas's COYL program is designed to recover a small portion of these expenditures, the majority of operating subsidiaries held by the proxy group also have a capital tracking mechanism, meaning that this risk mitigation is already reflected in the proxy group companies. Further 97 percent of Southwest Gas's capital expenditures are not funded through a capital cost recovery mechanism, like the COYL; as such, the Company is still dependent on general rate case filings to recover the majority of its capital expenditures. My conclusion is that Southwest Gas's significant capital expenditure plan results in a risk profile that is greater than that of the proxy group and supports an ROE toward the higher end of the reasonable range of ROEs.

D. Regulatory Risk

Q. 108 Please explain how the regulatory environment affects investors' risk assessments.

A. 108 The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory authorities recognize that because utility operations are capital intensive,

regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of investors and customers. Utilities must finance their operations and require the opportunity to earn a reasonable return on their invested capital to maintain their financial profiles. Southwest Gas is no exception. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q. 109 Please explain how credit rating agencies consider regulatory risk in establishing a company's credit rating.

A. 109 Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[76]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[77] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[78]

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[76] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 4.

[77] Standard & Poor's Global Ratings, Ratings Direct, U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others, June 25, 2018, at 2.

[78] *Id.*, at 1.

Q. 110 How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. 110 The regulatory environment can significantly affect both the access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations." [79] Moody's further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[80]

Q. 111 Have you conducted any analysis of the regulatory framework in Arizona relative to the jurisdictions in which the companies in your proxy group operate?

A. 111 Yes. I have evaluated the regulatory framework in Arizona on four factors that are important in terms of providing a regulated utility an opportunity to earn its authorized ROE. These are: 1) test year convention (i.e., forecast vs. historical); 2) method for determining rate base (i.e., average vs. year-end); 3) use of revenue decoupling mechanisms or other clauses that mitigate volumetric risk; and 4) prevalence of capital cost recovery between

[79] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 6.
[80] Ibid.

rate cases. The results of this regulatory risk assessment are shown in Exhibit No._(AEB-12) and are summarized below.

Test year convention: Southwest Gas uses a historical test year adjusted for known and measurable changes in Arizona, while approximately 60.00 percent of the operating companies held by the proxy group provide service in jurisdictions that use a fully or partially forecasted test year. Forecast test years have been relied on for several years and produce cost estimates that are more reflective of future costs which results in more accurate recovery of incurred costs and mitigates the regulatory lag associated with historical test years. As Lowry, Hovde, Getachew, and Makos explain in their 2010 report, Forward Test Years for US Electric Utilities:

> This report provides an in depth discussion of the test year issue. It includes the results of empirical research which explores why the unit costs of electric IOUs are rising and shows that utilities operating under forward test years realize higher returns on capital and have credit ratings that are materially better than those of utilities operating under historical test years. The research suggests that shifting to a future test year is a prime strategy for rebuilding utility credit ratings as insurance against an uncertain future.[81]

Rate Base: The Company's rate base in Arizona is determined based the on year-end methodology. Similarly, 60.00 percent of the operating companies held by proxy group are allowed to use year-end rate base, meaning that the rate base includes capital additions that occurred in the second half of the test year and is more reflective of net utility plant going forward.

[81] M.N. Lowry, D. Hovde, L. Getachew, and M. Makos, Forward Test Years for US Electric Utilities, prepared for Edison Electric Institute, August 2010, at 1.

Volumetric Risk: Southwest Gas does have protection against volumetric risk in Arizona, through a revenue decoupling mechanism (Delivery Charge Adjustment (DCA)) that was approved for continuation in the Company's last general rate case.[82] Similarly, 88.00 percent of the operating companies held by the proxy group have some form of protection against volumetric risk.

Capital Cost Recovery: Southwest Gas has a capital tracking mechanism to recover a limited range of capital investment costs between rate cases. As discussed above, 76 percent of the operating companies held by the proxy group have some form of capital cost recovery mechanism in place.

Q. 112 Have you developed any additional analyses to evaluate the regulatory environment in Arizona as compared to the jurisdictions in which the companies in your proxy group operate?

A. 112 Yes. I have conducted two additional analyses to compare the regulatory framework of Arizona to the jurisdictions in which the companies in the proxy group operate. Specifically, I considered two different rankings: (1) the Regulatory Research Associates ("RRA") ranking of regulatory jurisdictions; and (2) S&P's ranking of the credit supportiveness of regulatory jurisdictions.

[82] Decision No. 77850 (December 17, 2020), at 79-80.

Q. 113 Please explain how you used the RRA ratings to compare the regulatory jurisdictions of the proxy group companies with the Company's regulatory jurisdiction.

A. 113 RRA develops their ranking based on their assessment of how investors perceive the regulatory risk associated with ownership of utility securities in that jurisdiction, specifically reflecting their assessment of the probable level and quality of earnings to be realized by the State's utilities as a result of regulatory, legislative, and court actions. RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3," with nine total rankings between these categories. I applied a numeric ranking system to the RRA rankings with "Above Average/1" assigned the highest ranking ("1") and "Below Average/3" assigned the lowest ranking ("9"). As shown in Exhibit No._(AEB-13), the Arizona regulatory environment is ranked as "Below Average/1," while the proxy group is ranked "Average/2". Additionally, Arizona is one of nine Commissions[83] out of the 53 Commissions that RRA ranks to receive a rating of either "Below Average/1", "Below Average/2" or "Below Average/3".

Q. 114 How did you conduct your analysis of the S&P Credit Supportiveness?

A. 114 S&P classifies the regulatory jurisdictions into five categories ranging from "Credit Supportive" to "Most Credit Supportive" based on the level of credit

[83] The other eight Commissions are the District of Columbia Public Service Commission, the Connecticut Public Utilities Regulatory Authority, the Kansas Corporation Commission, the Montana Public Service Commission, the New Jersey Board of Public Utilities, the New Mexico Public Regulation Commission, the Public Service Commission of West Virginia and the Regulatory Commission of Alaska.

supportiveness. Similar to the RRA regulatory ranking analysis discussed above, I assigned a numerical ranking to each jurisdiction ranked by S&P, from most credit supportive ("1") to credit supportive ("5"). As shown in Exhibit No._(AEB-14), the proxy group is ranked between very credit supportive and highly credit supportive while the Arizona regulatory jurisdiction is only ranked as more credit supportive. Thus, similar to the results using the RRA regulatory rankings, Arizona is perceived as being below the average for the proxy group.

Q. 115 Have you compared the Moody's rankings of the proxy group companies and Southwest Gas?

A. 115 Yes, I have. As shown in Exhibit No. (AEB-15), I reviewed the Moody's rankings of the proxy group companies to Southwest Gas Company. I established a numerical scale for the Moody's ratings with the "Aaa" ranking equal to a "4", "Aa" equal to a "3", "A" equal to a "2" and "Baa" equal to a "1". I considered all for regulatory factors evaluated by Moody's; 1) Legislative and judicial underpinnings of the regulatory framework, 2) Consistency and Predictability of Regulation, 3) Timeliness of Recovery of Operating and Capital Costs and 4) Sufficiency of Rates and Returns. As shown in Exhibit No. __(AEB-15), Southwest Gas received the lowest average score as compared with the remainder of the proxy group at 1.50 which is midway between an A and Baa rating.

Q. 116 Has RRA provided recent commentary regarding its regulatory ranking for the Arizona?

A. 116 Yes. In May 2021, RRA updated its evaluation of the regulatory environment in Arizona and noted the following:

Regulatory Research Associates, a group within S&P Global Market Intelligence, had viewed the Arizona regulatory environment as somewhat restrictive from an investor perspective. The policies of the Arizona Corporation Commission, or ACC, which is comprised of elected officials, have generally been highly politicized, contributing to a heightened degree of risk for the state's utilities. There also continues to be a relatively high rate of turnover in the leadership ranks, with a majority of the current ACC commissioners seated for fewer than three years, further increasing uncertainty as commissioners get up to speed on complex issues. The ACC's status as a constitutionally created entity had allowed it to operate with a degree of autonomy relative to the legislature. However, this standing was upended last year when the state supreme court determined that the authority of the legislature can supersede that of the commission in non-ratemaking matters, adding a degree of uncertainty as Arizona addresses energy transition and regulatory reform issues. In addition, the recent enactment of legislation governing the appeals process for ACC decisions has introduced yet another layer of uncertainty. ACC equity return authorizations have generally approximated or have been below prevailing national averages at the time established, and the commission's most recent rate case decisions have included below average returns. Regulatory lag, associated with long rate case lead times and reliance on historical test years, remains a pervasive problem for the Arizona utilities, rendering it difficult for the utilities to earn their authorized returns. The more constructive elements of ACC regulation include the recognition of certain post-test-period adjustments in rate cases, the allowance of a premium rate of return on fair-value rate base, the adoption of decoupling mechanisms for both the electric and gas utilities, the use of riders for recovery of certain expenses and investments between rate cases, and the adoption of innovative rate designs. In order to maintain balance in the ranking system, at this time, RRA is lowering the ranking of Arizona regulation to Below Average/1 from Average/3.[84]

[84] Regulatory Research Associates, Profile of Arizona Corporation Commission, accessed July 23, 2021.

Q. 117 What are your conclusions regarding the perceived risks related to the regulatory environment in Arizona?

A. 117 As discussed throughout this section of my Direct Testimony, both Moody's and S&P have identified the supportiveness of the regulatory environment as an important consideration in developing their overall credit ratings for regulated utilities. Considering the regulatory adjustment mechanisms, many of the companies in the proxy group have more timely cost recovery through forecasted test years, year-end rate base, cost recovery trackers and revenue stabilization mechanisms than Southwest Gas has in Arizona. In addition, the RRA jurisdictional ranking and the S&P credit supportiveness ranking for Arizona indicates greater risk than the average for the proxy group. Finally, as discussed above and noted by RRA, the returns authorized in Arizona for natural gas utilities have generally been below the average authorized returns for natural gas utilities in other jurisdictions across the U.S. Therefore, the average ROE for the proxy group would understate the return on equity that an investor would require in Arizona because the risks of timely and full cost recovery are greater for Southwest Gas in Arizona than for the proxy group. For that reason, I conclude that the authorized ROE for Southwest Gas should be higher than the proxy group mean.

VIII. CAPITAL STRUCTURE

Q. 118 What capital structure has historically been used by the Commission for ratemaking purposes?

A. 118 The Commission's longstanding practice has been to rely on the permanent capital structure that is used to finance the long-term rate base

investment of the utility. This capital structure excludes short-term debt because utilities generally use short-term debt to finance working capital requirements, including construction work in progress and deferred energy balances. Short-term debt that is used to finance construction work in progress and energy balances should not be included in setting the capital structure for ratemaking purposes because the ratemaking financing structure is intended to reflect the cost of financing the long-term rate base. Including short-term debt in the calculation for long-term financing would result in an inaccurate estimate of the cost of financing long-term rate base assets.

Q. 119 Have you reviewed Commission precedent for the exclusion of short-term debt from the ratemaking capital structure?

A. 119 Yes. This precedent is discussed in Decision No. 57075 (August 1990):

> It properly excludes short-term debt from the capital structure in accordance with prior decisions. See e.g., APS, Decision Nos. 53761 (date), 55228 (October 9, 1986) 55931 (April 1, 1988); and Mountain States Telephone and Telegraph Company, Decision No. 53849 (December 22, 1983).[85]

The Commission has consistently accepted Southwest Gas's proposals in general rate case filings to exclude short-term debt from its ratemaking capital structure.

[85] Decision No. 57075, August 1990, p. 67.

Q. 120 What is the Company's current Commission-authorized ratemaking capital structure for its Arizona rate jurisdiction?

A. 120 The Company's currently authorized Arizona capital structure was established in Decision No. 77850, where the Commission adopted the following capital structure:

Southwest Gas Corporation
Arizona Rate Jurisdiction

Component	Ratio
Total Debt	48.90%
Common Equity	51.10%
Total	100.00%

Q. 121 Is the capital structure of the Company an important consideration in the determination of the appropriate ROE?

A. 121 Yes, it is. Assuming other factors equal, a higher debt ratio increases the risk to investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental risk of a higher debt ratio is more significant for common equity shareholders, who are the residual claimants on the cash flow of the Company. Therefore, the greater the debt service requirement, the less cash flow is available for common equity holders.

Q. 122 What is Southwest Gas's proposed capital structure?

A. 122 The Company proposes to establish a target capital structure consisting of 51.00 percent common equity and 49.00 percent long-term debt. The recommended target capital structure is the capital structure the Company

reasonably expects to achieve and is more representative of how it will finance rate base assets longer-term.

Q. 123 Did you conduct any analysis to determine if this requested equity ratio was reasonable?

A. 123 Yes, I did. I reviewed the Company's proposed capital structure and the capital structures of the utility operating subsidiaries of the proxy companies. Because the ROE is set based on the return that is derived from the risk-comparable proxy group, it is reasonable to look to the proxy group average capital structure to benchmark the equity ratio for the Company.

Q. 124 Please discuss your analysis of the capital structures of the proxy group companies.

A. 124 I calculated the mean proportions of common equity, long-term debt and preferred equity for the most recent year for each of the companies in the proxy group at the operating subsidiary level.[86] My analysis of the capital structures of the proxy group companies is provided in Exhibit No._(AEB-16). As shown in Exhibit No._(AEB-16), the equity ratios for the proxy group at the operating utility company level ranged from 47.44 percent to 60.04 percent, with an average of 55.56 percent.

Q. 125 What do you conclude from the analysis examining the actual equity ratios of the companies in the proxy group?

A. 125 Southwest Gas's request for a 51.00 percent equity ratio is conservative as compared with the actual ratios of the proxy companies. Utility operating

[86] Source: SNL Financial and FERC Form 1 and FERC Form 2 annual reports.

subsidiaries owned by holding companies with business characteristics similar to those of Southwest Gas have maintained average common equity ratios that are considerably higher than the 51.00 percent equity ratio that the Company is requesting. These higher proxy group equity ratios reflect a level of financial risk that is lower than the financial risk implied by the proposed 51.00 percent equity ratio for Southwest Gas.

Q. 126 Is the actual capital structure, at any point in time, solely determined by a firm's management?

A. 126 No. The management of the firm determines the appropriate target capital structure. At any point in time, the firm's actual capital structure may deviate from that target due to factors outside the control of the firm's management. In addition, a firm's capital structure is fluid and will fluctuate month-to-month, as it is impacted by numerous factors including profitability, seasonality in earnings, external financings, and dividends. The existence of actual and target capital structures, and the speed of adjustment back to the target capital structure, has been observed and is the focus of numerous empirical studies on the capital structure decisions of firms.[87]

Q. 127 What factors have negatively affected the Company's capital structure, moving it away from its target capital structure?

A. 127 The key factors that have contributed in pressuring the Company's capital structure and credit metrics are the Company's elevated capital expenditures, in combination with the negative cash flow impacts of tax

[87] For example, see Baum, C.F., Caglayan, M. & Rashid, A. Capital structure adjustments: Do macroeconomic and business risks matter?. *Empirical Economics* 53, 1463–1502 (2017) and Harry DeAngelo, Linda DeAngelo, Toni M. Whited, Capital structure dynamics and transitory debt, *Journal of Financial Economics,* Volume 99, Issue 2, 2011, p. 235-261

reform and below average authorized ROEs in two of its regulatory jurisdictions. In addition, also impacting the capital structure was the lack of any equity issuances by Southwest Gas' parent company, Southwest Gas Holdings, Inc., during the first quarter of 2020. This was due to the capital market volatility resulting from the COVID-19 pandemic, which created unfavorable conditions for Southwest Gas Holdings, Inc. to issue common through its Equity Shelf Program (ESP). During the test period in this proceeding, the capital structure was negatively impacted by the February 2021 weather event that significantly impacted natural gas costs.

Southwest Gas anticipates that capital expenditures will level off at current levels over the 2021-2023 period and that the common equity ratio will improve, through retained earnings and periodic equity contributions from the parent company, Southwest Gas Holdings, Inc., through the proceeds of additional common stock issuances.

Q. 128 Has the parent company, Southwest Gas Holdings, Inc., demonstrated a commitment to issue additional common equity to maintain the Company's strong investment grade credit ratings?

A. 128 Yes. Southwest Gas is committed to maintaining an appropriate capital structure to support its strong investment grade credit ratings. This commitment has been demonstrated by the parent company's willingness to continue to issue new equity to finance the Company's investment in utility plant and maintain its capital structure. New equity issuances to support Southwest Gas's capital structure have come primarily from the

establishment of a $300 million ESP[88] and a $500 million ESP[89]. During the test period ended August 31, 2021, Southwest Gas Holdings, Inc. sold, through the ESP an aggregate of 3,158,505 shares of common stock (1,644,427 shares under the $300 million ESP filed in May 2019 and 1,514,078 shares under the $500 million ESP filed in December 2020) in the open market at a weighted average price of $66.89 per share, resulting in proceeds to Southwest Gas Holdings, Inc. of $209,158,157 net of $2,112,709 in agent commissions. As of August 31, 2021, Southwest Gas Holdings, Inc. had $0 of common stock available for sale under the $300 million ESP filed in May 2019 and $397,132,412 under the $500 million ESP filed in December 2020. Net proceeds from the sale of shares of common stock under the ESP are intended for general corporate purposes, including the acquisition of property for the construction, completion, extension or improvement of pipeline systems and facilities located in and around the communities served by Southwest Gas Corporation. Net proceeds during the twelve months ended August 31, 2021, were

88 On May 8, 2019, Southwest Gas Holdings, Inc. filed with the Securities and Exchange Commission ("SEC") an automatic shelf registration statement on Form S-3 (File No. 333-231297), which became effective upon filing, for the offer and sale of up to $300 million of common stock from time to time in at-the-market offerings under the prospectus included therein and in accordance with the Sales Agency Agreement, dated May 8, 2019, between the Company and BNY Mellon Capital Markets, LLC (the "$300 million Equity Shelf Program").

89 On December 2, 2020, Southwest Gas Holdings, Inc. filed with the Securities and Exchange Commission ("SEC") an automatic shelf registration statement on Form S-3 (File No. 333-251074), which became effective upon filing, and included, among other registered securities, for the offer and sale of up to $500 million of common stock from time to time in at-the-market offerings under the prospectus included therein. On April 8, 2021, Southwest Gas Holdings, Inc. entered into a Sales Agency Agreement, with BNY Mellon Capital Markets, LLC and J.P. Morgan Securities LLC. (the "$500 million Equity Shelf Program").

contributed to, and reflected in the records of, Southwest Gas Corporation, as a capital contribution from the parent holding company.

Going forward, Southwest Gas Holdings, Inc. disclosed that it anticipates additional common stock issuance of $600 million to $800 million over the three-year period ending December 31, 2023. The Company has also disclosed its capital structure policy, with a target capital structure at Southwest Gas Holdings consisting of approximately 50% equity and 50% debt with a slightly higher target equity ratio at Southwest Gas Corporation. Southwest Gas Holdings, Inc. has clearly demonstrated that it has and will continue to issue additional common stock to fund capital expenditures by the Company, which are required to maintain an appropriate capital structure for its credit ratings.

Q. 129 Will the credit rating agencies view the use of the target capital structure for ratemaking purposes as being credit supportive?

A. 129 Yes. Rating agencies will analyze the effect of the authorized capital structure and return on common equity on the utility's projected financial performance. In doing so, rating agencies will look to see if the capital structure employed for ratemaking purposes is consistent with the utility's ratings and if the authorized return on common equity is comparable to other utilities are being authorized of the same credit quality. A reduction in the authorized common equity ratio will be viewed as credit negative, as well as a common equity ratio that is below the average authorized. For example, in comments by Moody's for their rationale for the Company's downgrade in January 2021, commenting on the outcome of the

Company's most recent Arizona general rate case, Moody's Investors Service ("Moody's") states:

However, the utility's allowed return on equity (ROE) was lowered to a below-industry average 9.1% from 9.5% and equity capitalization was lowered to 51.1% from 51.7%, both credit negatives.[90]

Moreover, the Company's credit metrics have declined since the Company's last general rate case, with Fitch Ratings ("Fitch") revising the Company's credit rating outlook to "Negative" on June 4, 2021. Fitch stated the following rationale for the change in the outlook: The Negative Outlook at SWG reflects expected credit metrics that are outside of stated Fitch's downgrade threshold over Fitch's forecast period following another round of rate case filings in Arizona and Nevada expected later this year. Recent rate case decisions in both states, and in particular in Arizona, were modestly disappointing and do not provide sufficient cash flow to keep leverage below negative sensitivity threshold.

Absent additional equity funding or better than projected resolution of the upcoming general rate cases that would return metrics to within the stated threshold by 2023, negative rating action is likely.[91]

The use of the Company's requested target capital structure, a capital structure it is projected to achieve by 2023, will be seen as constructive by the rating agencies and will augment the Company's efforts, via the infusion

[90] Moody's Investors Service, Ratings Action: *Moody's Downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable*, January 29, 2021, p. 1.

[91] Fitch Ratings, *Fitch Affirms SWX and SWG at 'BBB+' and 'A-'; SWG Outlook Revised to Negative from Stable*, June 4, 2021, p. 1.

of additional equity capital from the parent company resulting from stock offerings, in preserving the Company's strong investment grade credit ratings.

Q. 130 Does the use of a 51.00 percent equity ratio have any implications for your recommendation concerning the Company's ROE?

A. 130 Yes. The average equity ratio of the proxy companies is considerably higher than 51.00 percent, which means that all else equal, the proxy companies have lower financial risk than is implied by the equity ratio proposed by the Company. The use of a lower equity ratio than the proxy companies further supports a ROE at the high end of the range of results presented in Figure 18 below.

Q. 131 Will the capital structure and ROE authorized in these proceedings affect the Company's access to capital at reasonable rates?

A. 131 Yes. The level of earnings authorized by the Commission directly affects the Company's ability to fund their operations with internally generated funds. Both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally generated funds.

It also is important to realize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-run financing requirements of the assets placed into service. Those assurances, which often are measured by the relationship between internally generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. Therefore, both the ROE and capital structure are very important to debt and equity investors.

Furthermore, considering the capital market conditions discussed in Section IV, the authorized ROE and capital structure take on even greater significance.

Q. 132 What is your conclusion regarding an appropriate equity ratio for Southwest Gas?

A. 132 Considering the actual capital structures of the proxy group operating companies, I believe that Southwest Gas's proposed common equity ratio of 51.00 percent is reasonable. The proposed equity ratio is below the average equity ratio established by the capital structures of the utility operating subsidiaries of the proxy companies. In addition, based on the cash flow concerns raised by credit rating agencies as a result of the TCJA, COVID-19 and increased capital expenditures, it is reasonable to rely on a higher equity ratio than the Company may have relied on in prior rate cases.

IX. CONCLUSIONS AND RECOMMENDATION

Q. 133 What is your conclusion regarding a fair ROE for Southwest Gas?

A. 133 Figure 18 below provides a summary of my analytical results. Based on these results, the qualitative analyses presented in my Direct Testimony, the business and financial risks of Southwest Gas compared to the proxy group, and the effects of Federal tax reform and COVID-19 on the cash flow metrics of utilities, it is my view that the Company's requested ROE of 9.90 percent is reasonable and would fairly balance the interests of customers and shareholders. This ROE would enable the Company to maintain its financial integrity and therefore its ability to attract capital at reasonable rates under a variety of economic and financial market

conditions, while continuing to provide safe, reliable and affordable natural gas utility service to customers in Arizona.

Figure 18: Summary of Analytical Results

Constant Growth DCF			
	Mean Low	Mean	Mean High
30-Day Average Price	8.45%	10.36%	12.42%
90-Day Average Price	8.23%	10.14%	12.19%
180-Day Average Price	8.14%	10.04%	12.09%
	Median Low	Median	Median High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%
Capital Asset Pricing Model			
	Current Risk-Free Rate (2.13%)	Q1 2022 – Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-term Average Beta	9.66%	9.77%	10.05%
Empirical Capital Asset Pricing Model			
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-term Average Beta	10.41%	10.49%	10.70%
Bond Yield Plus Risk Premium			
	Current Risk-Free Rate (2.13%)	Q1 2022 – Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
Risk Premium Results	9.40%	9.59%	10.01%

Q. 134 What is your conclusion with respect to Southwest Gas's proposed capital structure?

A. 134 My conclusion is that Southwest Gas's proposal to establish a target capital structure consisting of 51.00 percent common equity, and 49.00 percent long-term debt is reasonable when compared to the capital structures of the companies in the proxy group and taking in consideration the effect of

the TCJA, increased capital expenditures and COVID-19 on cash flows and therefore should be adopted.

X. FAIR VALUE RATE OF RETURN

Q. 135 What is the fair value standard in Arizona?

A. 135 As the Commission noted in its decision regarding *Chaparral City Water Company*,[92] the Arizona Constitution requires the use of a fair value rate base in establishing rates. Article XV, Section 14 of the Arizona Constitution states:

> The corporation commission shall, to aid it in the proper discharge of its duties, ascertain the fair value of the property within the state of every public service corporation doing business therein; and every public service corporation doing business within the state shall furnish to the commission all evidence in its possession, and all assistance in its power, requested by the commission in aid of the determination of the value of the property within the state of such public service corporation.[93]

As interpreted by the Arizona Court of Appeals, this paragraph requires the Commission to find the fair value of a public service corporation's property and to use that value to set just and reasonable rates.[94]

Q. 136 Does the fair value standard also require consideration of the fair return on the fair value of the Company's assets?

A. 136 Yes. As noted above, the Arizona Constitution requires that the Commission establish just and reasonable rates using the fair value of the Company's property. In establishing the revenue requirement, the

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[92] Decision No. 70441 (July 28, 2008), at 20-21.
[93] Arizona Constitution, Article XV, Section 14.
[94] Decision No. 75697 (August 18, 2016), Decision No. 71914, (September 30, 2010), at 48-49. See also, Decision No. 70441 (July 28, 2008), at 20-21.

Commission would also need to establish the appropriate ROE to apply to the equity component of the FVRB.

Q. 137 How has the Commission historically estimated the FVROR on the FVRB?

A. 137 The Commission has determined the FVROR by applying the market ROE and the cost of debt to the Company's OCRB based on the percent of equity and debt in the Company's proposed capital structure. The Commission then applies a different rate, traditionally one half of the risk-free rate, to what has been commonly referred to as the "fair value increment."[95] The fair value increment is the difference between the OCRB and the Company's proposed FVRB. The FVROR is then the sum of the returns on each of the three components: (1) equity capital; (2) debt capital; and (3) the fair value increment, weighted by the percentage of each in the FVRB.

Q. 138 What does the fair value increment represent?

A. 138 As described in the Commission's Decision No. 77850, the fair value increment represents the appreciation in the value of the assets to their current value due to inflation. The sum of the OCRB and the fair value increment is the total fair value of the utility's property.[96]

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[95] Decision No. 77856 (December 31, 2020), at 69-70, Decision No. 77850 (December 17, 2020), at 74, Decision No. 70665 (December 24, 2008), at 32 and Decision No. 75697 (August 18, 2016), at 14.

[96] Ibid.

XI. ESTIMATING THE FAIR VALUE RATE OF RETURN

Q. 139 Do you agree with the methodology of determining the rate of return to be applied to the fair value increment traditionally used by the Commission, *i.e.*, half of the risk-free interest rate?

A. 139 No. There is no basis whatsoever for reducing this return component to one-half of the risk-free rate. Since equity investors are the residual claimants after bondholders and preferred stockholders, it is inconceivable to me that an investor would accept a rate of return that is less than the cost of debt for an equity position in any investment. At the very least, the market expectation is that investments that are not risk-free should earn a rate of return that exceeds the risk-free rate. Furthermore, the application of 50.00 percent of the risk-free rate as a measure of the Cost of Equity on the fair value increment is subjective and has no basis in financial theory. The risk-free rate sets the low-end of the range of returns that I believe would be appropriate to apply to the fair value increment.

Q. 140 Have you estimated the FVROR in this case?

A. 140 I have estimated the FVROR using three approaches, all based generally on the methodology that has been relied on by the Commission in prior cases.

Q. 141 Please explain the methodologies you used to estimate the risk-free rate of return.

A. 141 As shown in Exhibit No._(AEB-17), in all three cases, the risk-free rate is estimated based on a nominal projection of the risk-free rate and an interest rate assumption to establish the real risk-free rate. In the first two scenarios, I relied on a projected nominal risk-free rate of return as the

average of the 2023-2027 projected yield on 30-year U.S. Treasury bonds of 3.50 percent and the 2028-2032 projected yield on 30-year U.S. Treasury bonds of 3.90 percent as reported in the Blue Chip Financial Forecasts.[97] I then adjusted the nominal risk-free rate of 3.70 percent by a measure of inflation.

In scenario 1, the nominal risk-free rate was adjusted based on a projected estimate of inflation that was based on the growth in the Consumer Price Index and the GDP Chain-type Price Index over the period from 2022-2032 (see Exhibit No._(AEB-17)). The rate of inflation of 2.23 percent is based on three measures: (1) the average 2023-2027 and 2028-2032 projected growth rate in the CPI of 2.20 percent, as reported by Blue Chip Financial Forecasts;98 (2) the compound annual growth rate of the CPI for all urban consumers for 2022-2032 of 2.20 percent as projected by the EIA in the Annual Energy Outlook 2021; and (3) the compound annual growth rate of the GDP Chain-Type Price Index for 2022-2032 of 2.28 percent, also reported by the EIA in the Annual Energy Outlook 2021.99 Using these indexes, the estimate of inflation was 2.23 percent. Removing inflation from the nominal risk-free rate resulted in a real risk-free rate of 1.44 percent.

In scenario 2, the estimate of inflation was based on the 180-day average yield on the 30-year U.S. Treasury Bond (i.e., 2.08 percent) minus the 180-day average yield on the 30-year U.S. Treasury Inflation Protected Security

[97] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.
[98] Ibid.
[99] U.S. Energy Information Administration, Annual Energy Outlook 2021, Table 20, Macroeconomic Indicators.

(TIPS) (i.e., -0.1 percent). This resulted in an estimate of inflation of 2.21 percent.[100] The resulting real risk-free rate after adjusting for inflation is 1.49 percent.

Q. 142 Did you consider other estimates of the risk-free rate?

A. 142 Yes, I also considered a normalized estimate of the risk-free rate. As discussed previously in my Direct Testimony, though recent data has demonstrated historically low interest rates, investors are expecting to see increases in interest rates over time. In order to address the uncertainty on the correct level of interest rates, in scenario 3, I have relied on a normalized risk-free rate, as published by Duff and Phelps in the 2020 Valuation Handbook of 2.50 percent. This normalized interest rate is then converted to a real rate using the difference between the yield on the 30-year U.S. Treasury Bond and the yield on the TIPS of 2.21 percent. The resulting real risk-free rate is 0.29 percent.

Q. 143 What is your conclusion on the appropriate real risk-free rate in this case?

A. 143 The range established by the three methodologies that I developed is from 0.29 percent to 1.49 percent. In reviewing the inflation estimates, I believe that the inflation estimate developed in Scenario 3, which relies on the normalized risk-free rate from Duff and Phelps may understate the expected risk-free rate over the near-term given, as discussed in Section IV above, that investors expect interest rates to increase as the economy recovers from the COVID-19 pandemic. Averaging the results from all three

[100] Docket No. WS-01303A-17-0257 Joint Notice of Filing Issues Matrix July 13, 2018, p. 1.

scenarios results in a real risk-free rate of 1.07 percent. However, to simplify the Company's request in this case, the Company is requesting a return of 0.00 percent be relied on for the FVI cost rate.

Q. 144 Please explain how you applied the Commission's methodology to estimate the FVROR.

A. 144 As shown in Exhibit No._(AEB-18) and in Figure 19 and Figure 20 below, I calculated the difference between the Company's OCRB and the Company's proposed FVRB, which includes a 50.00 percent weight on original cost. That difference represents the appreciation in the value of the assets based on the "market value" of the OCRB and has been commonly referred to as the "fair value increment."[101] The weighted average cost of debt and the market Cost of Equity were applied to the OCRB.

Q. 145 Please explain how you estimated the rate of return that you applied to the fair value increment.

A. 145 As discussed above, I believe that the appropriate return that could be applied to the fair value increment ranges from the low-end as measured by the risk-free rate to the high-end as measured by the cost of equity for the proxy group as discussed in Section VI of my Direct Testimony. Nevertheless, the Company has requested that I estimate the FVROR by applying 0.00 percent to the fair value increment.

[101] Decision No. 77856 (December 31, 2020), at 69-70, Decision No. 77850 (December 17, 2020), at 74, Decision No. 70665 (December 24, 2008), at 32 and Decision No. 75697 (August 18, 2016), at 14.

Figure 19: Estimation of the FVRB

Capital	$ Millions	Percent	Weighted FVRB
OCRB	$2,642.068	50.00%	$ 1,321.034
RCND	$4,186.764	50.00%	$ 2,093.382
FVRB			$ 3,414.416

Figure 20: Estimation of the FVROR

Capital	$ Millions	Percent	Cost Rate	Weighted Cost Rate
Long-Term Debt	$1,294.613	37.92%	4.16%	1.57%
Common Equity	$ 1,347.455	39.46%	9.90%	3.91%
Fair Value Increment	$ 772.348	22.62%	0.00%	0.00%
Total	$ 3,414.416			5.48%

Q. 146 What is the resulting FVROR?

A. 146 As shown in Figure 19 and Figure 20 (see also, Exhibit No._(AEB-18)) based on the calculation discussed previously, the FVROR that would be applied to the FVRB is 5.48 percent.

Q. 147 Does this conclude your Direct Testimony?

A. 147 Yes, it does.

CONCENTRIC ENERGY ADVISORS

ANN E. BULKLEY
Senior Vice President

Ms. Bulkley has more than two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has extensive state and federal regulatory experience on both electric and natural gas issues including rate of return, cost of equity and capital structure issues. Ms. Bulkley has provided expert testimony on the cost of capital in nearly 100 regulatory proceedings before 32 state regulatory commissions and the Federal Energy Regulatory Commission. In addition to her regulatory experience, Ms. Bulkley has provided valuation and appraisal services for a variety of purposes including the sale or acquisition of utility assets, regulated ratemaking, ad valorem tax disputes, and other litigation purposes. In addition, Ms. Bulkley has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring and regulatory and litigation support. Prior to joining Concentric, Ms. Bulkley held senior expertise-based consulting positions at several firms, including Reed Consulting Group and Navigant Consulting, Inc. where she specialized in valuation. Ms. Bulkley holds an M.A. in economics from Boston University and a B.A. in economics and finance from Simmons College. Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Analysis and Ratemaking

Ms. Bulkley has provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking. Specific services have included: cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies; development of merchant function exit strategies; analysis and program development to address residual energy supply and/or provider of last resort obligations; stranded costs assessment and recovery; performance-based ratemaking analysis and design; and many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation).

Cost of Capital

Ms. Bulkley has provided expert testimony on the cost of capital and capital structure in nearly 100 regulatory proceedings before state and federal regulatory commissions in the United States.

Ratemaking

Ms. Bulkley has assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.

Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Analyzed and evaluated rate application. Attended hearings and conducted

investigation of rate application for regulatory staff. Prepared, supported and defended recommendations for revenue requirements and rates for the company. Developed rates for gas utility for transportation program and ancillary services.

Valuation

Ms. Bulkley has provided valuation services to utility clients, unregulated generators and private equity clients for a variety of purposes including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Ms. Bulkley's appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Prepared appraisals of electric utility transmission and distribution assets for ad valorem tax purposes.
- Prepared appraisals of several hydroelectric generating facilities for ad valorem tax purposes.
- Conducted appraisals of fossil fuel generating facilities for ad valorem tax purposes.
- Conducted appraisals of generating assets for the purposes of unwinding sale-leaseback agreements.
- Confidential Utility Client: Prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost and comparable sales approaches.

- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Prepared Feasibility Reports analyzing the expected net benefits resulting from municipal ownership of investor-owned utility operations.
- Prepared independent analyses of proposal for the proposed government condemnation of the investor-owned utilities in the State of Maine and the formation of a Public Power District.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

Strategic and Financial Advisory Services

Ms. Bulkley has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Senior Vice President
Vice President
Assistant Vice President
Project Manager

Navigant Consulting, Inc. (1995 – 2002)
Project Manager

Cahners Publishing Company (1995)
Economist

EDUCATION

Boston University
M.A., Economics, 1995

Simmons College
B.A., Economics and Finance, 1991

CERTIFICATIONS

Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A-19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A-19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A-15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A-15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A-12-0504	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Co	10/21	Oklahoma Gas and Electric Co	Docket No. D-18-046-FR	Return on Equity
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
San Jose Water Company	05/21	San Jose Water Company	A2105004	Return on Equity
Colorado Public Utilities Commission				
Public Service Company of Colorado	07/21	Public Service Company of Colorado	21AL-0317E	Return on Equity
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
Connecticut Public Utilities Regulatory Authority				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
United Illuminating	05/21	United Illuminating	Docket No. 17-12-03RE11	Return on Equity
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory Commission				
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Idaho Public Utilities Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commission				
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Indiana Utility Regulatory Commission				
Indiana Michigan Power Co.	07/21	Indiana Michigan Power Co.	IURC Cause No. 45576	Return on Equity
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Iowa Department of Commerce Utilities Board				
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020-0001	Return on Equity
Kansas Corporation Commission				
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG-079-RTS	Return on Equity
Kentucky Public Service Commission				
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity
Maine Public Utilities Commission				
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Maryland Public Service Commission				
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Tax Board				
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department of Public Utilities				
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16-001888-TT	Valuation of Electric Generation Assets
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
Minnesota Public Utilities Commission				
CenterPoint Energy Resources	11/21	CenterPoint Energy Resources	D-G-008/GR-21-435	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/21	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-21-630	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19-511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17-563	Return on Equity
Missouri Public Service Commission				
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021-0240 Docket No. GR-2021-0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Commission				
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
New Hampshire - Board of Tax and Land Appeals				
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets
New Hampshire Public Utilities Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Hampshire-Merrimack County Superior Court				
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property
New Hampshire-Rockingham Superior Court				
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public Utilities				
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	EO18101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	EO18060629 GO18060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulation Commission				
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department of Public Service				
Corning Natural Gas Corporation	07/21	Corning Natural Gas Corporation	Case No. 21-G-0394	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/19	New York State Electric and Gas Company Rochester Gas and Electric	19-E-0378 19-G-0379 19-E-0380 19-G-0381	Return on Equity
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service Commission				
Montana-Dakota Utilities Co.	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Commission				
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility Commission				
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020-3019369 (water) Docket No. R-2020-3019371 (wastewater)	Return on Equity
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017-2595853	Return on Equity
South Dakota Public Utilities Commission				
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commission				
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
Utah Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equity
Virginia State Corporation Commission				
Virginia American Water Company, Inc.	11/21	Virginia American Water Company, Inc.	Docket No. PUR-2021-00255	Return on Equity
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018-00175	Return on Equity
Washington Utilities Transportation Commission				
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity

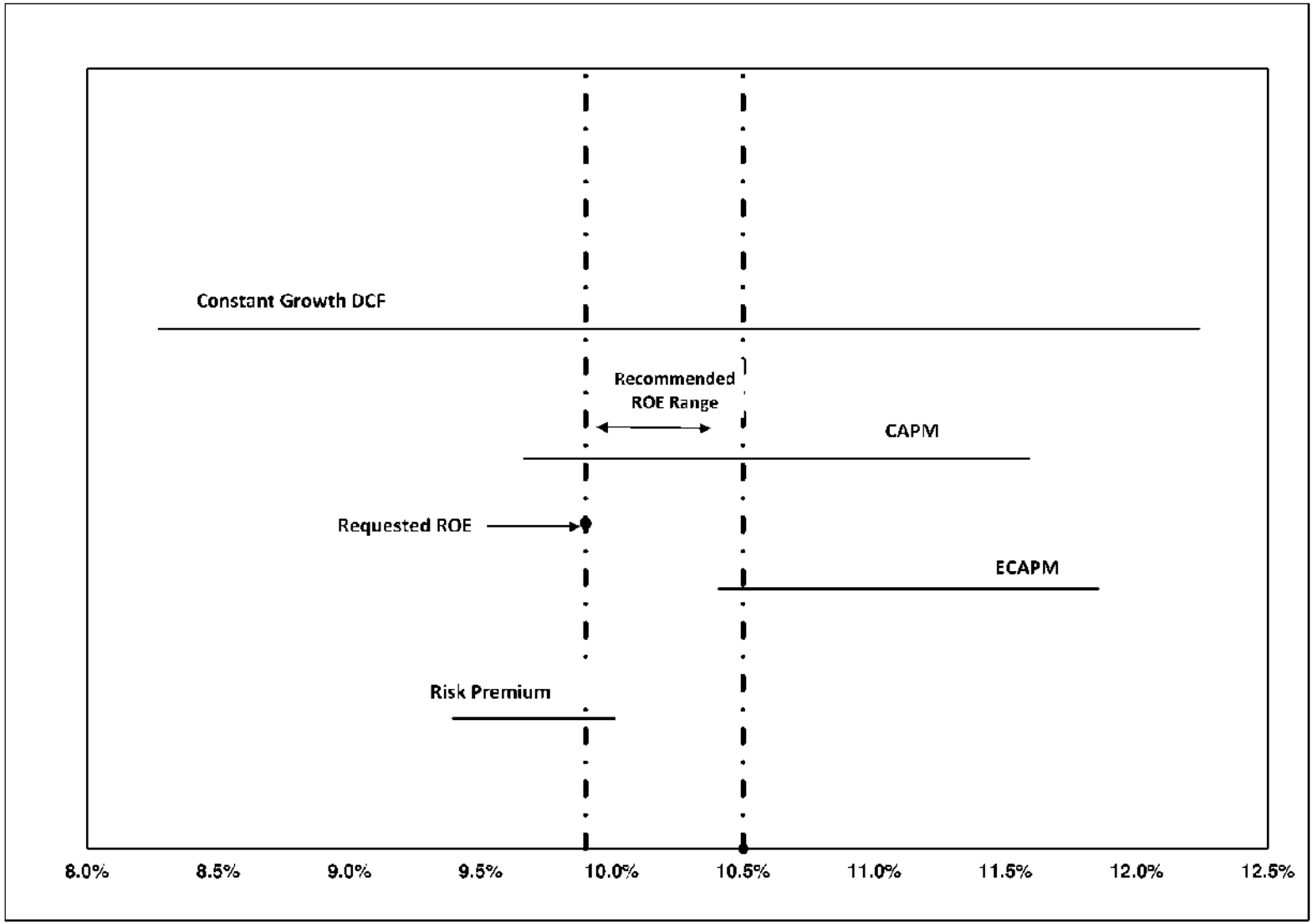
SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service Commission				
West Virginia American Water Company	04/21	West Virginia American Water Company	Case No. 21-02369-W-42T	Return on Equity
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Commission				
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity
Wyoming Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578-ER-20	Return on Equity
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity

SUMMARY OF ROE ANALYSES RESULTS AS OF OCTOBER 31, 2021

Constant Growth DCF			
	Mean Low	Mean	Mean High
30-Day Average	8.45%	10.36%	12.42%
90-Day Average	8.23%	10.14%	12.19%
180-Day Average	8.14%	10.04%	12.09%
Constant Growth Average	8.28%	10.18%	12.24%
	Median Low	Median	Median High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%
Constant Growth Average	9.00%	10.09%	11.04%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-Term Avg. Beta	9.66%	9.77%	10.05%
ECAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-Term Avg. Beta	10.41%	10.49%	10.70%
Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	9.40%	9.59%	10.01%

	X
Constant Growth DCF	8.28%
	10.18%
	12.24%
CAPM	9.66%
	11.59%
ECAPM	10.41%
	11.85%
Risk Premium	9.40%
	10.01%
Recommended ROE Range	9.90%
	9.90%
Recommended ROE Range	10.50%
	10.50%
Requested ROE	9.90%

SUMMARY OF ROE ANALYSES RESULTS AS OF OCTOBER 31, 2021



PROXY GROUP SCREENING DATA AND RESULTS - FINAL PROXY GROUP

Company	Ticker	[1] Dividends	[2] S&P Credit Rating Between BBB- and AAA	[3] Covered by More Than 1 Analyst	[4] Positive Growth Rates from at least two sources (Value Line, Yahoo! First Call, and Zacks)	[5] % Regulated Operating Income > 60%	[6] % Regulated Natural Gas Operating Income > 60%	[7] Announced Merger
Atmos Energy Corporation	ATO	Yes	A-	Yes	Yes	100.00%	64.64%	No
New Jersey Resources Corporation	NJR	Yes	A+	Yes	Yes	67.77%	100.54%	No
NiSource Inc.	NI	Yes	BBB+	Yes	Yes	99.76%	66.71%	No
Northwest Natural Gas Company	NWN	Yes	A+	Yes	Yes	99.84%	91.42%	No
ONE Gas Inc.	OGS	Yes	BBB+	Yes	Yes	100.00%	100.00%	No
South Jersey Industries, Inc.	SJI	Yes	BBB	Yes	Yes	97.52%	100.00%	No
Spire, Inc.	SR	Yes	A-	Yes	Yes	97.04%	100.00%	No

Notes:
[1] Source: Bloomberg Professional as of October 31, 2021
[2] Source: Bloomberg Professional as of October 31, 2021
[3] Source: Yahoo! Finance and Zacks
[4] Source: Yahoo! Finance, Value Line Investment Survey, and Zacks
[5] Source: Form 10-K's for 2020, 2019, and 2018
[6] Source: Form 10-K's for 2020, 2019, and 2018
[7] Source: SNL Financial News Releases

30-DAY CONSTANT GROWTH DCF – SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$90.73	2.76%	2.86%	7.00%	8.00%	7.50%	7.50%	9.85%	10.36%	10.87%
New Jersey Resources Corporation	NJR	$1.45	$36.72	3.95%	4.05%	2.00%	6.00%	7.10%	5.03%	5.99%	9.08%	11.19%
NiSource Inc.	NI	$0.88	$24.48	3.59%	3.71%	9.50%	3.52%	6.20%	6.41%	7.18%	10.12%	13.27%
Northwest Natural Gas Company	NWN	$1.93	$46.74	4.13%	4.24%	5.50%	5.70%	5.00%	5.40%	9.23%	9.64%	9.95%
ONE Gas Inc.	OGS	$2.32	$66.57	3.49%	3.57%	6.50%	2.90%	5.00%	4.80%	6.44%	8.37%	10.10%
South Jersey Industries, Inc.	SJI	$1.21	$22.31	5.42%	5.63%	11.50%	5.20%	5.60%	7.43%	10.77%	13.06%	17.24%
Spire, Inc.	SR	$2.60	$63.18	4.12%	4.27%	10.00%	7.31%	5.50%	7.60%	9.73%	11.88%	14.32%
Mean				3.92%	4.05%	7.43%	5.52%	5.99%	6.31%	8.45%	10.36%	12.42%
Median				3.95%	4.05%	7.00%	5.70%	5.60%	6.41%	9.23%	10.12%	11.19%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF – SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$95.60	2.62%	2.71%	7.00%	8.00%	7.50%	7.50%	9.71%	10.21%	10.72%
New Jersey Resources Corporation	NJR	$1.45	$37.88	3.83%	3.92%	2.00%	6.00%	7.10%	5.03%	5.87%	8.96%	11.06%
NiSource Inc.	NI	$0.88	$24.87	3.54%	3.65%	9.50%	3.52%	6.20%	6.41%	7.12%	10.06%	13.21%
Northwest Natural Gas Company	NWN	$1.93	$50.19	3.85%	3.95%	5.50%	5.70%	5.00%	5.40%	8.94%	9.35%	9.65%
ONE Gas Inc.	OGS	$2.32	$70.64	3.28%	3.36%	6.50%	2.90%	5.00%	4.80%	6.23%	8.16%	9.89%
South Jersey Industries, Inc.	SJI	$1.21	$24.22	5.00%	5.18%	11.50%	5.20%	5.60%	7.43%	10.33%	12.61%	16.78%
Spire, Inc.	SR	$2.60	$67.61	3.85%	3.99%	10.00%	7.31%	5.50%	7.60%	9.45%	11.60%	14.04%
Mean				3.71%	3.82%	7.43%	5.52%	5.99%	6.31%	8.23%	10.14%	12.19%
Median				3.83%	3.92%	7.00%	5.70%	5.60%	6.41%	8.94%	10.06%	11.06%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF -- SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$96.56	2.59%	2.69%	7.00%	8.00%	7.50%	7.50%	9.68%	10.19%	10.69%
New Jersey Resources Corporation	NJR	$1.45	$39.73	3.65%	3.74%	2.00%	6.00%	7.10%	5.03%	5.69%	8.77%	10.88%
NiSource Inc.	NI	$0.88	$24.70	3.56%	3.68%	9.50%	3.52%	6.20%	6.41%	7.15%	10.08%	13.23%
Northwest Natural Gas Company	NWN	$1.93	$51.59	3.74%	3.84%	5.50%	5.70%	5.00%	5.40%	8.83%	9.24%	9.55%
ONE Gas Inc.	OGS	$2.32	$73.19	3.17%	3.25%	6.50%	2.90%	5.00%	4.80%	6.12%	8.05%	9.77%
South Jersey Industries, Inc.	SJI	$1.21	$24.81	4.88%	5.06%	11.50%	5.20%	5.60%	7.43%	10.20%	12.49%	16.66%
Spire, Inc.	SR	$2.60	$70.45	3.69%	3.83%	10.00%	7.31%	5.50%	7.60%	9.29%	11.43%	13.88%
Mean				3.61%	3.73%	7.43%	5.52%	5.99%	6.31%	8.14%	10.04%	12.09%
Median				3.65%	3.74%	7.00%	5.70%	5.60%	6.41%	8.83%	10.08%	10.88%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.13%	0.80	12.64%	10.51%	10.53%	11.06%
New Jersey Resources Corporation	NJR	2.13%	1.00	12.64%	10.51%	12.64%	12.64%
NiSource Inc.	NI	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
Northwest Natural Gas Company	NWN	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
ONE Gas Inc.	OGS	2.13%	0.80	12.64%	10.51%	10.53%	11.06%
South Jersey Industries, Inc.	SJI	2.13%	1.05	12.64%	10.51%	13.16%	13.03%
Spire, Inc.	SR	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
Mean						11.43%	11.73%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.50%	0.80	12.64%	10.14%	10.61%	11.12%
New Jersey Resources Corporation	NJR	2.50%	1.00	12.64%	10.14%	12.64%	12.64%
NiSource Inc.	NI	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
Northwest Natural Gas Company	NWN	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
ONE Gas Inc.	OGS	2.50%	0.80	12.64%	10.14%	10.61%	11.12%
South Jersey Industries, Inc.	SJI	2.50%	1.05	12.64%	10.14%	13.14%	13.02%
Spire, Inc.	SR	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
Mean						11.48%	11.77%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2023 - 2027)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	3.50%	0.80	12.64%	9.14%	10.81%	11.27%
New Jersey Resources Corporation	NJR	3.50%	1.00	12.64%	9.14%	12.64%	12.64%
NiSource Inc.	NI	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
Northwest Natural Gas Company	NWN	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
ONE Gas Inc.	OGS	3.50%	0.80	12.64%	9.14%	10.81%	11.27%
South Jersey Industries, Inc.	SJI	3.50%	1.05	12.64%	9.14%	13.09%	12.98%
Spire, Inc.	SR	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
Mean						11.59%	11.85%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.13%	0.75	12.64%	10.51%	10.02%	10.67%
New Jersey Resources Corporation	NJR	2.13%	0.83	12.64%	10.51%	10.87%	11.31%
NiSource Inc.	NI	2.13%	0.81	12.64%	10.51%	10.62%	11.13%
Northwest Natural Gas Company	NWN	2.13%	0.72	12.64%	10.51%	9.74%	10.46%
ONE Gas Inc.	OGS	2.13%	0.83	12.64%	10.51%	10.87%	11.31%
South Jersey Industries, Inc.	SJI	2.13%	0.84	12.64%	10.51%	10.94%	11.36%
Spire, Inc.	SR	2.13%	0.77	12.64%	10.51%	10.18%	10.79%
Mean						10.46%	11.01%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.50%	0.75	12.64%	10.14%	10.11%	10.74%
New Jersey Resources Corporation	NJR	2.50%	0.83	12.64%	10.14%	10.93%	11.36%
NiSource Inc.	NI	2.50%	0.81	12.64%	10.14%	10.69%	11.18%
Northwest Natural Gas Company	NWN	2.50%	0.72	12.64%	10.14%	9.84%	10.54%
ONE Gas Inc.	OGS	2.50%	0.83	12.64%	10.14%	10.93%	11.36%
South Jersey Industries, Inc.	SJI	2.50%	0.84	12.64%	10.14%	11.00%	11.41%
Spire, Inc.	SR	2.50%	0.77	12.64%	10.14%	10.26%	10.86%
Mean						10.54%	11.06%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2023 - 2027)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	3.50%	0.75	12.64%	9.14%	10.36%	10.93%
New Jersey Resources Corporation	NJR	3.50%	0.83	12.64%	9.14%	11.10%	11.48%
NiSource Inc.	NI	3.50%	0.81	12.64%	9.14%	10.89%	11.32%
Northwest Natural Gas Company	NWN	3.50%	0.72	12.64%	9.14%	10.12%	10.75%
ONE Gas Inc.	OGS	3.50%	0.83	12.64%	9.14%	11.10%	11.48%
South Jersey Industries, Inc.	SJI	3.50%	0.84	12.64%	9.14%	11.16%	11.53%
Spire, Inc.	SR	3.50%	0.77	12.64%	9.14%	10.50%	11.03%
Mean						10.75%	11.22%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM AVERAGE BETA

CAPM: $K = R_f + \beta (R_m - R_f)$ / ECAPM: $K = Rf + 0.25(Rm - Rf) + 0.75\beta (Rm - Rf)$

	[4]	[5]	[6]	[7]	[8]	[9]
	Risk-Free Rate (R_f)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	CAPM (K)	ECAPM (K)
Current 30-day average of 30-year U.S. Treasury bond yield [1]	2.13%	0.717	12.64%	10.51%	9.66%	10.41%
Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023) [2]	2.50%	0.717	12.64%	10.14%	9.77%	10.49%
Projected 30-year U.S. Treasury bond yield (2023 - 2027) [3]	3.50%	0.717	12.64%	9.14%	10.05%	10.70%
				Average:	9.83%	10.53%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[3] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[4] See Notes [1], [2], and [3]
[5] Source: Exhibit No._(AEB-6)
[6] Source: Exhibit No._(AEB-7)
[7] Equals [6] – [4]
[8] Equals [4] + [5] x [7]
[9] Equals [4] + 0.25 x ([7]) + 0.75 x ([5] x [7])

HISTORICAL BETA - 2011 - 2020

Company	Ticker	[1] 12/31/2011	[2] 12/31/2012	[3] 12/31/2013	[4] 12/31/2014	[5] 12/31/2015	[6] 12/31/2016	[7] 12/31/2017	[8] 12/31/2018	[9] 12/31/2019	[10] 12/31/2020	[11] Average
Atmos Energy Corporation	ATO	0.70	0.70	0.80	0.80	0.80	0.70	0.70	0.60	0.60	0.80	0.72
New Jersey Resources Corporation	NJR	0.65	0.65	0.70	0.80	0.80	0.80	0.80	0.70	0.70	0.95	0.76
NiSource Inc.	NI	0.85	0.80	0.85	0.85	NMF	NMF	0.60	0.50	0.55	0.85	0.73
Northwest Natural Gas Company	NWN	0.60	0.55	0.65	0.70	0.65	0.65	0.70	0.60	0.60	0.80	0.65
ONE Gas Inc.	OGS	N/A	N/A	N/A	N/A	N/A	N/A	0.70	0.65	0.65	0.80	0.70
South Jersey Industries, Inc.	SJI	0.65	0.65	0.70	0.80	0.80	0.80	0.85	0.80	0.80	1.05	0.79
Spire, Inc.	SR	0.60	0.55	0.65	0.70	0.70	0.70	0.70	0.65	0.65	0.85	0.68
Mean		0.68	0.65	0.73	0.78	0.75	0.73	0.72	0.64	0.65	0.87	0.72

Notes:
[1] Value Line, dated December 9, 2011.
[2] Value Line, dated December 7, 2012.
[3] Value Line, dated December 6, 2013.
[4] Value Line, dated December 5, 2014.
[5] Value Line, dated December 4, 2015.
[6] Value Line, dated December 2, 2016.
[7] Value Line, dated December 1, 2017.
[8] Value Line, dated November 30, 2018.
[9] Value Line, dated November 29, 2019.
[10] Value Line, dated November 27, 2020.
[11] Average ([1] - [10])

MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimate of the S&P 500 Dividend Yield	1.75%
[2] Estimate of the S&P 500 Growth Rate	10.79%
[3] S&P 500 Estimated Required Market Return	12.64%

Notes:
[1] Sum of [6]
[2] Sum of [8]
[3] Equals ([1] x (1 + 0.5 x [2])) + [2]

STANDARD & POOR'S 500 INDEX

		[4]	[5]	[6]	[7]	[8]
Name	Ticker	Weight in Index	Current Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	0.11%	4.87%	0.01%	8.00%	0.01%
American Express Co	AXP	0.50%	0.99%	0.00%	8.50%	0.04%
Verizon Communications Inc	VZ	0.81%	4.83%	0.04%	3.50%	0.03%
Broadcom Inc	AVGO		2.71%	n/a	27.00%	n/a
Boeing Co/The	BA		n/a	n/a	0.00%	n/a
Caterpillar Inc	CAT	0.41%	2.18%	0.01%	9.00%	0.04%
JPMorgan Chase & Co	JPM	1.87%	2.35%	0.04%	7.50%	0.14%
Chevron Corp	CVX		4.68%	n/a	23.50%	n/a
Coca-Cola Co/The	KO	0.90%	2.98%	0.03%	7.00%	0.06%
AbbVie Inc	ABBV	0.75%	4.92%	0.04%	6.50%	0.05%
Walt Disney Co/The	DIS		n/a	n/a	14.00%	n/a
FleetCor Technologies Inc	FLT		n/a	n/a	11.00%	n/a
Extra Space Storage Inc	EXR	0.10%	2.53%	0.00%	5.00%	0.00%
Exxon Mobil Corp	XOM		5.46%	n/a	0.00%	n/a
Phillips 66	PSX	0.12%	4.92%	0.01%	20.00%	0.02%
General Electric Co	GE	0.42%	0.31%	0.00%	15.00%	0.06%
HP Inc	HPQ	0.13%	2.56%	0.00%	12.50%	0.02%
Home Depot Inc/The	HD	1.45%	1.78%	0.03%	8.50%	0.12%
Monolithic Power Systems Inc	MPWR		0.46%	n/a	20.50%	n/a
International Business Machines Corp	IBM	0.41%	5.24%	0.02%	1.50%	0.01%
Johnson & Johnson	JNJ	1.58%	2.60%	0.04%	10.00%	0.16%
McDonald's Corp	MCD	0.68%	2.25%	0.02%	10.50%	0.07%
Merck & Co Inc	MRK	0.82%	2.95%	0.02%	7.50%	0.06%
3M Co	MMM	0.38%	3.31%	0.01%	6.00%	0.02%
American Water Works Co Inc	AWK	0.12%	1.38%	0.00%	8.50%	0.01%
Bank of America Corp	BAC	1.44%	1.76%	0.03%	7.50%	0.11%
Baker Hughes Co	BKR	0.08%	2.87%	0.00%	6.00%	0.00%
Pfizer Inc	PFE	0.90%	3.57%	0.03%	8.00%	0.07%
Procter & Gamble Co/The	PG	1.28%	2.43%	0.03%	7.00%	0.09%
AT&T Inc	T	0.67%	8.23%	0.05%	2.50%	0.02%
Travelers Cos Inc/The	TRV	0.15%	2.19%	0.00%	8.00%	0.01%
Raytheon Technologies Corp	RTX	0.49%	2.30%	0.01%	1.00%	0.00%
Analog Devices Inc	ADI	0.34%	1.59%	0.01%	11.00%	0.04%
Walmart Inc	WMT	1.54%	1.47%	0.02%	7.50%	0.12%
Cisco Systems Inc/Delaware	CSCO	0.87%	2.64%	0.02%	7.00%	0.06%
Intel Corp	INTC	0.74%	2.84%	0.02%	7.00%	0.05%
General Motors Co	GM		n/a	n/a	11.00%	n/a
Microsoft Corp	MSFT	9.19%	0.75%	0.07%	15.00%	1.38%
Dollar General Corp	DG	0.19%	0.76%	0.00%	10.50%	0.02%
Cigna Corp	CI	0.27%	1.87%	0.01%	10.00%	0.03%
Kinder Morgan Inc	KMI	0.14%	6.45%	0.01%	19.00%	0.03%
Citigroup Inc	C	0.51%	2.95%	0.01%	7.00%	0.04%
American International Group Inc	AIG		2.17%	n/a	31.50%	n/a
Altria Group Inc	MO	0.30%	8.16%	0.02%	6.00%	0.02%
HCA Healthcare Inc	HCA	0.30%	0.77%	0.00%	12.00%	0.04%
Under Armour Inc	UAA		n/a	n/a	33.00%	n/a
International Paper Co	IP	0.07%	3.72%	0.00%	12.00%	0.01%
Hewlett Packard Enterprise Co	HPE	0.07%	3.28%	0.00%	6.50%	0.00%
Abbott Laboratories	ABT	0.84%	1.40%	0.01%	11.50%	0.10%
Aflac Inc	AFL	0.13%	2.46%	0.00%	11.00%	0.01%
Air Products and Chemicals Inc	APD	0.24%	2.00%	0.00%	12.50%	0.03%
Royal Caribbean Cruises Ltd	RCL		n/a	n/a	0.00%	n/a
Hess Corp	HES		1.21%	n/a	0.00%	n/a
Archer-Daniels-Midland Co	ADM	0.13%	2.30%	0.00%	9.50%	0.01%
Automatic Data Processing Inc	ADP	0.35%	1.66%	0.01%	8.50%	0.03%
Verisk Analytics Inc	VRSK	0.13%	0.55%	0.00%	8.00%	0.01%
AutoZone Inc	AZO		n/a	n/a	15.00%	n/a
Avery Dennison Corp	AVY	0.07%	1.25%	0.00%	9.00%	0.01%
Enphase Energy Inc	ENPH		n/a	n/a	40.00%	n/a
MSCI Inc	MSCI	0.20%	0.63%	0.00%	16.00%	0.03%
Ball Corp	BLL		0.87%	n/a	21.00%	n/a
Carrier Global Corp	CARR		n/a	n/a	0.00%	n/a
Bank of New York Mellon Corp/The	BK		0.92%	n/a	0.00%	n/a
Otis Worldwide Corp	OTIS	0.18%	2.30%	0.00%	5.00%	0.01%

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
Baxter International Inc	BAX		1.20%	n/a	0.00%	n/a
Becton Dickinson and Co	BDX	0.15%	1.42%	0.00%	8.50%	0.01%
Berkshire Hathaway Inc	BRK/B	0.25%	1.39%	0.00%	7.50%	0.02%
Best Buy Co Inc	BBY		n/a	n/a	0.00%	n/a
Boston Scientific Corp	BSX	0.11%	2.29%	0.00%	8.50%	0.01%
Bristol-Myers Squibb Co	BMY		n/a	n/a	17.50%	n/a
Fortune Brands Home & Security Inc	FBHS	0.48%	3.36%	0.02%	12.50%	0.06%
Brown-Forman Corp	BF/B	0.05%	1.03%	0.00%	11.00%	0.01%
Cabot Oil & Gas Corp	COG	0.08%	1.06%	0.00%	13.00%	0.01%
Campbell Soup Co	CPB		2.06%	n/a	0.00%	n/a
Kansas City Southern	KSU	0.04%	3.70%	0.00%	5.50%	0.00%
Hilton Worldwide Holdings Inc	HLT	0.10%	0.70%	0.00%	10.50%	0.01%
Carnival Corp	CCL		n/a	n/a	0.00%	n/a
Qorvo Inc	QRVO		n/a	n/a	0.00%	n/a
Lumen Technologies Inc	LUMN		n/a	n/a	27.00%	n/a
UDR Inc	UDR	0.05%	8.43%	0.00%	2.50%	0.00%
Clorox Co/The	CLX	0.06%	2.61%	0.00%	6.00%	0.00%
Paycom Software Inc	PAYC	0.07%	2.85%	0.00%	5.00%	0.00%
CMS Energy Corp	CMS		n/a	n/a	19.50%	n/a
Newell Brands Inc	NWL	0.06%	2.88%	0.00%	6.00%	0.00%
Colgate-Palmolive Co	CL		4.02%	n/a	0.00%	n/a
Comerica Inc	CMA	0.24%	2.36%	0.01%	4.50%	0.01%
IPG Photonics Corp	IPGP	0.04%	3.20%	0.00%	2.50%	0.00%
Conagra Brands Inc	CAG		n/a	n/a	17.00%	n/a
Consolidated Edison Inc	ED	0.06%	3.88%	0.00%	4.50%	0.00%
Corning Inc	GLW	0.10%	4.11%	0.00%	4.00%	0.00%
Cummins Inc	CMI	0.11%	2.70%	0.00%	20.00%	0.02%
Caesars Entertainment Inc	CZR	0.13%	2.42%	0.00%	7.00%	0.01%
Danaher Corp	DHR		n/a	n/a	0.00%	n/a
Target Corp	TGT		0.27%	n/a	21.00%	n/a
Deere & Co	DE	0.47%	1.39%	0.01%	15.00%	0.07%
Dominion Energy Inc	D	0.39%	1.23%	0.00%	17.00%	0.07%
Dover Corp	DOV	0.23%	3.32%	0.01%	12.00%	0.03%
Alliant Energy Corp	LNT	0.09%	1.18%	0.00%	7.00%	0.01%
Duke Energy Corp	DUK	0.05%	2.85%	0.00%	5.50%	0.00%
Regency Centers Corp	REG	0.29%	3.86%	0.01%	7.00%	0.02%
Eaton Corp PLC	ETN	0.04%	3.38%	0.00%	16.00%	0.01%
Ecolab Inc	ECL	0.24%	1.85%	0.00%	9.00%	0.02%
PerkinElmer Inc	PKI	0.23%	0.86%	0.00%	6.00%	0.01%
Emerson Electric Co	EMR	0.08%	0.16%	0.00%	11.00%	0.01%
EOG Resources Inc	EOG	0.21%	2.08%	0.00%	10.50%	0.02%
Aon PLC	AON	0.20%	1.78%	0.00%	12.50%	0.02%
Entergy Corp	ETR	0.26%	0.64%	0.00%	7.00%	0.02%
Equifax Inc	EFX	0.08%	3.92%	0.00%	3.00%	0.00%
IQVIA Holdings Inc	IQV	0.12%	0.56%	0.00%	10.50%	0.01%
Gartner Inc	IT		n/a	n/a	14.00%	n/a
FedEx Corp	FDX		n/a	n/a	18.50%	n/a
FMC Corp	FMC	0.23%	1.27%	0.00%	12.00%	0.03%
Ford Motor Co	F	0.04%	2.11%	0.00%	9.50%	0.00%
NextEra Energy Inc	NEE	0.07%	0.65%	0.00%	9.50%	0.01%
Franklin Resources Inc	BEN		2.34%	n/a	47.50%	n/a
Freeport-McMoRan Inc	FCX	0.62%	1.80%	0.01%	10.50%	0.06%
Gap Inc/The	GPS	0.06%	3.56%	0.00%	8.50%	0.00%
Dexcom Inc	DXCM		0.80%	n/a	37.50%	n/a
General Dynamics Corp	GD		2.12%	n/a	27.00%	n/a
General Mills Inc	GIS		n/a	n/a	0.00%	n/a
Genuine Parts Co	GPC	0.21%	2.35%	0.00%	5.00%	0.01%
Atmos Energy Corp	ATO	0.14%	3.30%	0.00%	3.50%	0.00%
WW Grainger Inc	GWW	0.07%	2.49%	0.00%	7.00%	0.00%
Halliburton Co	HAL	0.04%	2.71%	0.00%	7.00%	0.00%
L3Harris Technologies Inc	LHX	0.09%	1.40%	0.00%	5.50%	0.00%
Healthpeak Properties Inc	PEAK	0.08%	0.72%	0.00%	9.00%	0.01%
Catalent Inc	CTLT		1.77%	n/a	0.00%	n/a
Fortive Corp	FTV		3.38%	n/a	-12.00%	n/a
Hershey Co/The	HSY		n/a	n/a	21.00%	n/a
Synchrony Financial	SYF	0.10%	0.37%	0.00%	6.00%	0.01%
Hormel Foods Corp	HRL	0.09%	2.06%	0.00%	6.00%	0.01%
Arthur J Gallagher & Co	AJG	0.09%	1.89%	0.00%	9.50%	0.01%
Mondelez International Inc	MDLZ	0.08%	2.32%	0.00%	9.00%	0.01%
CenterPoint Energy Inc	CNP	0.13%	1.15%	0.00%	13.50%	0.02%
Humana Inc	HUM	0.31%	2.30%	0.01%	8.00%	0.03%
Willis Towers Watson PLC	WLTW	0.06%	2.61%	0.00%	9.50%	0.01%
Illinois Tool Works Inc	ITW	0.22%	0.60%	0.00%	12.00%	0.03%
CDW Corp/DE	CDW	0.11%	1.32%	0.00%	8.00%	0.01%
Trane Technologies PLC	TT	0.26%	2.14%	0.01%	11.00%	0.03%
Interpublic Group of Cos Inc/The	IPG	0.09%	0.86%	0.00%	10.00%	0.01%
International Flavors & Fragrances Inc	IFF		1.30%	n/a	0.00%	n/a
Jacobs Engineering Group Inc	J	0.05%	2.95%	0.00%	12.00%	0.01%
Generac Holdings Inc	GNRC	0.14%	2.14%	0.00%	7.50%	0.01%

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Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
NXP Semiconductors NV	NXPI	0.07%	0.60%	0.00%	15.00%	0.01%
Hanesbrands Inc	HBI		n/a	n/a	23.50%	n/a
Kellogg Co	K	0.20%	1.12%	0.00%	11.00%	0.02%
Broadridge Financial Solutions Inc	BR	0.02%	3.52%	0.00%	6.00%	0.00%
Perrigo Co PLC	PRGO	0.08%	3.78%	0.00%	3.50%	0.00%
Kimberly-Clark Corp	KMB	0.08%	1.43%	0.00%	8.50%	0.01%
Kimco Realty Corp	KIM	0.16%	3.52%	0.01%	5.50%	0.01%
Oracle Corp	ORCL	0.05%	3.01%	0.00%	10.50%	0.01%
Kroger Co/The	KR	0.97%	1.33%	0.01%	10.00%	0.10%
Leggett & Platt Inc	LEG	0.11%	2.10%	0.00%	6.00%	0.01%
Lennar Corp	LEN	0.02%	3.59%	0.00%	10.00%	0.00%
Eli Lilly & Co	LLY	0.10%	1.00%	0.00%	12.00%	0.01%
Bath & Body Works Inc	BBWI	0.90%	1.33%	0.01%	11.00%	0.10%
Charter Communications Inc	CHTR		0.87%	n/a	26.00%	n/a
Lincoln National Corp	LNC		n/a	n/a	27.50%	n/a
Loews Corp	L	0.05%	2.33%	0.00%	9.00%	0.00%
Lowe's Cos Inc	LOW	0.05%	0.45%	0.00%	12.50%	0.01%
IDEX Corp	IEX	0.60%	1.37%	0.01%	14.50%	0.09%
Marsh & McLennan Cos Inc	MMC	0.06%	0.97%	0.00%	8.00%	0.00%
Masco Corp	MAS	0.31%	1.28%	0.00%	12.00%	0.04%
S&P Global Inc	SPGI	0.06%	1.43%	0.00%	9.50%	0.01%
Medtronic PLC	MDT	0.42%	0.65%	0.00%	10.50%	0.04%
Viatris Inc	VTRS	0.60%	2.10%	0.01%	9.00%	0.05%
CVS Health Corp	CVS		3.30%	n/a	0.00%	n/a
DuPont de Nemours Inc	DD	0.43%	2.24%	0.01%	6.00%	0.03%
Micron Technology Inc	MU		1.72%	n/a	0.00%	n/a
Motorola Solutions Inc	MSI	0.29%	0.58%	0.00%	11.50%	0.03%
Cboe Global Markets Inc	CBOE	0.16%	1.14%	0.00%	7.00%	0.01%
Laboratory Corp of America Holdings	LH	0.05%	1.46%	0.00%	12.00%	0.01%
Newmont Corp	NEM		n/a	n/a	5.50%	n/a
NIKE Inc	NKE	0.16%	4.07%	0.01%	14.00%	0.02%
NiSource Inc	NI		0.66%	n/a	27.00%	n/a
Norfolk Southern Corp	NSC	0.04%	3.57%	0.00%	9.50%	0.00%
Principal Financial Group Inc	PFG	0.26%	1.49%	0.00%	10.00%	0.03%
Eversource Energy	ES	0.07%	3.82%	0.00%	6.00%	0.00%
Northrop Grumman Corp	NOC	0.11%	2.84%	0.00%	6.50%	0.01%
Wells Fargo & Co	WFC	0.21%	1.76%	0.00%	7.00%	0.01%
Nucor Corp	NUE	0.75%	1.56%	0.01%	5.50%	0.04%
PVH Corp	PVH	0.12%	1.45%	0.00%	8.00%	0.01%
Occidental Petroleum Corp	OXY		n/a	n/a	13.50%	n/a
Omnicom Group Inc	OMC		0.12%	n/a	36.50%	n/a
ONEOK Inc	OKE	0.05%	4.11%	0.00%	6.00%	0.00%
Raymond James Financial Inc	RJF	0.10%	5.88%	0.01%	9.50%	0.01%
Parker-Hannifin Corp	PH	0.07%	1.05%	0.00%	6.50%	0.00%
Rollins Inc	ROL	0.14%	1.39%	0.00%	14.00%	0.02%
PPL Corp	PPL	0.06%	1.14%	0.00%	11.50%	0.01%
ConocoPhillips	COP		5.76%	n/a	0.00%	n/a
PulteGroup Inc	PHM	0.37%	2.47%	0.01%	13.50%	0.05%
Pinnacle West Capital Corp	PNW	0.04%	1.16%	0.00%	12.50%	0.01%
PNC Financial Services Group Inc/The	PNC	0.03%	5.15%	0.00%	0.00%	0.00%
PPG Industries Inc	PPG	0.33%	2.37%	0.01%	11.50%	0.04%
Progressive Corp/The	PGR	0.14%	1.47%	0.00%	3.00%	0.00%
Public Service Enterprise Group Inc	PEG	0.20%	0.42%	0.00%	5.00%	0.01%
Robert Half International Inc	RHI	0.12%	3.20%	0.00%	3.50%	0.00%
Edison International	EIX	0.05%	1.34%	0.00%	7.50%	0.00%
Schlumberger NV	SLB		4.21%	n/a	0.00%	n/a
Charles Schwab Corp/The	SCHW	0.17%	1.55%	0.00%	8.50%	0.01%
Sherwin-Williams Co/The	SHW	0.55%	0.88%	0.00%	7.00%	0.04%
West Pharmaceutical Services Inc	WST	0.31%	0.69%	0.00%	10.50%	0.03%
J M Smucker Co/The	SJM	0.12%	0.17%	0.00%	17.00%	0.02%
Snap-on Inc	SNA	0.05%	3.22%	0.00%	4.00%	0.00%
AMETEK Inc	AME	0.04%	2.42%	0.00%	4.50%	0.00%
Southern Co/The	SO	0.11%	0.60%	0.00%	9.00%	0.01%
Truist Financial Corp	TFC	0.24%	4.24%	0.01%	6.00%	0.01%
Southwest Airlines Co	LUV	0.31%	3.03%	0.01%	7.00%	0.02%
W R Berkley Corp	WRB		n/a	n/a	34.50%	n/a
Stanley Black & Decker Inc	SWK	0.05%	0.65%	0.00%	14.50%	0.01%
Public Storage	PSA	0.11%	1.76%	0.00%	6.00%	0.01%
Arista Networks Inc	ANET	0.21%	2.41%	0.01%	4.00%	0.01%
Sysco Corp	SYY		n/a	n/a	4.50%	n/a
Corteva Inc	CTVA	0.15%	2.44%	0.00%	17.00%	0.02%
Texas Instruments Inc	TXN		1.30%	n/a	0.00%	n/a
Textron Inc	TXT	0.64%	2.45%	0.02%	9.00%	0.06%
Thermo Fisher Scientific Inc	TMO	0.06%	0.11%	0.00%	8.50%	0.01%
TJX Cos Inc/The	TJX	0.92%	0.16%	0.00%	14.50%	0.13%
Globe Life Inc	GL	0.29%	1.59%	0.00%	20.00%	0.06%
Johnson Controls International plc	JCI	0.03%	0.89%	0.00%	8.00%	0.00%
Ulta Beauty Inc	ULTA	0.19%	1.47%	0.00%	10.00%	0.02%
Union Pacific Corp	UNP		n/a	n/a	15.50%	n/a

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Keysight Technologies Inc	KEYS	0.57%	1.77%	0.01%	10.00%	0.06%
UnitedHealth Group Inc	UNH		n/a	n/a	17.00%	n/a
Unum Group	UNM	1.60%	1.26%	0.02%	12.00%	0.19%
Marathon Oil Corp	MRO		1.47%	n/a	0.00%	n/a
Bio-Rad Laboratories Inc	BIO		n/a	n/a	11.50%	n/a
Ventas Inc	VTR	0.08%	3.37%	0.00%	4.50%	0.00%
VF Corp	VFC	0.11%	2.74%	0.00%	9.50%	0.01%
Vornado Realty Trust	VNO		4.97%	n/a	-19.00%	n/a
Vulcan Materials Co	VMC	0.09%	0.78%	0.00%	10.00%	0.01%
Weyerhaeuser Co	WY		1.90%	n/a	22.00%	n/a
Whirlpool Corp	WHR	0.05%	2.66%	0.00%	9.50%	0.00%
Williams Cos Inc/The	WMB	0.13%	5.84%	0.01%	10.50%	0.01%
WEC Energy Group Inc	WEC	0.10%	3.01%	0.00%	6.50%	0.01%
Adobe Inc	ADBE		n/a	n/a	15.50%	n/a
AES Corp/The	AES		2.40%	n/a	24.00%	n/a
Amgen Inc	AMGN	0.43%	3.40%	0.01%	5.50%	0.02%
Apple Inc	AAPL	9.07%	0.59%	0.05%	17.00%	1.54%
Autodesk Inc	ADSK		n/a	n/a	18.00%	n/a
Cintas Corp	CTAS	0.17%	0.88%	0.00%	12.50%	0.02%
Comcast Corp	CMCSA	0.87%	1.94%	0.02%	11.00%	0.10%
Molson Coors Beverage Co	TAP		3.08%	n/a	41.00%	n/a
KLA Corp	KLAC	0.21%	1.13%	0.00%	18.00%	0.04%
Marriott International Inc/MD	MAR		n/a	n/a	17.50%	n/a
McCormick & Co Inc/MD	MKC	0.07%	1.70%	0.00%	6.00%	0.00%
PACCAR Inc	PCAR	0.11%	1.52%	0.00%	5.50%	0.01%
Costco Wholesale Corp	COST	0.80%	0.64%	0.01%	10.50%	0.08%
First Republic Bank/CA	FRC	0.14%	0.41%	0.00%	13.50%	0.02%
Stryker Corp	SYK	0.37%	0.95%	0.00%	11.00%	0.04%
Tyson Foods Inc	TSN	0.09%	2.23%	0.00%	6.00%	0.01%
Lamb Weston Holdings Inc	LW	0.03%	1.67%	0.00%	6.00%	0.00%
Applied Materials Inc	AMAT	0.46%	0.70%	0.00%	16.50%	0.08%
American Airlines Group Inc	AAL		n/a	n/a	0.00%	n/a
Cardinal Health Inc	CAH	0.05%	4.11%	0.00%	12.00%	0.01%
Cerner Corp	CERN	0.08%	1.18%	0.00%	11.00%	0.01%
Cincinnati Financial Corp	CINF	0.07%	2.08%	0.00%	13.50%	0.01%
ViacomCBS Inc	VIAC	0.08%	2.65%	0.00%	7.00%	0.01%
DR Horton Inc	DHI	0.12%	0.90%	0.00%	15.50%	0.02%
Electronic Arts Inc	EA	0.15%	0.48%	0.00%	12.50%	0.02%
Expeditors International of Washington Inc	EXPD	0.08%	0.94%	0.00%	10.00%	0.01%
Fastenal Co	FAST	0.12%	1.96%	0.00%	9.00%	0.01%
M&T Bank Corp	MTB	0.07%	2.99%	0.00%	8.00%	0.01%
Xcel Energy Inc	XEL	0.13%	2.83%	0.00%	6.00%	0.01%
Fiserv Inc	FISV		n/a	n/a	13.00%	n/a
Fifth Third Bancorp	FITB	0.11%	2.76%	0.00%	8.00%	0.01%
Gilead Sciences Inc	GILD	0.30%	4.38%	0.01%	3.50%	0.01%
Hasbro Inc	HAS	0.05%	2.84%	0.00%	11.50%	0.01%
Huntington Bancshares Inc/OH	HBAN	0.08%	3.94%	0.00%	8.50%	0.01%
Welltower Inc	WELL		3.03%	n/a	-1.50%	n/a
Biogen Inc	BIIB		n/a	n/a	7.00%	n/a
Northern Trust Corp	NTRS	0.09%	2.28%	0.00%	7.00%	0.01%
Packaging Corp of America	PKG	0.05%	2.91%	0.00%	5.00%	0.00%
Paychex Inc	PAYX	0.16%	2.14%	0.00%	8.00%	0.01%
People's United Financial Inc	PBCT	0.03%	4.26%	0.00%	4.00%	0.00%
QUALCOMM Inc	QCOM	0.55%	2.04%	0.01%	14.00%	0.08%
Roper Technologies Inc	ROP	0.19%	0.46%	0.00%	8.00%	0.02%
Ross Stores Inc	ROST	0.15%	1.01%	0.00%	14.00%	0.02%
IDEXX Laboratories Inc	IDXX		n/a	n/a	14.50%	n/a
Starbucks Corp	SBUX	0.46%	1.85%	0.01%	16.00%	0.07%
KeyCorp	KEY	0.08%	3.18%	0.00%	9.50%	0.01%
Fox Corp	FOXA		1.21%	n/a	0.00%	n/a
Fox Corp	FOX		1.30%	n/a	0.00%	n/a
State Street Corp	STT	0.13%	2.31%	0.00%	7.50%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH		n/a	n/a	0.00%	n/a
US Bancorp	USB	0.33%	3.05%	0.01%	6.50%	0.02%
A O Smith Corp	AOS	0.04%	1.53%	0.00%	10.00%	0.00%
NortonLifeLock Inc	NLOK	0.05%	1.96%	0.00%	11.00%	0.01%
T Rowe Price Group Inc	TROW	0.18%	1.99%	0.00%	12.00%	0.02%
Waste Management Inc	WM	0.25%	1.44%	0.00%	7.50%	0.02%
Constellation Brands Inc	STZ	0.13%	1.40%	0.00%	7.00%	0.01%
Xilinx Inc	XLNX	0.16%	0.82%	0.00%	8.00%	0.01%
DENTSPLY SIRONA Inc	XRAY	0.05%	0.77%	0.00%	5.50%	0.00%
Zions Bancorp NA	ZION	0.04%	2.41%	0.00%	7.50%	0.00%
Alaska Air Group Inc	ALK		n/a	n/a	0.00%	n/a
Invesco Ltd	IVZ	0.04%	2.68%	0.00%	15.50%	0.01%
Linde PLC	LIN		1.33%	n/a	0.00%	n/a
Intuit Inc	INTU	0.63%	0.43%	0.00%	15.00%	0.09%
Morgan Stanley	MS	0.69%	2.72%	0.02%	8.50%	0.06%
Microchip Technology Inc	MCHP	0.15%	1.18%	0.00%	10.50%	0.02%
Chubb Ltd	CB	0.31%	1.64%	0.01%	12.50%	0.04%

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Hologic Inc	HOLX		n/a	n/a	25.00%	n/a
Citizens Financial Group Inc	CFG	0.07%	3.29%	0.00%	8.50%	0.01%
O'Reilly Automotive Inc	ORLY		n/a	n/a	13.00%	n/a
Allstate Corp/The	ALL	0.13%	2.62%	0.00%	5.00%	0.01%
Equity Residential	EQR	0.12%	2.79%	0.00%	2.00%	0.00%
BorgWarner Inc	BWA	0.04%	1.51%	0.00%	9.50%	0.00%
Organon & Co	OGN		3.05%	n/a	0.00%	n/a
Host Hotels & Resorts Inc	HST		n/a	n/a	10.00%	n/a
Incyte Corp	INCY		n/a	n/a	0.00%	n/a
Simon Property Group Inc	SPG	0.18%	4.09%	0.01%	1.50%	0.00%
Eastman Chemical Co	EMN	0.05%	2.65%	0.00%	10.50%	0.01%
Twitter Inc	TWTR		n/a	n/a	39.00%	n/a
AvalonBay Communities Inc	AVB	0.12%	2.69%	0.00%	1.50%	0.00%
Prudential Financial Inc	PRU	0.16%	4.18%	0.01%	4.50%	0.01%
United Parcel Service Inc	UPS	0.57%	1.91%	0.01%	10.50%	0.06%
Walgreens Boots Alliance Inc	WBA	0.15%	4.06%	0.01%	7.50%	0.01%
STERIS PLC	STE	0.09%	0.74%	0.00%	10.00%	0.01%
McKesson Corp	MCK	0.12%	0.90%	0.00%	9.00%	0.01%
Lockheed Martin Corp	LMT	0.34%	3.37%	0.01%	7.50%	0.03%
AmerisourceBergen Corp	ABC	0.09%	1.44%	0.00%	6.50%	0.01%
Capital One Financial Corp	COF		1.59%	n/a	0.00%	n/a
Waters Corp	WAT		n/a	n/a	6.00%	n/a
Dollar Tree Inc	DLTR		n/a	n/a	8.50%	n/a
Darden Restaurants Inc	DRI	0.07%	3.05%	0.00%	19.00%	0.01%
Domino's Pizza Inc	DPZ		n/a	n/a	18.50%	n/a
NVR Inc	NVR	0.07%	0.77%	0.00%	15.00%	0.01%
NetApp Inc	NTAP		n/a	n/a	9.00%	n/a
Citrix Systems Inc	CTXS	0.07%	2.24%	0.00%	6.50%	0.00%
DXC Technology Co	DXC	0.04%	1.56%	0.00%	8.00%	0.00%
Old Dominion Freight Line Inc	ODFL		n/a	n/a	6.50%	n/a
DaVita Inc	DVA	0.15%	0.23%	0.00%	9.50%	0.01%
Hartford Financial Services Group Inc/The	HIG		n/a	n/a	16.00%	n/a
Iron Mountain Inc	IRM	0.09%	2.11%	0.00%	6.50%	0.01%
Estee Lauder Cos Inc/The	EL	0.05%	5.42%	0.00%	8.00%	0.00%
Cadence Design Systems Inc	CDNS	0.28%	0.65%	0.00%	11.50%	0.03%
Tyler Technologies Inc	TYL		n/a	n/a	12.00%	n/a
Universal Health Services Inc	UHS		n/a	n/a	14.00%	n/a
Skyworks Solutions Inc	SWKS	0.03%	0.64%	0.00%	11.00%	0.00%
NOV Inc	NOV	0.10%	1.34%	0.00%	13.50%	0.01%
Quest Diagnostics Inc	DGX	0.07%	1.69%	0.00%	7.50%	0.00%
Activision Blizzard Inc	ATVI	0.22%	0.60%	0.00%	13.00%	0.03%
Rockwell Automation Inc	ROK	0.14%	1.40%	0.00%	7.50%	0.01%
Kraft Heinz Co/The	KHC	0.16%	4.46%	0.01%	1.50%	0.00%
American Tower Corp	AMT	0.47%	1.86%	0.01%	9.50%	0.05%
Regeneron Pharmaceuticals Inc	REGN		n/a	n/a	12.50%	n/a
Amazon.com Inc	AMZN		n/a	n/a	30.00%	n/a
Jack Henry & Associates Inc	JKHY	0.05%	1.11%	0.00%	10.50%	0.00%
Ralph Lauren Corp	RL	0.02%	2.16%	0.00%	11.50%	0.00%
Boston Properties Inc	BXP		3.45%	n/a	-2.00%	n/a
Amphenol Corp	APH	0.17%	1.04%	0.00%	10.50%	0.02%
Howmet Aerospace Inc	HWM	0.05%	0.27%	0.00%	12.00%	0.01%
Pioneer Natural Resources Co	PXD	0.17%	1.20%	0.00%	20.00%	0.03%
Valero Energy Corp	VLO	0.12%	5.07%	0.01%	13.00%	0.02%
Synopsys Inc	SNPS		n/a	n/a	13.00%	n/a
Western Union Co/The	WU	0.03%	5.16%	0.00%	8.00%	0.00%
Etsy Inc	ETSY		n/a	n/a	29.00%	n/a
CH Robinson Worldwide Inc	CHRW	0.05%	2.10%	0.00%	8.00%	0.00%
Accenture PLC	ACN	0.87%	1.08%	0.01%	10.00%	0.09%
TransDigm Group Inc	TDG		n/a	n/a	11.00%	n/a
Yum! Brands Inc	YUM	0.14%	1.60%	0.00%	10.50%	0.01%
Prologis Inc	PLD	0.40%	1.74%	0.01%	8.50%	0.03%
FirstEnergy Corp	FE	0.08%	4.05%	0.00%	11.50%	0.01%
VeriSign Inc	VRSN		n/a	n/a	8.50%	n/a
Quanta Services Inc	PWR	0.06%	0.20%	0.00%	12.50%	0.01%
Henry Schein Inc	HSIC		n/a	n/a	6.50%	n/a
Ameren Corp	AEE	0.08%	2.61%	0.00%	6.50%	0.01%
ANSYS Inc	ANSS		n/a	n/a	8.00%	n/a
NVIDIA Corp	NVDA	2.36%	0.06%	0.00%	17.00%	0.40%
Sealed Air Corp	SEE	0.03%	1.35%	0.00%	13.50%	0.00%
Cognizant Technology Solutions Corp	CTSH	0.15%	1.23%	0.00%	7.00%	0.01%
SVB Financial Group	SIVB		n/a	n/a	5.00%	n/a
Intuitive Surgical Inc	ISRG		n/a	n/a	15.00%	n/a
Take-Two Interactive Software Inc	TTWO		n/a	n/a	12.00%	n/a
Republic Services Inc	RSG	0.16%	1.37%	0.00%	7.50%	0.01%
eBay Inc	EBAY	0.18%	0.94%	0.00%	16.50%	0.03%
Goldman Sachs Group Inc/The	GS	0.51%	1.94%	0.01%	7.00%	0.04%
SBA Communications Corp	SBAC		0.67%	n/a	45.00%	n/a
Sempra Energy	SRE	0.15%	3.45%	0.01%	10.00%	0.01%
Moody's Corp	MCO	0.28%	0.61%	0.00%	8.50%	0.02%

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
Booking Holdings Inc	BKNG		n/a	n/a	14.00%	n/a
F5 Networks Inc	FFIV		n/a	n/a	7.00%	n/a
Akamai Technologies Inc	AKAM		n/a	n/a	9.50%	n/a
Charles River Laboratories International Inc	CRL		n/a	n/a	7.00%	n/a
MarketAxess Holdings Inc	MKTX	0.06%	0.65%	0.00%	14.00%	0.01%
Devon Energy Corp	DVN		1.10%	n/a	0.00%	n/a
Bio-Techne Corp	TECH	0.08%	0.24%	0.00%	13.00%	0.01%
Alphabet Inc	GOOGL		n/a	n/a	0.00%	n/a
Teleflex Inc	TFX	0.06%	0.38%	0.00%	14.50%	0.01%
Allegion plc	ALLE	0.04%	1.12%	0.00%	9.50%	0.00%
Netflix Inc	NFLX		n/a	n/a	23.50%	n/a
Agilent Technologies Inc	A	0.18%	0.49%	0.00%	11.50%	0.02%
Trimble Inc	TRMB		n/a	n/a	14.00%	n/a
Anthem Inc	ANTM	0.39%	1.04%	0.00%	13.00%	0.05%
CME Group Inc	CME	0.29%	1.63%	0.00%	8.50%	0.02%
Juniper Networks Inc	JNPR	0.04%	2.71%	0.00%	7.00%	0.00%
BlackRock Inc	BLK	0.53%	1.75%	0.01%	11.00%	0.06%
DTE Energy Co	DTE	0.08%	3.12%	0.00%	2.00%	0.00%
Celanese Corp	CE	0.06%	1.68%	0.00%	6.50%	0.00%
Nasdaq Inc	NDAQ	0.13%	1.03%	0.00%	6.50%	0.01%
Philip Morris International Inc	PM	0.54%	5.29%	0.03%	7.00%	0.04%
Ingersoll Rand Inc	IR		0.15%	n/a	0.00%	n/a
salesforce.com Inc	CRM		n/a	n/a	20.00%	n/a
Huntington Ingalls Industries Inc	HII	0.03%	2.25%	0.00%	7.00%	0.00%
MetLife Inc	MET	0.20%	3.06%	0.01%	6.50%	0.01%
Under Armour Inc	UA		n/a	n/a	0.00%	n/a
Tapestry Inc	TPR	0.04%	2.57%	0.00%	10.00%	0.00%
CSX Corp	CSX	0.30%	1.03%	0.00%	11.50%	0.03%
Edwards Lifesciences Corp	EW		n/a	n/a	13.00%	n/a
Ameriprise Financial Inc	AMP	0.13%	1.50%	0.00%	13.50%	0.02%
Zebra Technologies Corp	ZBRA		n/a	n/a	12.50%	n/a
Zimmer Biomet Holdings Inc	ZBH	0.11%	0.67%	0.00%	8.50%	0.01%
CBRE Group Inc	CBRE		n/a	n/a	10.50%	n/a
Mastercard Inc	MA	1.21%	0.52%	0.01%	13.00%	0.16%
CarMax Inc	KMX		n/a	n/a	12.50%	n/a
Intercontinental Exchange Inc	ICE	0.29%	0.95%	0.00%	8.00%	0.02%
Fidelity National Information Services Inc	FIS		1.41%	n/a	28.00%	n/a
Chipotle Mexican Grill Inc	CMG		n/a	n/a	22.00%	n/a
Wynn Resorts Ltd	WYNN		n/a	n/a	27.00%	n/a
Live Nation Entertainment Inc	LYV		n/a	n/a	0.00%	n/a
Assurant Inc	AIZ	0.04%	1.64%	0.00%	15.50%	0.01%
NRG Energy Inc	NRG		3.26%	n/a	-1.50%	n/a
Monster Beverage Corp	MNST		n/a	n/a	11.50%	n/a
Regions Financial Corp	RF	0.08%	2.87%	0.00%	9.50%	0.01%
Mosaic Co/The	MOS		0.72%	n/a	33.50%	n/a
Expedia Group Inc	EXPE		n/a	n/a	0.00%	n/a
Evergy Inc	EVRG	0.05%	3.36%	0.00%	8.00%	0.00%
Discovery Inc	DISCA		n/a	n/a	13.50%	n/a
CF Industries Holdings Inc	CF	0.05%	2.11%	0.00%	19.50%	0.01%
APA Corp	APA		0.95%	n/a	0.00%	n/a
Leidos Holdings Inc	LDOS	0.05%	1.44%	0.00%	9.00%	0.00%
Alphabet Inc	GOOG		n/a	n/a	23.50%	n/a
Cooper Cos Inc/The	COO	0.08%	0.01%	0.00%	14.50%	0.01%
TE Connectivity Ltd	TEL	0.18%	1.37%	0.00%	9.00%	0.02%
Discover Financial Services	DFS	0.12%	1.76%	0.00%	16.00%	0.02%
Visa Inc	V	1.31%	0.71%	0.01%	12.00%	0.16%
Mid-America Apartment Communities Inc	MAA	0.09%	2.01%	0.00%	9.00%	0.01%
Xylem Inc/NY	XYL	0.09%	0.86%	0.00%	6.50%	0.01%
Marathon Petroleum Corp	MPC		3.52%	n/a	0.00%	n/a
Advanced Micro Devices Inc	AMD		n/a	n/a	29.00%	n/a
Tractor Supply Co	TSCO	0.09%	0.96%	0.00%	11.00%	0.01%
ResMed Inc	RMD	0.14%	0.64%	0.00%	8.50%	0.01%
Mettler-Toledo International Inc	MTD		n/a	n/a	12.00%	n/a
Copart Inc	CPRT		n/a	n/a	12.00%	n/a
Fortinet Inc	FTNT		n/a	n/a	21.00%	n/a
Albemarle Corp	ALB	0.11%	0.62%	0.00%	6.50%	0.01%
Moderna Inc	MRNA		n/a	n/a	0.00%	n/a
Essex Property Trust Inc	ESS		2.46%	n/a	-0.50%	n/a
Realty Income Corp	O	0.10%	3.96%	0.00%	6.50%	0.01%
Westrock Co	WRK	0.05%	2.08%	0.00%	8.00%	0.00%
IHS Markit Ltd	INFO	0.19%	0.61%	0.00%	10.50%	0.02%
Westinghouse Air Brake Technologies Corp	WAB	0.06%	0.53%	0.00%	9.50%	0.01%
Pool Corp	POOL	0.08%	0.62%	0.00%	17.00%	0.01%
Western Digital Corp	WDC		n/a	n/a	1.00%	n/a
PepsiCo Inc	PEP	0.82%	2.66%	0.02%	6.50%	0.05%
Diamondback Energy Inc	FANG		1.68%	n/a	0.00%	n/a
ServiceNow Inc	NOW		n/a	n/a	44.50%	n/a
Church & Dwight Co Inc	CHD	0.08%	1.16%	0.00%	8.00%	0.01%
Duke Realty Corp	DRE		1.99%	n/a	-1.00%	n/a

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
Federal Realty Investment Trust	FRT	0.03%	3.56%	0.00%	1.00%	0.00%
MGM Resorts International	MGM		0.02%	n/a	25.00%	n/a
American Electric Power Co Inc	AEP	0.16%	3.68%	0.01%	6.50%	0.01%
PTC Inc	PTC		n/a	n/a	0.00%	n/a
JB Hunt Transport Services Inc	JBHT	0.08%	0.61%	0.00%	8.00%	0.01%
Lam Research Corp	LRCX	0.29%	1.06%	0.00%	17.50%	0.05%
Mohawk Industries Inc	MHK		n/a	n/a	10.50%	n/a
Pentair PLC	PNR	0.05%	1.08%	0.00%	12.00%	0.01%
Vertex Pharmaceuticals Inc	VRTX		n/a	n/a	17.00%	n/a
Amcor PLC	AMCR	0.07%	3.89%	0.00%	15.00%	0.01%
Facebook Inc	FB		n/a	n/a	21.50%	n/a
T-Mobile US Inc	TMUS		n/a	n/a	8.50%	n/a
United Rentals Inc	URI		n/a	n/a	10.50%	n/a
Alexandria Real Estate Equities Inc	ARE	0.12%	2.19%	0.00%	12.00%	0.01%
Honeywell International Inc	HON	0.56%	1.79%	0.01%	10.00%	0.06%
ABIOMED Inc	ABMD		n/a	n/a	9.50%	n/a
Delta Air Lines Inc	DAL		n/a	n/a	49.00%	n/a
United Airlines Holdings Inc	UAL		n/a	n/a	0.00%	n/a
Seagate Technology Holdings PLC	STX	0.07%	3.14%	0.00%	4.00%	0.00%
News Corp	NWS		0.89%	n/a	0.00%	n/a
Centene Corp	CNC		n/a	n/a	9.50%	n/a
Martin Marietta Materials Inc	MLM	0.09%	0.62%	0.00%	7.00%	0.01%
Teradyne Inc	TER	0.08%	0.29%	0.00%	13.50%	0.01%
PayPal Holdings Inc	PYPL		n/a	n/a	16.00%	n/a
Tesla Inc	TSLA		n/a	n/a	0.00%	n/a
DISH Network Corp	DISH		n/a	n/a	2.50%	n/a
Penn National Gaming Inc	PENN		n/a	n/a	30.00%	n/a
Dow Inc	DOW		5.00%	n/a	0.00%	n/a
Everest Re Group Ltd	RE	0.04%	2.37%	0.00%	11.00%	0.00%
Teledyne Technologies Inc	TDY		n/a	n/a	14.50%	n/a
News Corp	NWSA		0.87%	n/a	0.00%	n/a
Exelon Corp	EXC	0.19%	2.88%	0.01%	5.50%	0.01%
Global Payments Inc	GPN	0.15%	0.70%	0.00%	16.50%	0.03%
Crown Castle International Corp	CCI	0.29%	3.26%	0.01%	8.50%	0.02%
Aptiv PLC	APTV		n/a	n/a	15.50%	n/a
Advance Auto Parts Inc	AAP	0.05%	1.77%	0.00%	11.00%	0.01%
Align Technology Inc	ALGN		n/a	n/a	17.00%	n/a
Illumina Inc	ILMN		n/a	n/a	14.00%	n/a
LKQ Corp	LKQ	0.06%	1.82%	0.00%	12.00%	0.01%
Nielsen Holdings PLC	NLSN		1.19%	n/a	0.00%	n/a
Garmin Ltd	GRMN	0.10%	1.87%	0.00%	10.00%	0.01%
Zoetis Inc	ZTS	0.38%	0.46%	0.00%	11.00%	0.04%
Digital Realty Trust Inc	DLR	0.17%	2.94%	0.00%	8.00%	0.01%
Equinix Inc	EQIX	0.28%	1.37%	0.00%	17.00%	0.05%
Las Vegas Sands Corp	LVS		n/a	n/a	17.00%	n/a
Discovery Inc	DISCK		n/a	n/a	0.00%	n/a

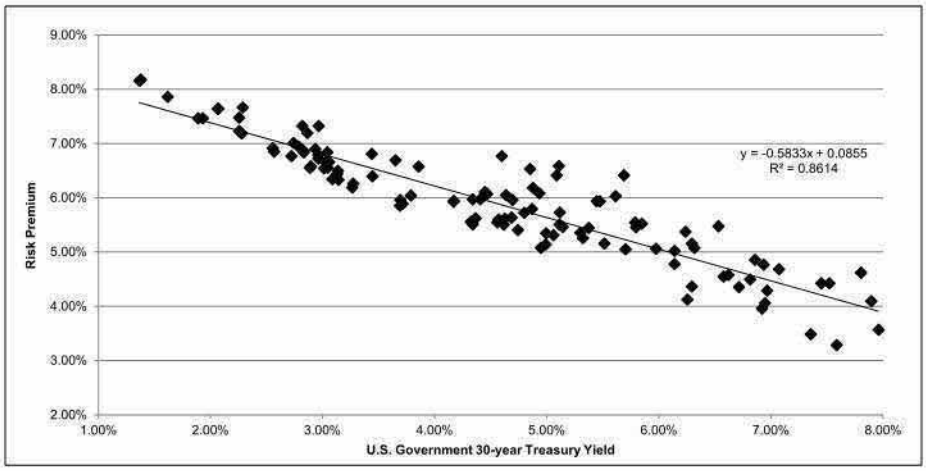
Notes:
[4] Source: Bloomberg Professional as of October 31, 2021
[5] Source: Bloomberg Professional as of October 31, 2021
[6] Equals [4] x [5]
[7] Source: Value Line
[8] Equals [4] x [7]

Risk Premium -- Natural Gas Utilities (US)

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.42%	7.80%	4.62%
1992.2	11.98%	7.89%	4.09%
1992.3	11.87%	7.45%	4.42%
1992.4	11.94%	7.52%	4.42%
1993.1	11.75%	7.07%	4.68%
1993.2	11.71%	6.86%	4.85%
1993.3	11.39%	6.31%	5.07%
1993.4	11.16%	6.14%	5.02%
1994.1	11.12%	6.57%	4.55%
1994.2	10.84%	7.35%	3.48%
1994.3	10.87%	7.58%	3.28%
1994.4	11.53%	7.96%	3.57%
1995.2	11.00%	6.94%	4.06%
1995.3	11.07%	6.71%	4.35%
1995.4	11.61%	6.23%	5.37%
1996.1	11.45%	6.29%	5.16%
1996.2	10.88%	6.92%	3.96%
1996.3	11.25%	6.96%	4.29%
1996.4	11.19%	6.62%	4.58%
1997.1	11.31%	6.81%	4.49%
1997.2	11.70%	6.93%	4.77%
1997.3	12.00%	6.53%	5.47%
1997.4	10.92%	6.14%	4.78%
1998.2	11.37%	5.85%	5.52%
1998.3	11.41%	5.47%	5.94%
1998.4	11.69%	5.10%	6.59%
1999.1	10.82%	5.37%	5.44%
1999.2	11.25%	5.79%	5.46%
1999.4	10.38%	6.25%	4.12%
2000.1	10.66%	6.29%	4.36%
2000.2	11.03%	5.97%	5.06%
2000.3	11.33%	5.79%	5.55%
2000.4	12.10%	5.69%	6.41%
2001.1	11.38%	5.44%	5.93%
2001.2	10.75%	5.70%	5.05%
2001.4	10.65%	5.30%	5.35%
2002.1	10.67%	5.51%	5.15%
2002.2	11.64%	5.61%	6.03%
2002.3	11.50%	5.08%	6.42%
2002.4	11.01%	4.93%	6.08%
2003.1	11.38%	4.85%	6.53%
2003.2	11.36%	4.60%	6.76%
2003.3	10.61%	5.11%	5.50%
2003.4	10.84%	5.11%	5.73%
2004.1	11.06%	4.88%	6.18%
2004.2	10.57%	5.32%	5.25%
2004.3	10.37%	5.06%	5.31%
2004.4	10.66%	4.86%	5.79%
2005.1	10.65%	4.69%	5.96%
2005.2	10.54%	4.47%	6.07%
2005.3	10.47%	4.44%	6.03%
2005.4	10.32%	4.68%	5.63%
2006.1	10.68%	4.63%	6.05%
2006.2	10.60%	5.14%	5.46%
2006.3	10.34%	4.99%	5.34%
2006.4	10.14%	4.74%	5.40%
2007.1	10.52%	4.80%	5.72%
2007.2	10.13%	4.99%	5.14%
2007.3	10.03%	4.95%	5.08%
2007.4	10.12%	4.61%	5.50%
2008.1	10.38%	4.41%	5.97%
2008.2	10.17%	4.57%	5.60%
2008.3	10.55%	4.44%	6.11%
2008.4	10.34%	3.65%	6.69%
2009.1	10.24%	3.44%	6.81%
2009.2	10.11%	4.17%	5.94%
2009.3	9.88%	4.32%	5.56%
2009.4	10.31%	4.34%	5.97%
2010.1	10.24%	4.62%	5.61%
2010.2	9.99%	4.36%	5.62%
2010.3	10.43%	3.86%	6.57%
2010.4	10.09%	4.17%	5.93%
2011.1	10.10%	4.56%	5.54%
2011.2	9.85%	4.34%	5.51%
2011.3	9.65%	3.69%	5.96%
2011.4	9.88%	3.04%	6.84%
2012.1	9.63%	3.14%	6.50%
2012.2	9.83%	2.93%	6.90%
2012.3	9.75%	2.74%	7.01%

Risk Premium -- Natural Gas Utilities (US)

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
2012.4	10.06%	2.86%	7.19%
2013.1	9.57%	3.13%	6.44%
2013.2	9.47%	3.14%	6.33%
2013.3	9.60%	3.71%	5.89%
2013.4	9.83%	3.79%	6.04%
2014.1	9.54%	3.69%	5.85%
2014.2	9.84%	3.44%	6.39%
2014.3	9.45%	3.26%	6.19%
2014.4	10.28%	2.96%	7.32%
2015.1	9.47%	2.55%	6.91%
2015.2	9.43%	2.88%	6.55%
2015.3	9.75%	2.96%	6.79%
2015.4	9.68%	2.96%	6.72%
2016.1	9.48%	2.72%	6.76%
2016.2	9.42%	2.57%	6.85%
2016.3	9.47%	2.28%	7.19%
2016.4	9.67%	2.83%	6.84%
2017.1	9.60%	3.04%	6.56%
2017.2	9.47%	2.90%	6.58%
2017.3	10.14%	2.82%	7.32%
2017.4	9.70%	2.82%	6.88%
2018.1	9.68%	3.02%	6.66%
2018.2	9.43%	3.09%	6.34%
2018.3	9.71%	3.06%	6.65%
2018.4	9.53%	3.27%	6.26%
2019.1	9.55%	3.01%	6.54%
2019.2	9.73%	2.78%	6.94%
2019.3	9.95%	2.29%	7.66%
2019.4	9.73%	2.25%	7.48%
2020.1	9.35%	1.89%	7.46%
2020.2	9.55%	1.38%	8.17%
2020.3	9.52%	1.37%	8.15%
2020.4	9.47%	1.62%	7.86%
2021.1	9.71%	2.07%	7.64%
2021.2	9.48%	2.25%	7.22%
2021.3	9.40%	1.93%	7.46%
2021.4	9.70%	2.06%	7.64%
AVERAGE	10.45%	4.54%	5.90%
MEDIAN	10.34%	4.61%	5.95%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.928096723
R Square	0.861363528
Adjusted R Square	0.860147418
Standard Error	0.003878396
Observations	116

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.010654134	0.010654134	708.2944371	9.803E-51
Residual	114	0.001714783	1.5042E-05		
Total	115	0.012368917			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.085522442	0.001059027	80.75564866	1.8754E-102	0.083424517	0.08762037	0.083424517	0.087620367
U.S. Govt. 30-year Treasury	-0.583296505	0.021917068	-26.6138016	9.803E-51	-0.626714048	-0.539879	-0.626714048	-0.539878962

	[7] U.S. Govt. 30-year Treasury	[8] Risk Premium	[9] ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	2.03%	7.37%	9.40%
Blue Chip Near-Term Projected Forecast (Q1 2021 - Q1 2023) [5]	2.50%	7.09%	9.59%
Blue Chip Long-Term Projected Forecast (2023-2027) [6]	3.50%	6.51%	10.01%
AVERAGE			9.67%

Notes:
[1] Source: Regulatory Research Associates, rate cases through October 31, 2021
[2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] Source: Bloomberg Professional, 30-day average as of October 31, 2021
[5] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.085522 + (-0.583297 x Column [7])
[9] Equals Column [7] + Column [8]

BUSINESS SEGMENT DATA FOR NISOURCE

NiSource Inc. - Operating Income ($000)											
Year	Total	Gas Distribution Operations	MA Incident / Impairment Charges	Gas Distribution Restated	Electric Operations	Corporate and Other	MA Incident / Impairment Charges	Corporate and Other Restated	Eliminations	Notes	Percent Gas Dist. / Total
2020	963,200	199,100	412,400	611,500	348,800	2,900	-	2,900	-	[1]	63.49%
2019	1,305,200	675,400	209,700	885,100	406,800	(191,500)	204,800	13,300	-	[1]	67.81%
2018	1,215,400	(254,100)	1,090,700	836,600	386,100	(7,300)	-	(7,300)	-	[1]	68.83%
3 yr. average											**66.71%**
2017	921,200	550,100	-	550,100	367,400	3,700	-	3,700	-	[2]	59.72%
2016	866,100	569,700	-	569,700	301,300	(4,900)	-	(4,900)	-	[2]	65.78%
2015	799,900	555,800	-	555,800	264,400	(20,300)	-	(20,300)	-	[3], [4]	69.48%
2014	789,100	537,000	-	537,000	282,700	(30,600)	-	(30,600)	-	[3]	68.05%
2013	702,000	445,400	-	445,400	265,500	(8,900)	-	(8,900)	-	[5]	63.45%
2012	641,700	391,300	-	391,300	250,800	(400)	-	(400)	-	[5]	60.98%
2011	554,400	376,400	-	376,400	208,400	(30,400)	-	(30,400)	-	[5]	67.89%
2010	515,200	319,500	-	319,500	219,800	(24,100)	-	(24,100)	-	[6]	62.01%

Notes:

[1] Source: NiSource -2020 Form 10-K pages 32, 34, 36, 71, and 113
[2] Source: NiSource - 2017 Form 10-K, pages 98-99
[3] Source: NiSource - 2015 Form 10-K, pages 102-103
[4] The calculation for 2010 through 2015 excludes the segment data for Columbia Pipeline Partners Group which separated from NiSource in July 2015.
[5] Source: NiSource - 2013 Form 10-K, pages 124-125
[6] Source: NiSource - 2012 10-K, pages 128-129

FLOTATION COST ADJUSTMENT

Company	Date [i]	[1] Shares Issued (000)	[2] Offering Price	[3] Under-writing Discount [ii]	[4] Offering Expense ($000)	[5] Net Proceeds Per Share	[6] Total Flotation Costs ($000)	[7] Gross Equity Issue Before Costs ($000)	[8] Net Proceeds ($000)	[9] Flotation Cost Percentage	
Southwest Gas Holdings, Inc.	11/27/2018	3,565	$ 75.50	$ 2.55	$ 600.00	$72.78	$9,684	$269,158	$259,474	3.598%	
Total							$ 9,684.0	$ 269,157.5	$ 259,473.5		
							WEIGHTED AVERAGE FLOTATION COSTS			3.598%	[10]

Notes:
[i] Offering Completion Date
[ii] Underwriting discount was calculated as the market price minus the offering price when not explicitly given in the prospectus.

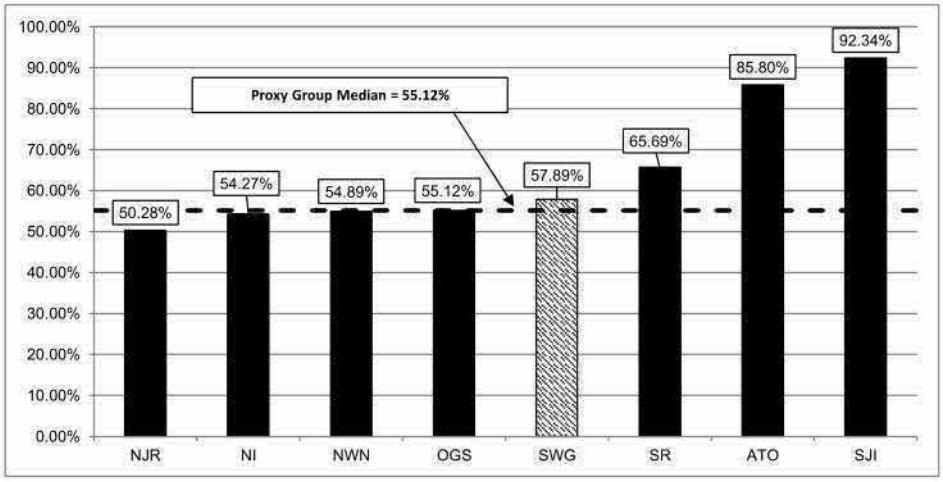
The flotation cost adjustment is derived by dividing the dividend yield by 1 − F (where F = flotation costs expressed in percentage terms), or by 0.9640, and adding that result to the constant growth rate to determine the cost of equity. Using the formulas shown previously in my testimony, the Constant Growth DCF calculation is modified as follows to accommodate an adjustment for flotation costs:

$$k = \frac{D \times (1 + 0.5g)}{P \times (1 - F)} + g$$

Company	Ticker	[11] Annualized Dividend	[12] Stock Price	[13] Dividend Yield	[14] Expected Dividend Yield	[15] Expected Dividend Yield Adjusted for Flotation Costs	[16] Value Line Earnings Growth	[17] Yahoo! Finance Earnings Growth	[18] Zacks Earnings Growth	[19] Average Earnings Growth	[20] ROE	[21] ROE Adjusted for Flotation Costs
Atmos Energy Corporation	ATO	$2.50	$90.73	2.76%	2.86%	2.97%	7.00%	8.00%	7.50%	7.50%	10.36%	10.47%
New Jersey Resources Corporation	NJR	$1.45	$36.72	3.95%	4.05%	4.20%	2.00%	6.00%	7.10%	5.03%	9.08%	9.23%
NiSource Inc.	NI	$0.88	$24.48	3.59%	3.71%	3.85%	9.50%	3.52%	6.20%	6.41%	10.12%	10.26%
Northwest Natural Gas Company	NWN	$1.93	$46.74	4.13%	4.24%	4.40%	5.50%	5.70%	5.00%	5.40%	9.64%	9.80%
ONE Gas Inc.	OGS	$2.32	$66.57	3.49%	3.57%	3.70%	6.50%	2.90%	5.00%	4.80%	8.37%	8.50%
South Jersey Industries, Inc.	SJI	$1.21	$22.31	5.42%	5.63%	5.84%	11.50%	5.20%	5.60%	7.43%	13.06%	13.27%
Spire, Inc.	SR	$2.60	$63.18	4.12%	4.27%	4.43%	10.00%	7.31%	5.50%	7.60%	11.88%	12.03%
Mean											10.36%	10.51%
Flotation Cost Adjustment											[12]	0.15%

Notes:
[1] Source: Company Prospectus
[2] Source: Company Prospectus
[3]-[4] Source: Company Prospectus
[5] Equals [8]/[1]
[6] Equals [4] + ([1] x [3])
[7] Equals [1] x [2]
[8] Equals [7] - [6]
[9] Equals [6] / [7]
[10] Equals average [6] / average [7]
[11] Source: Bloomberg Professional
[12] Source: Bloomberg Professional, equals 30-day average as of August 31, 2021
[13] Equals [11] / [12]
[14] Equals [13] x (1 + 0.5 x [19])
[15] Equals [14] / (1 − Flotation Cost)
[16] Source: Value Line
[17] Source: Yahoo! Finance
[18] Source: Zacks
[19] Equals Average ([16], [17], [18])
[20] Equals [14] + [19]
[21] Equals [15] + [19]
[22] Equals Average ([21]) − Average ([20])

2022-2026 CAPITAL EXPENDITURES AS A PERCENT OF 2020 NET PLANT



Projected CAPEX / 2020 Net Plant

Company		2022-2026
New Jersey Resources Corporation	NJR	50.28%
NiSource Inc.	NI	54.27%
Northwest Natural Gas Company	NWN	54.89%
ONE Gas Inc.	OGS	55.12%
Southwest Gas	SWG	57.89%
Spire, Inc.	SR	65.69%
Atmos Energy Corporation	ATO	85.80%
South Jersey Industries, Inc.	SJI	92.34%
Proxy Group Median		55.12%
Southwest Gas/Proxy Group		1.05

Notes:
Source: Exhibit No._(AEB-11), page 1, col. [7]

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]
						Non-Volumetric Rate Design				
Company	Operating Subsidiary	Jurisdiction	Service	Test Year	Rate Base	Revenue Decoupling	Formula-based rates	Straight Fixed-Variable Rate Design	Non-Volumetric Rate Design	Capital Cost Recovery Mechanism
Atmos Energy Corporation	Atmos Energy Corporation	Kansas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Atmos Energy Corporation	Kentucky	Gas	Fully Forecast	Average	Partial	No	No	Yes	Yes
	Atmos Energy Corporation	Louisiana	Gas	Historical	Year End	Partial	Yes	No	Yes	Yes
	Atmos Energy Corporation	Mississippi	Gas	Partially Forecast	Average	Partial	Yes	No	Yes	Yes
	Atmos Energy Corporation	Tennessee	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Atmos Energy Corporation	Texas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
New Jersey Resources Corporation	New Jersey Natural Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Full	No	No	Yes	Yes
NiSource Inc.	Northern Indiana Public Service C	Indiana	Electric	Fully Forecast	Year End	Partial	No	No	Yes	Yes
	Northern Indiana Public Service C	Indiana	Electric	Fully Forecast	Year End	No	No	No	No	Yes
	Columbia Gas of Kentucky Inc	Kentucky	Gas	Fully Forecast	Average	Partial	No	No	Yes	Yes
	Columbia Gas of Maryland Inc.	Maryland	Gas	Partially Forecast	Average	Partial	No	No	Yes	Yes
	Columbia Gas of Ohio Inc.	Ohio	Gas	Partially Forecast	Year End	No	No	Yes	Yes	Yes
	Columbia Gas of Pennsylvania Inc	Pennsylvania	Gas	Fully Forecast	Year End	Partial	No	No	Yes	Yes
	Columbia Gas of Virginia Inc.	Virginia	Gas	Historical	Average	Partial	No	No	Yes	Yes
Northwest Natural Gas Company	Northwest Natural Gas Co.	Oregon	Gas	Fully Forecast	Average	Partial	No	No	Yes	No
	Northwest Natural Gas Co.	Washington	Gas	Historical	Average	No	No	No	No	No
ONE Gas, Inc.	Kansas Gas Service Co.	Kansas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Oklahoma Natural Gas Co.	Oklahoma	Gas	Historical	Year End	Partial	No	No	Yes	No
	Texas Gas Service Co. Inc.	Texas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
South Jersey Industries, Inc.	Elizabethtown Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Partial	No	No	Yes	Yes
	South Jersey Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Full	No	No	Yes	Yes
Spire, Inc.	Spire Alabama Inc.	Alabama	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Spire Gulf Inc.	Alabama	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Spire Missouri Inc. - East	Missouri	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Spire Missouri Inc. - West	Missouri	Gas	Historical	Year End	No	No	No	No	Yes
Proxy Group Totals		Fully Forecast		9	Year End 15	Full 2	Yes 5	Yes 1	Yes 22	Yes 19
		Partially Forecast		6	Average 10	Partial 19	No 20	No 24	No 3	No 6
		Historical		10		No 4				
		Forecast		60.00%	Year End 60.00%	RDM 84.00%	FRP 20.00%	SFV 4.00%	NVRD 88.00%	CCRM 76.00%
Southwest Gas [8]		Arizona		Historical	Year-End	Full	No	No	Yes	Yes

Notes
[1] - [2] Source: S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 6/22/21, ATO LA Tariff, ATO MS Tariff, SR AL Tariff, and SR Gulf Tariff.
[3] Source: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit.
[4] Source: S&P Global Market Intelligence: Regulatory Commission Profiles
[5] Source: S&P Global Market Intelligence: Regulatory Commission Profiles
[6] Equals IF(AND([3]=No, [4]=No, [5]=No), No, Yes)
[7] Source: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit.
[8] Data provided by Southwest Gas.

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
RRA RANKINGS

		[1]	[2]
		RRA	
		Rank	Numeric Rank
Atmos Energy Corporation	Kansas	Below Average / 1	7.00
	Kentucky	Average / 1	4.00
	Louisiana	Average / 2	5.00
	Mississippi	Above Average / 3	3.00
	Tennessee	Above Average / 3	3.00
	Texas	Average / 3	6.00
New Jersey Industries	New Jersey	Below Average / 1	7.00
NiSource	Indiana	Average / 1	4.00
	Kentucky	Average / 1	4.00
	Maryland	Average / 3	6.00
	Ohio	Average / 3	6.00
	Pennsylvania	Above Average / 2	2.00
	Virginia	Average / 1	4.00
Northwest Natural Gas Company	Oregon	Average / 2	5.00
	Washington	Average / 3	6.00
ONE Gas, Inc.	Kansas	Below Average / 1	7.00
	Oklahoma	Average / 2	5.00
	Texas	Average / 3	6.00
South Jersey Industries, Inc.	New Jersey	Below Average / 1	7.00
Spire, Inc.	Alabama	Above Average / 1	1.00
	Missouri	Average / 3	6.00
Proxy Group Average		Average / 2	4.95
Southwest Gas	Arizona	Below Average / 1	7.00

Ranking Legend	
Description	**Value**
Below Average / 3	9
Below Average / 2	8
Below Average / 1	7
Average / 3	6
Average / 2	5
Average / 1	4
Above Average / 3	3
Above Average / 2	2
Above Average / 1	1

Notes
[1] Source: RRA Regulatory Focus – State Regulatory Evaluations, September 8, 2021
[2] AA/1= 1, AA/2= 2, AA/3= 3, A/1= 4, A/2= 5, A/3=6, BA/1= 7, BA/2= 8, BA/3= 9

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
S&P JURISDICTIONAL RANKINGS

		[1]	[2]
		RRA	
		Rank	Numeric Rank
Atmos Energy Corporation	Kansas	Highly Credit Supportive	2
	Kentucky	Most Credit Supportive	1
	Louisiana	Highly Credit Supportive	2
	Mississippi	More Credit Supportive	4
	Tennessee	Highly Credit Supportive	2
	Texas	Highly Credit Supportive	2
New Jersey Industries	New Jersey	More Credit Supportive	4
NiSource	Indiana	Highly Credit Supportive	2
	Kentucky	Most Credit Supportive	1
	Maryland	Very Credit Supportive	3
	Ohio	Very Credit Supportive	3
	Pennsylvania	Highly Credit Supportive	2
	Virginia	Highly Credit Supportive	2
Northwest Natural Gas Company	Oregon	Highly Credit Supportive	2
	Washington	Very Credit Supportive	3
ONE Gas, Inc.	Kansas	Highly Credit Supportive	2
	Oklahoma	More Credit Supportive	4
	Texas	Highly Credit Supportive	2
South Jersey Industries, Inc.	New Jersey	More Credit Supportive	4
Spire, Inc.	Alabama	Most Credit Supportive	1
	Missouri	Very Credit Supportive	3
Proxy Group Average		Very Credit Supportive / Highly Credit Supportive	2.43
Southwest Gas	Arizona	More Credit Supportive	4

Ranking Legend

Description	Value
Credit Supportive	5
More Credit Supportive	4
Very Credit Supportive	3
Highly Credit Supportive	2
Most Credit Supportive	1

Notes
[1] Source: Updates and Insights on Regulatory Jurisdictions Shaping Policies for North American Utilities, Standard and Poor's Ratings Services, June 29, 2021

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DOCKET NO.

MOODY'S INVESTORS SERVICE - ASSESSMENT OF REGULATORY RISK

	ATO	NJR	NI	NWN	OGS	SJI	SR	Average	SWX
Factor 1: Regulatory Framework									
Legislative and Judicial Underpinnings of Regulatory Framework	A	A	A	A	A	A	A		A
Consistency and Predictability of Regulation	Aa	Aa	A	A	A	Aa	A		A
Factor 2: Ability to Recover Costs and Earn Returns									
Timeliness of Recovery of Operating and Capital Costs	Aa	A	A	Aa	A	A	A		Baa
Sufficiency of Rates and Returns	A	A	A	A	Baa	A	A		Baa
Factor 1: Regulatory Framework									
Legislative and Judicial Underpinnings of Regulatory Framework	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Consistency and Predictability of Regulation	3.00	3.00	2.00	2.00	2.00	3.00	2.00	2.43	2.00
Factor 2: Ability to Recover Costs and Earn Returns									
Timeliness of Recovery of Operating and Capital Costs	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.29	1.00
Sufficiency of Rates and Returns	2.00	2.00	2.00	2.00	1.00	2.00	2.00	1.86	1.00
Average	2.50	2.25	2.00	2.25	1.75	2.25	2.00	2.14	1.50

Source: Moody's Investors Service Credit Opinions Publications

Scale	
Aaa	4
Aa	3
A	2
Baa	1

CAPITAL STRUCTURE ANALYSIS

COMMON EQUITY RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
New Jersey Resources Corporation	NJR	55.45%	58.87%	55.45%
NiSource Inc.	NI	54.43%	54.33%	54.43%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
One Gas Inc.	OGS	60.04%	63.28%	60.04%
South Jersey Industries, Inc.	SJI	54.73%	52.88%	54.73%
Spire Inc.	SR	58.51%	60.85%	58.51%
Proxy Group				
MEAN		55.56%	56.83%	55.56%
LOW		47.44%	49.19%	47.44%
HIGH		60.04%	63.28%	60.04%

COMMON EQUITY RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
New Jersey Natural Gas Company	NJR	55.45%	58.87%	55.45%
Columbia Gas of Kentucky, Inc.	NI	54.68%	54.23%	54.68%
Columbia Gas of Maryland, Inc.	NI	54.95%	52.38%	54.95%
Columbia Gas of Ohio, Inc.	NI	50.45%	53.00%	50.45%
Columbia Gas of Pennsylvania, Inc.	NI	55.68%	55.59%	55.68%
Columbia Gas of Virginia, Inc.	NI	43.69%	42.53%	43.69%
Northern Indiana Public Service Company LLC	NI	58.01%	56.43%	58.01%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
Kansas Gas Service Company, Inc.	OGS	60.33%	63.55%	60.33%
Oklahoma Natural Gas Company	OGS	59.85%	63.10%	59.85%
Texas Gas Service Company, Inc.	OGS	59.99%	63.23%	59.99%
South Jersey Gas Company	SJI	54.73%	52.88%	54.73%
Spire Alabama Inc.	SR	64.35%	66.82%	64.35%
Spire Gulf Inc.	SR	40.55%	37.18%	40.55%
Spire Mississippi Inc.	SR		100.00%	100.00%
Spire Missouri Inc.	SR	56.68%	59.05%	56.68%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

LONG-TERM DEBT RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
New Jersey Resources Corporation	NJR	44.55%	41.13%	44.55%
NiSource Inc.	NI	45.57%	45.67%	45.57%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
One Gas Inc.	OGS	39.96%	36.72%	39.96%
South Jersey Industries, Inc.	SJI	45.27%	47.12%	45.27%
Spire Inc.	SR	41.49%	39.15%	41.49%
Proxy Group				
MEAN		44.44%	43.17%	44.44%
LOW		39.96%	36.72%	39.96%
HIGH		52.56%	50.81%	52.56%

LONG-TERM DEBT RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
New Jersey Natural Gas Company	NJR	44.55%	41.13%	44.55%
Columbia Gas of Kentucky, Inc.	NI	45.32%	45.77%	45.32%
Columbia Gas of Maryland, Inc.	NI	45.05%	47.62%	45.05%
Columbia Gas of Ohio, Inc.	NI	49.55%	47.00%	49.55%
Columbia Gas of Pennsylvania, Inc.	NI	44.32%	44.41%	44.32%
Columbia Gas of Virginia, Inc.	NI	56.31%	57.47%	56.31%
Northern Indiana Public Service Company LLC	NI	41.99%	43.57%	41.99%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
Kansas Gas Service Company, Inc.	OGS	39.67%	36.45%	39.67%
Oklahoma Natural Gas Company	OGS	40.15%	36.90%	40.15%
Texas Gas Service Company, Inc.	OGS	40.01%	36.77%	40.01%
South Jersey Gas Company	SJI	45.27%	47.12%	45.27%
Spire Alabama Inc.	SR	35.65%	33.18%	35.65%
Spire Gulf Inc.	SR	59.45%	62.82%	59.45%
Spire Mississippi Inc.	SR		0.00%	0.00%
Spire Missouri Inc.	SR	43.32%	40.95%	43.32%

Notes:
[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

PREFERRED EQUITY RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
New Jersey Resources Corporation	NJR	0.00%	0.00%	0.00%
NiSource Inc.	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
One Gas Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Industries, Inc.	SJI	0.00%	0.00%	0.00%
Spire Inc.	SR	0.00%	0.00%	0.00%
Proxy Group				
MEAN		0.00%	0.00%	0.00%
LOW		0.00%	0.00%	0.00%
HIGH		0.00%	0.00%	0.00%

PREFERRED EQUITY RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
New Jersey Natural Gas Company	NJR	0.00%	0.00%	0.00%
Columbia Gas of Kentucky, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Maryland, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Ohio, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Pennsylvania, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Virginia, Inc.	NI	0.00%	0.00%	0.00%
Northern Indiana Public Service Company LLC	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
Kansas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
Oklahoma Natural Gas Company	OGS	0.00%	0.00%	0.00%
Texas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Gas Company	SJI	0.00%	0.00%	0.00%
Spire Alabama Inc.	SR	0.00%	0.00%	0.00%
Spire Gulf Inc.	SR	0.00%	0.00%	0.00%
Spire Mississippi Inc.	SR		0.00%	0.00%
Spire Missouri Inc.	SR	0.00%	0.00%	0.00%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

Estimates of Return on Fair Value Increment

Scenario 1: Real Risk Free Rate -- Projected Estimate

Step 1

Consumer Price Index (YoY % Change) [1]	
2023-2027	2.20%
2028-2032	2.20%
Average	2.20%
Consumer Price Index (All-Urban) [2]	
2022	2.68%
2032	3.34%
Compound Annual Growth Rate	2.20%
GDP Chain-type Price Index (2012=1.000) [2]	
2022	1.16%
2032	1.45%
Compound Annual Growth Rate	2.28%
Average Inflation Forecast	**2.23%**

Step 2

Nominal U.S. Treasury Bond Yield, 30-year [1]	
2023-2027	3.50%
2028-2032	3.90%
	3.70%
Real Risk-Free Rate [3]	**1.44%**

Notes:

[1] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14

[2] Energy Information Administration, Annual Energy Outlook 2021, Table 20

[3] Equals (3.70% + 1) / (1 + 2.23%) − 1

Estimates of Return on Fair Value Increment

Scenario 2: Real Risk Free Rate -- Projected Estimate

Nominal U.S. Treasury Bond Yield, 30-year [1]		
Projection period:	2023-2027	3.50%
Projection period:	2028-2032	3.90%
		3.70%
180-day average yield on 30-year U.S. Treasury Bonds [2]		2.08%
180-day average yield on 30-year U.S. Treasury Inflation Protected Securities [2]		-0.13%
		2.21%
Real Risk-Free Rate [3]		**1.49%**

Notes:

[1] Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyieldYear&year=2021

As of August 31, 2021

[3] Equals [1]-[2]

Estimates of Return on Fair Value Increment

Scenario 3: Real Risk Free Rate -- Normalized Risk-Free Rate

Nominal Risk Free Rate [1]	2.50%
180-day average yield on 30-year U.S. Treasury Bonds [2]	2.08%
180-day average yield on 30-year U.S. Treasury Inflation Protected Securities [2]	-0.13%
	2.21%
Real Risk-Free Rate [3]	**0.29%**

Notes:

[1] Duff and Phelps 2020 Valuation Handbook

[2] Source: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyieldYear&year=2021

As of August 31, 2021

[3] Equals [1]-[2]

Estimates of Return on Fair Value Increment

Real Risk-Free Rate Estimates	
Scenario 1	1.44%
Scenario 2	1.49%
Scenario 3	0.29%
Mean	1.07%

FVI Cost Rate Recommendations

Bulkley recommended rate [1]	1.07%
Southwest Gas requested rate	**0.00%**

Notes:
[1] Equals the mean of the three scenarios

FAIR VALUE RATE OF RETURN
ARIZONA STAFF METHODOLOGY

	Amount ($M)	Weighting	Weighted Amount ($M)	
Original Cost Rate Base (OCRB)	$ 2,642,068	50.00%	$ 1,321,034	[1]
Replacement Cost New, Depreciated Rate Base (RCND)	$ 4,186,764	50.00%	$ 2,093,382	[2]
Fair Value Rate Base (FVRB)			$ 3,414,416	[3]
Appreciation Above OCRB			$ 772,348	[4]

Capital		Amount ($M)	Percent	Cost Rate		Weighted Cost Rate
Long-Term Debt	49.00%	$ 1,294,613.3	37.92%	4.15%	[5]	1.57%
Common Equity	51.00%	1,347,454.6	39.46%	9.90%	[6]	3.91%
Capital Financing OCRB		$ 2,642,067.9	77.38%			5.48%
Appreciation Above OCRB Not Recognized on Utility's Books		772,348.3	22.62%	0.00%	[7]	0.00%
Total		$ 3,414,416.2	100.00%			5.48%

[1] Schedule B-1
[2] Schedule B-1
[3] Equals [1] + [2]
[4] Equals [3] − OCRB
[5] Schedule D-1
[6] Equals the recommended ROE on OCRB
[7] Equals Southwest Gas' requested FVI cost rate.

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Testimony

Vol. 2 of 3

December 3, 2021

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368
2021 General Rate Case

Volume 2

TAB	WITNESS
A	Matthew D. Derr
B	Carla Ayala
C	Frederica Harvey
D	Timothy S. Lyons
E	John R. Olenick
F	Nick Liu
G	Randi L. Cunningham
H	Michelle L. Asani
I	Ann Bulkley

December 3, 2021

Tab A

Direct Testimony
of
Matthew D. Derr

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
MATTHEW D. DERR

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Matthew D. Derr

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V. CONCLUSION 11

Appendix A – Summary of Qualifications of Matthew D. Derr

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Matthew D. Derr

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Matthew D. Derr. My business address is 1600 E. Northern Avenue, Phoenix, Arizona 85020.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation & Energy Efficiency department. My title is Director/Regulation & Energy Efficiency.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously testified before the Arizona Corporation Commission (Commission).

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I provide an overview of the Company's requested rate relief as well as an overview and support of the Company's acquisition of the Graham County Utilities (GCU) natural gas assets, and its proposed tariff changes.

. . .

. . .

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- An overview of the Company's application, including discussion of the Company's investment in Arizona and the associated customer bill impact;
- The acquisition of GCU assets; and
- The Company's proposed tariff modifications.

II. OVERVIEW OF FILING

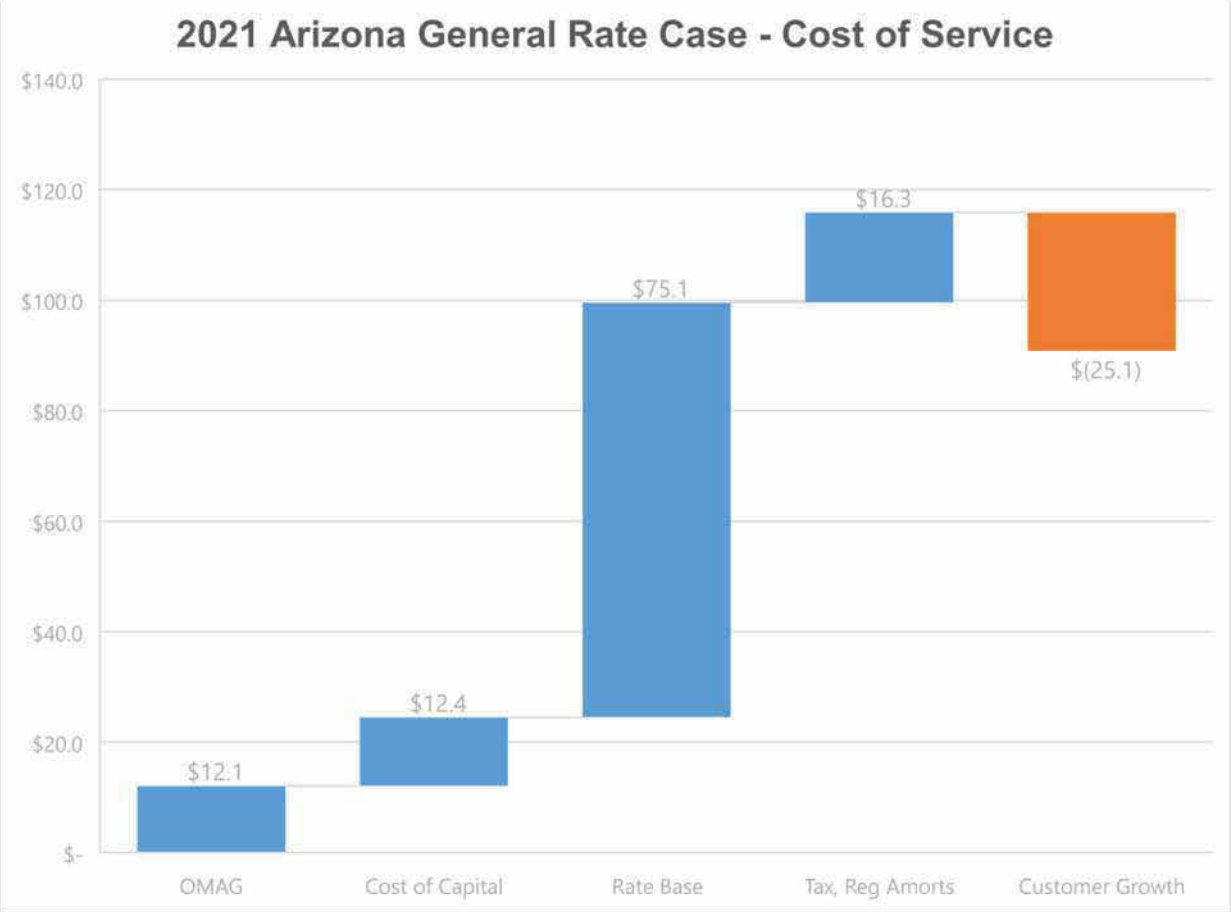
Q. 7 Why is the Company filing this rate case?

A. 7 This case is driven by the Company's investment in Arizona. The Company has made significant financial investments in the State to support the economic growth in Arizona, and the maintenance of a safe and reliable natural gas distribution system. As discussed in the prepared direct testimony of Company witness Randi L. Cunningham, the rate base increase since the Company's last General Rate Case (GRC) is approximately $711 million. The amount of time that has lapsed since the end of the last test year – just over two years - combined with the Company's investment in Arizona, necessitates the Company filing for rate relief at this time.

As demonstrated below, and as discussed by Ms. Cunningham, increases in Operations and Maintenance and Administrative and General (OMAG) as well as increases in Regulatory Amortizations and Income Tax expense are contributors of the Company's deficiency.

Figure 1 demonstrates the components of the cost of service.

Figure 1 – Components of Cost of Service



Q. 8 Has the Company been able to effectively manage its Operation and Maintenance Costs?

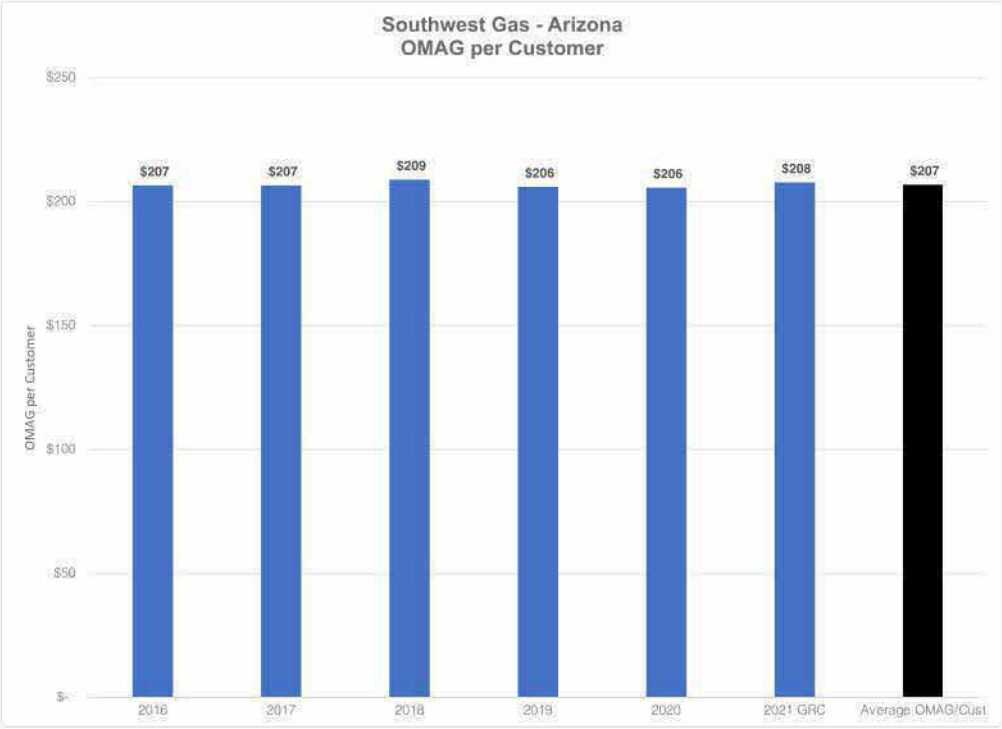
A. 8 Yes. The Company has managed OMAG spend in line with customer growth, and below the rate of inflation as demonstrated in Figure 2 below. Over the last five years, the Company's customer growth in Arizona has increased approximately 9 percent, the same rate of growth of the Company's OMAG. While OMAG has increased, the increases are in line with customer growth and are reasonable to recover in the cost of service. The Company has implemented strategies in its Arizona operating divisions to maintain an efficient level of O&M growth, in line with customer growth. Some examples of this include:

1. The use of data analytics for after hour and weekend coverage, to improve emergency response.

2. Process improvements to reduce leak survey workload management through enhanced scheduling of leak survey activities.

3. Improve damage prevention, by improving damages per 1,000 tickets, while seeing an increase in ticket count. Damage prevention initiatives increase public health and safety, and work to decrease emergency response and repair costs.

Figure 2 – OMAG per Customer



Q. 9 What is the customer bill impact from the Company's proposed cost of service?

A. 9 The most significant component of the cost of service is the return on and return of rate base, or the inclusion of the Company's approximate $710 million in capital investments in rates. For this investment, the Company is proposing that the delivery charge (or margin) rate increase approximately 22 cents, or approximately $5 per month. This is further demonstrated on Schedule No. H-4 and the Prepared Direct Testimony of Company witness Timothy S. Lyons.

With this proposed increase, average bills for natural gas service in Arizona would be approximately $50 a month, still among the lowest bills customers have for the provision of utility service. Additionally, as further discussed below, the Company is proposing to increase eligibility for the Company's Low Income Ratepayer Assistance (LIRA) program and expand its offering year-round, rather than the six months currently offered. Finally, as described by Mr. Lyons, the Company is proposing to maintain its Commission-approved rate design and the current basic service charge.

Q. 10 Please discuss the Company's proposed return on fair value.

A. 10 As described in the Prepared Direct Testimony of Company witness Ann Bulkley, the Company is not seeking a positive return on the fair value increment (FVI) above the original cost rate base (OCRB). Per the Arizona Constitution and the Arizona Administrative Code filing requirements, the Company is providing the Commission with a finding of fair value rate base and fair value rate of return. However, to simplify the Company's request in this case, the Company is not seeking a positive return on FVI.

The Company believes that a zero return on FVI is consistent with the Arizona Constitution, Article 15 Section 14, as well as the memorandum decision from

the Arizona Court of Appeals.[1] The Company is requesting to set rates based on a Fair Value Rate Base of $3.414 billion and a Fair Value Rate of Return of 5.48 percent. Further, the Company's request is within the range of FVI supported by parties to the Company's last rate case, where Commission Staff and RUCO both supported a return on FVI ranging from zero percent to 0.6 percent.

III. GRAHAM COUNTY UTILITIES

Q. 11 Please discuss the Company's acquisition of the assets of GCU.

A. 11 On April 21, 2021, in Docket Nos. G-01551A-21-0092 and G-02527A-21-0092, the Company and Graham County Utilities, Inc. (GCU) filed a joint application with the Commission requesting: (1) authorization to extend the Company's Certificate of Convenience and Necessity and (2) approval of the asset purchase agreement for the GCU assets. A hearing was held on November 1, 2021 and approval is expected in December 2021. Upon Commission approval, Southwest Gas will extend its service territory to include the approximate 5,300 GCU customers. GCU customers will be moved to Southwest Gas rate schedules that reflect their current GCU rates until a decision in this case. As discussed in the Prepared Direct Testimony of Company witness Timothy Lyons, the Company's application includes a proposal that moves GCU customers to Southwest Gas' tariff rates. Company witness Nick Liu supports the adjustments to the Company's cost of service to reflect the GCU rate base and O&M expense for GCU.

IV. TARIFF MODIFICATIONS

[1] Chaparral City Water Co. v. Ariz. Corp. Comm'n, 1 CA-CC 05-0002.

Q. 12 Is the Company proposing any modifications to its Arizona Tariff No. 7?

A. 12 Yes. The Company is proposing four changes to its tariff, in addition to the changes to the Statement of Rates to reflect the proposed tariff rates resulting from the Company's proposed cost of service. A clean, and redline, version of the tariff changes is provided for in Volume I of the application.

The tariff changes are summarized below.

Tariff Name	Description
Move2Zero	Voluntary program whereby customers can sign up purchase a block of carbon offsets.
Soft Off	Incorporate a soft off process used upon the discontinuance of service to residential accounts
LIRA	Enhancements to the LIRA program to expand eligibility and the length of the discount.

Q. 13 Please describe the Company's proposed Move2Zero Program.

A. 13 The Move2Zero Program is a voluntary program that will provide the Company's Arizona sales customers the ability to offset combustion-related greenhouse gas ~~(~~GHG~~)~~ emissions associated with natural gas usage through the Company's purchase and retirement of certified carbon offset credits. Company witness John R. Olenick further discusses the Move2Zero Program in his Prepared Direct Testimony.

The Move2Zero Program is incorporated into the Company's Arizona Gas Tariff No. 7 as a Special Supplementary Provision on Sheet No. 94.

Q. 14 How does the Company intend to account for Move2Zero Program-related costs and revenues?

A. 14 Similar to other Commission-approved programs, the Company proposes to establish a balancing account to track all Move2Zero Program costs and revenues. This accounting treatment is similar to the Company's Demand Side

Management Balancing Account, Delivery Charge Adjustment Balancing Account, Low Income Ratepayer Assistance, Department of Transportation and Gas Cost Balancing Account. Each of these Commission-approved programs accounts for revenues (through surcharges) and expenses in balancing accounts. The Company will seek to contract for carbon offsets up to the level of customer participation in the Move2Zero Program.

Q. 15 How does the Company propose to adjust the proposed block cost, or equivalent therms offset, or both?

A. 15 The Company proposes to adjust the block cost, or equivalent therm offset, as part of the annual compliance filing, as described by Mr. Olenick.

Q. 16 Will customers who elect not to participate in the Move2Zero Program pay any costs associated with the Move2Zero Program?

A. 16 No. Any costs will be accounted for in the balancing account and taken into consideration for the price per block, as part of the Move2Zero Program. For customers who elect not to participate, there will be no incremental cost, or bill impact.

Q. 17 Please describe the Company's Soft Off proposal.

A. 17 A soft off is a meter read that occurs upon the discontinuance of service under the Company's Tariff, but the meter is not turned off. The use of a soft off provides the Company the ability to temporarily leave the meter on where a residential service account is discontinued by one customer and service later established by another customer at the same premise. The Soft Off tariff changes are incorporated into the Company's Arizona Gas Tariff No. 7 in Rule No. 10.E.4, Sheet 238.

Q. 18 Please describe the Soft Off Process.

A. 18 The soft off process would allow the Company to maintain an active meter for no more than 30 calendar days before the meter is turned off to the premises. During a soft off period, the Company can more quickly and conveniently establish service, since it would not require a service technician to enter the premises to perform a turn-on service order. The Company's current average turn around time between disconnecting service for an existing customer and establishing service for a new applicant at the same residence is approximately 20 days. The soft off process is expected to reduce that turnaround time since the supply of gas will already be on at the time the applicant requests service enabling the Company to initiate service by performing meter reads without entering the customers' premises to perform a turn-on service order. By saving time and the need to enter the premise, the soft off process will result in enhanced customer experience and anticipated expense savings over time.

Q. 19 Please describe the Company's LIRA Program.

A. 19 The LIRA Program provides reduced energy rates to qualifying low-income customers.

Q. 20 Please describe how the Company's LIRA Program is structured.

A. 20 Customers qualify for the LIRA Program by meeting an annual household income threshold based on the Federal Poverty Income Guidelines. Qualifying customers receive a yearly 30 percent reduction in their monthly basic service charge and a per therm discount. The reduced basic service charge benefits customers year-round while the per therm discount is applied to the first 150 therms of natural gas used each month from November 1 through April 30 (use greater than 150 therms in these months is priced at the full tariff rate).

Q. 21 Is the Company proposing any modifications to its LIRA Program?

A. 21 Yes. While the LIRA Program has performed as intended by allowing low-income customers to receive discounts on their Southwest Gas' energy bills, the Company seeks to make revisions to enhance the Program. The Company proposes to modify the Program's income qualifications, timeframe for the discount, and regulatory reporting. The income qualifications and timeframe for discount tariff changes are found on Sheet Nos. 19, 20A, 23, and 90.

Q. 22 Why is Southwest Gas requesting to modify its LIRA Program's income qualifications?

A. 22 Currently, customers are eligible for the LIRA Program if their incomes are less than or equal to 200 percent of the Federal Poverty Income Guidelines. Decision No. 78316 issued on November 9, 2021 modified the definition of "limited income" from a residential customer with an annual household income at or below 200 percent of the Federal Poverty Level to 250 percent of the Federal Poverty Level.[2] To align with this modification, Southwest Gas proposes to increase its LIRA Program eligibility to incomes less than or equal to 250 percent of the Federal Poverty Income Guidelines. This proposed increase will allow the Company to better support low-income customers.

Q. 23 Why is Southwest Gas proposing to extend the LIRA discount year-round?

A. 23 Currently, the LIRA program helps eligible customers save on their natural gas bills by providing a 30 percent reduction in the monthly basic service charge and volumetric rate on the first 150 therms of natural gas consumed from November 1 to April 30. The Company proposes to enhance the program by providing the 30 percent reduction in year-round, instead of only the winter months. It is

[2] Decision in Docket No. RU-00000A-19-0132, page 789.

expected that this enhancement will cause the LIRA adjustment to increase by approximately $1.6 million per year.

Q. 24 What are the Company's proposed modifications to the LIRA Program's regulatory reporting?

A. 24 Currently, Southwest Gas submits reports on its LIRA Program to the Commission on a quarterly basis. Southwest Gas proposes to modify its reporting frequency to annually, every March 1, and to provide additional data in the report. Southwest Gas proposes adding a monthly therm usage comparison between LIRA and non-LIRA participants. The data will showcase if LIRA participants are using less or more natural gas than non-LIRA participants and provide insight if LIRA participants need to be encouraged to enroll in the Company's low-income weatherization program or other energy conservation programs.

V. CONCLUSION

Q. 25 Does this conclude your prepared direct testimony?

A. 25 Yes.

SUMMARY OF QUALIFICATIONS
MATTHEW D. DERR

Matthew D. Derr is the Director/Regulation and Energy Efficiency for Southwest Gas Corporation (Southwest Gas). He provides strategic leadership, guidance, and direction in the alignment of the Company's regulatory strategy, ensures technical accuracy, and regulatory compliance, as well as ensuring the Company has positive relationships with all regulatory stakeholders.

Mr. Derr joined Southwest Gas in 2012 as an Administrator in the Corporate Public Affairs Department in Phoenix. He was subsequently promoted to Regulatory Manager/Arizona in 2015 and his current role in May 2018.

Prior to joining Southwest Gas, Mr. Derr worked in several senior positions in state government, including as a Policy Advisor at the Arizona Corporation Commission. He holds a Bachelor of Arts Degree in Economics from Arizona State University.

Tab B

Direct Testimony
of
Carla D. Ayala

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
CARLA AYALA

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Carla Ayala

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IV. CONCLUSION 9

Appendix A – Summary of Qualifications of Carla Ayala

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Carla Ayala

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Carla Ayala. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Systems Planning department. My title is Sr Economist.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission), the California Public Utilities Commission and the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor the Company's adjustments to the recorded test year bills and volumes, to derive the test period billing determinants for both Southwest Gas and the Graham County Utilities (GCU) properties.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- *The methodology used to develop test period billing determinants; and*
- *The Company's proposed adjustments to test year bills and volumes, including its proposed weather normalization adjustment.*

II. METHODOLOGY USED TO DEVELOP BILLING DETERMINANTS

Q. 7 Please describe the methodology utilized to develop the test period billing determinants.

A. 7 The development of the billing determinants commenced with the compilation of the monthly recorded number of bills and volumes by rate schedule for the test year – the 12 months ended August 31, 2021.

After compiling the recorded number of bills and volumes for the test year, I made the following adjustments to derive the adjusted test period billing determinants for Southwest Gas: (1) billing adjustments; (2) customer-specific volume annualizations; (3) customer reclassifications; (4) weather normalizations; and (5) customer annualizations. Due to the lack of detailed billing data, the GCU properties were weather normalized and customer annualization adjustments were made. The details supporting these adjustments are set forth below and are shown in the Schedule H-2 Workpapers.

Q. 8 Why are adjustments made to the recorded test year number of bills and volumes?

A. 8 Adjustments are made to recorded bills and volumes to more accurately reflect the billing determinants that Southwest Gas would expect to experience during the rate effective period under normal weather conditions.

Q. 9 Has Southwest Gas made any changes to the general methodology for developing the billing determinants for the test period?

A. 9 No. In fact, Southwest Gas utilized the same general methodology to develop the billing determinants in each of its general rate cases (GRC) in Arizona since 2000 and this methodology was approved in each of the respective Decisions.[1]

III. ADJUSTMENTS TO RECORDED NUMBER OF BILLS AND VOLUMES

Q. 10 Please explain Southwest Gas' proposed billing adjustments.

A. 10 After compiling recorded test year billing determinants, significant billing anomalies are investigated to ensure that the correct consumption level is reflected for each month in the test year. The majority of the corrections for the billing adjustments involve restating the monthly consumption levels for customer bills to reflect actual monthly usage. These adjustments are typically adjustments between months and do not impact the total test year sales. This adjustment is necessary to ensure that the monthly adjusted volumes accurately reflect actual test year consumption. Otherwise, distorted monthly values would reduce the reliability of the regression analysis associated with the weather normalization adjustments.

Q. 11 Please explain Southwest Gas' proposed volume annualization adjustments.

A. 11 After completing the corrections for billing adjustments, customer-specific volume annualization adjustments are performed to reflect a full year of consumption for each active customer (excluding residential and small commercial customers) billed during August 2021. The process involves

[1] See Docket Nos. G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107, G-015551A-19-0055 and Decision Nos. 64172, 68487, 70665, 72723, 76069 and 77850 respectively.

estimating additional consumption for months during the test year where a new customer was not on-line or was clearly in a start-up phase, as well as removing consumption attributable to specific customers who discontinued service during the test year.

Q. 12 Please explain Southwest Gas' proposed customer reclassification adjustments.

A. 12 Customer reclassification adjustments move customers and their associated consumption volumes between rate schedules. Reclassification adjustments are required when a customer changes rate schedules during the test year. For example, a general service customer whose consumption increases or decreases may qualify for a different rate schedule. These adjustments are performed to ensure that customer-specific consumption reflects a full 12-months of usage under the correct rate schedule at the end of the test year. Reclassification adjustments do not impact the overall number of bills or volumes for the test year.

Q. 13 Please explain Southwest Gas' proposed weather normalization adjustments.

A. 13 Weather normalization adjustments are made to address warmer or colder than normal weather during the test year and provide a more accurate depiction of test period volumes under normal (average) weather conditions. To the extent that weather for the test year deviates from normal weather conditions, heat-sensitive consumption per customer should be adjusted to represent monthly test year volumes under normal weather conditions.

For the test year in this case, actual billing cycle heating degree days were approximately 5.8 percent colder than normal in Tucson and approximately 14.5

percent colder than normal in Phoenix. As a result of these deviations from normal weather, adjustments to test period volumes were computed to reflect anticipated volumes under normal weather conditions.

Weather normalization adjustments were completed for the following rate schedules: G-5 Single Family Residential; G-6 Multi-Family Residential; G-10 Single Family Low Income Residential; G-11 Multi-Family Low Income Residential; G-15 Special Residential; G-20 Master-Metered Mobile Home Park; G-25 Master-Metered Apartments; G-25 Small Commercial; G-25 Large Commercial; and G-25 Armed Forces.

Q. 14 What heating degree day normal did Southwest Gas use to weather normalize the heat-sensitive volumes for the test period?

A. 14 Southwest Gas used a ten-year average (120 months ended August 2021) of heating degree days, to represent normal weather conditions for the test period.

Q. 15 Is the use of ten-year average heating degree days to weather normalize the heat-sensitive volumes consistent with Southwest Gas' prior practices for general rate cases in Arizona?

A. 15 Yes. Southwest Gas has utilized, and the Commission has accepted, ten-year average heating degree days to weather normalize test period volumes in every GRC filed in Arizona since 1986.[2] Southwest Gas believes the use of a 10-year weather normalization to establish billing determinants remains in the public interest.

[2] See Docket Nos. U-1551-86-300, U-1551-86-301, U-1551-89-102, U-1551-89-103, U-1551-90-322, U-1551-92-253, U-1551-93-272, U-1551-96-596, G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107 G-015551A-19-0055 and Decision Nos. 60352, 64172, 68487, 70665, 72723, 76069 and 77850, respectively.

Q. 16 Please explain Southwest Gas' procedure for calculating the weather normalization adjustments.

A. 16 Southwest Gas conducts regression analysis to quantify the historical relationships between actual monthly consumption per customer and heating degree days for each heat-sensitive customer class. The monthly consumption per heating degree day factors (regression coefficients) quantified in the regression analysis are then applied to monthly heating degree day deviations from normal to quantify the corresponding adjustments to consumption per customer.

Q. 17 What was the impact of the weather normalization adjustments upon the test year volumes?

A. 17 The net result of the weather normalization adjustments was a decrease in test year volumes of 21,733,004 for Southwest Gas and a decrease of 103,314 in test year volumes for GCU.

Q. 18 Please explain Southwest Gas' proposed customer annualization adjustments.

A. 18 Customer annualization adjustments were computed for the following rate schedules: G-5 Single Family Residential; G-6 Multi-Family Residential; G-10 Single Family Low Income Residential; G-11 Multi-Family Low Income Residential; and G-25 Small Master Metered Apartments and Small Commercial. G-25 Medium Master Metered Apartments and Small Commercial. G-25 Large I Master Metered Apartments, Small Commercial and Large Commercial. As well as G-25 Large II Small Commercial and Large Commercial.

Q. 19 What method was used to develop the customer annualization adjustments?

A. 19 Southwest Gas utilized the same methodology adopted by the Commission in Southwest Gas' last five general rate cases.[3] This method captures the seasonal nature of test year customer growth by comparing the number of customers in the last month of the test year, August 2021, to the same month of the prior year, August 2020. The growth in customers is then prorated across the test year in declining intervals with 11/12ths of the adjustment in the first month of the test year (September 2020), 10/12ths in the second month (October 2020) and so forth. Adjustments to annualize volumes are made by multiplying the monthly customer additions by the respective monthly weather-adjusted average use per customer. Customer and volume adjustments are then added to the weather-normalized monthly bills and volumes to produce annualized test period monthly bills and volumes.

Q. 20 Why were the customer annualization adjustments only performed for the residential and small commercial customer classes?

A. 20 All rate schedules other than residential and small commercial, were annualized by individual customers, based upon customer-specific information. These customer-specific annualization adjustments are covered under the volume annualization adjustments discussed in Q&A 11. Because of the sheer magnitude of the number of customers in the residential and small commercial customer classes, which includes thousands of billing records, tracking each

[3] See Docket Nos. U-1551-96-596, G-01551A-00-0309, G-01551A-04-0876, G-015551A-07-0504, G-01551A-10-0458, G-015551A-16-0107 G-015551A-19-0055 and Decision Nos. 60352, 64172, 68487, 70665, 72723, 76069 and 77850, respectively.

customer's billing history to perform customer-specific billing or annualization adjustments is impractical. Accordingly, customer annualization adjustments are performed using the outlined methodology for the residential and small commercial customer classes.

Q. 21 Please summarize the impact of the adjustments performed for the preparation of the annualized number of bills and volumes for the test period.

A. 21 The impacts of each of the adjustments upon the number of bills and volumes included in the test year are indicated by rate schedule in the table below as well as in the H-2 Workpapers. All the adjustments (billing adjustments, customer-specific volume annualizations, customer reclassifications, weather normalization and customer annualizations) were conducted to ensure the accuracy and propriety of the number of bills and volumes used to establish rates.

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Rate Schedule	Description	AZ Recorded Annual U/C	AZ Adjusted Annual U/C	GCU Recorded Annual U/C	GCU Adjusted Annual U/C
AZ_G5	Single Family Residential	300.5	285.3	363.8	348.5
AZ_G6	Multi-Family Residential	169.5	164.1		
AZ_G10	Low Income Residential	271.8	262.9		
AZ_G11	Multi-Family Low Income Residential	185.9	180.6		
AZ_G15	Special Residential	1,133.7	1,111.6		
AZ_G20	Master Metered Mobile Home Parks	14,110.3	12,946.9		
AZ_G25S	General Gas Service - Small	220.2	210.7	236.9	227.4
AZ_G25M	General Gas Service - Medium	2,946.3	2,850.8	2176.2	2093.3
AZ_G25L1	General Gas Service - Large 1	15,072.1	14,715.5	14128.6	13745.6
AZ_G25L2	General Gas Service - Large 2	82,478.7	80,697.5	95037.3	92798.0
AZ_G25TE	General Gas Service - TE	355,639.0	373,493.5		
AZ_G30	Optional Gas Service	6,436,018.4	6,290,323.0		
AZ_G40	Air-Conditioning	13,493.4	12,993.7		
AZ_G45	Street & Outdoor Lighting	2,286.1	2,331.0		
AZ_G50	Compression Gas Service	174,011.7	183,276.2		
AZ_G60	Small Electric Generation	85,460.5	87,045.2		
AZ_G75	Small Essential Agriculture	45,756.6	45,882.0		
AZ_G80	Natural Gas Engine	41,613.7	41,717.0	2137.0	2137.0

IV. CONCLUSION

Q. 22 Does this conclude your prepared direct testimony?

A. 22 Yes.

SUMMARY OF QUALIFICATIONS
CARLA AYALA

I graduated from New Mexico State University, Las Cruces, New Mexico, with a Bachelor of Arts degree in Economics in 2003. In December 2004, I graduated from New Mexico State University, Las Cruces, New Mexico with a Master of Arts degree in Economics, with a specialization in Public Utility Regulation.

In 2005, I joined Southwest Gas Corporation as an Analyst in the Demand Planning Department. In December 2009, I was promoted to Analyst III, in November 2013, I was promoted to Economist and in November 2018, I was promoted to Sr Economist. I am responsible for performing bill frequency analysis for general rate case filings. I am also responsible for the development of weather normalized billing determinants for rate cases, the development of short- and long-range demand forecasts for rate cases and systems planning, analysis and monitoring of the regional economy in each of Southwest Gas' rate jurisdictions and assorted load research activities.

Tab C

Direct Testimony
of
Frederica Harvey

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
FREDERICA HARVEY

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Frederica Harvey

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Appendix A – Summary of Qualifications of Frederica Harvey

Exhibit No.___(FH- 1)

Confidential Exhibit No.___(FH- 2)

Exhibit No.___(FH- 3)

Confidential Exhibit No.___(FH- 4)

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Frederica Harvey

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Frederica Harvey. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Human Resources department. My title is Director/Compensation & Benefits.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes, I previously testified before the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My prepared direct testimony supports the Company's reasonable and prudent compensation and benefit programs, including base pay and incentive pay. I also support the Company's non-cash compensation benefits and the reasonableness of the Board of Directors' compensation.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- An overview and discussion of the Company's compensation philosophy and the determination of its base pay;
- An overview and discussion of the Company's incentive compensation;
- An overview and discussion of the Company's non-cash compensation;
- Southwest Gas' Pension Plan and Other Post-Employment Benefits (OPEB);
- An overview of the administration of the Company's base pay compensation;
- Reasonableness of the Company's Board of Directors' compensation; and
- Voluntary Retirement Incentive Program.

II. SOUTHWEST GAS' COMPENSATION PHILOSOPHY AND DETERMINATION OF BASE PAY

Q. 7 Please describe Southwest Gas' overall compensation philosophy.

A. 7 Southwest Gas recognizes the need to attract and retain top industry-specific talent to ensure continued safe and reliable natural gas service for its customers. As such, Southwest Gas strives to maintain a median market position compared to its peers and competitors for its total rewards program, which includes cash and non-cash benefits provided to employees in return for their services. The Company offers total rewards that include a market competitive base pay,

competitive incentive pay, a competitive package of employee benefits (including medical/dental/vision, wellness, life insurance, disability insurance, and accidental death and dismemberment insurance, and post-employment benefits).

Q. 8 How does Southwest Gas determine the appropriate levels of total compensation?

A. 8 Southwest Gas is committed to fairly compensating employees for the value of work provided. Without a balanced compensation program, recruitment, retention, motivation, and productivity are jeopardized. To ensure competitive total compensation, Southwest Gas evaluates the current market value of its positions based on the knowledge, skills and talents required of a fully competent incumbent.

The Company reviews incentive programs and executive retirement programs relative to those of its peers. In addition to reviewing peer group data, Southwest Gas reviews numerous compensation surveys, which typically include surveys prepared by Willis Towers Watson, American Gas Association, Mercer, and/or Hay Group. A primary source for comparison of Senior Executives is the compensation paid by companies within the Southwest Gas public-company peer group, which is comprised of utilities deemed to be of comparable size and similar operational complexity to the Company. The Company periodically works with an outside compensation consultant in performing its executive compensation review, which involves the use of national, regional, and industry-specific benchmarking data. In addition to base salary, the survey data includes Target Total Cash Compensation (TTC) and Target Total Direct Compensation (TDC) values to gage the compensation

reasonableness of each position and to ensure that the salary ranges for these positions are within the competitive range of the 50th percentile (+/- 10% base salary, +/- 15% TTC/TDC).

Q. 9 How does Southwest Gas determine its base salaries?

A. 9 Southwest Gas generally benchmarks base pay at the median of the market – or the 50th percentile. The Company believes that targeting the median is a reasonable and prudent approach to offering competitive base pay. I discuss the benchmarking process that the Company undertakes to ensure it offers compensation at a level that attracts and retains a talented workforce in further detail later in my testimony.

Q. 10 Please provide an overview of the Company's base pay compensation.

A. 10 As discussed above, Southwest Gas generally targets the 50th percentile for the base pay offered to its employees. Base pay is provided to all employees in the form of either an hourly rate (nonexempt) or weekly salary (exempt).

Q. 11 How is the Company's employee population categorized with respect to administering base pay?

A. 11 Southwest Gas categorizes its employees into four populations for purposes of administering base pay. The four populations and a compensation practice narrative are provided below:

- **Nonexempt –** Jobs for nonexempt employees are assigned to a pay structure with assigned wage steps that have been matched to market. A percentage adjustment is applied to the structure once a year to reflect the change in market conditions. This percentage is determined by annual increase projections published by nationally recognized compensation salary

surveys as outlined on page 10 of Exhibit No.___(FH-1). All employees in this category receive the same percentage increase and pay rates outlined on the wage steps.

- **Exempt –** Positions for nonexecutive, exempt employees have salary ranges (structures) that were established using the Korn Ferry (formerly Hay Group) point evaluation method. The ranges reflect the minimum, midpoint, and maximum salaries for the job. A percentage adjustment may be applied to the midpoint of the range (structure adjustment) each year to reflect the change in market conditions. This percentage is determined by annual structure increase projections published by nationally recognized compensation salary surveys as outlined on page 9 of Exhibit No.__(FH-1).

  The annual increase process for exempt employees is similar to that of nonexempt employees with the exception that once the percentage increase is determined, it is used to establish a "pool" of dollars that is allocated to management, who considers each employee's work performance and placement in salary range in determining the employee's specific increase amount. This percentage is determined by annual increase projections published by nationally recognized compensation salary surveys as outlined on page 10 of Exhibit No.__(FH-1).

- **Officers** – Officers are executive-level employees that have a comprehensive salary analysis completed by an outside executive compensation consulting firm, every other year. Based on the recommendations of the consulting firm, adjustments are made and approved by the CEO using the same methodology as the exempt

population. Officers are eligible for standard increases based on market conditions during the years when the analysis is not performed.

- **Named Executive Officers (NEOs)** – NEOs are the top five, highest paid positions within the Company. Compensation for these employees is reviewed annually by an outside executive compensation consulting firm that completes salary analyses and recommendations based on a proxy analysis of the Company's peer group. The Board of Directors must approve all compensation changes for NEOs.

Q. 12 Please explain how the Company determines appropriate salary ranges for exempt positions.

A. 12 The current salary structure was put in place several years ago and is based on the Korn Ferry Job Evaluation methodology, which maps out job roles in the context of the organizational structure. Each exempt job was evaluated using its point-factor system that assigns points to jobs based on three primary components: know-how, problem solving, and accountability. Once the points were assigned, the jobs were compared to benchmark positions within the Hay Compensation Database. The 50th percentile of each benchmark position was established as the midpoint of the salary range for the point total. As stated previously, each year, the midpoints may be adjusted based on projected salary structure movement.

Q. 13 Does this process occur annually?

A. 13 No, nor does it need to. Once the internal hierarchy is established, there are typically not significant changes in the organization from one year to the next to warrant an annual reevaluation for all exempt positions. However, the Company

does perform, or request from its consultants, market reviews for specific positions. This is done on an as needed basis to ensure that the evaluation results are in line with the skill sets, responsibility and base salary observed in the market.

Q. 14 Have there been any significant changes to the internal hierarchy since the Company's last general rate case?

A. 14 No.

Q. 15 Please explain how the Company determines appropriate wage structures for non-exempt positions.

A. 15 The current wage structure has been in place since 2010, and annual adjustments occur in accordance with projected wage movement in the market. As the need for new jobs have occurred, the jobs are market priced to the 50th percentile for non-industry jobs and the 75th percentile for industry specific jobs, which are more specialized and can be difficult to recruit. The new jobs are then slotted into the appropriate existing wage rates. Additionally, the Non-Exempt Audit and Review (NEXAR) process, which is outlined below, is used to ensure the appropriateness of the wage structure.

Q. 16 Does this process occur annually?

A. 16 No, nor does it need to. Like the process for the exempt positions, once the internal hierarchy for non-exempt jobs is established, there are typically not significant changes in the organization from one year to the next to perform this evaluation for all non-exempt positions. The Company does, however, perform NEXAR, which is a job evaluation process that was established in 1996. The process involves a detailed review of each non-exempt job classification within a 5-cycle basis or approximately 20 percent per cycle. The five key components

of this process are to: 1) obtain information related to the functions performed within a job classification; 2) ensure internal equity, (i.e., is the internal hierarchy correct); 3) compare the current wages to the market; 4) revise job descriptions as necessary; and 5) provide the results of the process to senior management for approval.

Q. 17 Have there been any significant changes to non-exempt wage structure since the Company's last general rate case?

A. 17 No.

Q. 18 Please provide an overview of the analysis conducted to administer the Company's base pay.

A. 18 Each year, Southwest Gas conducts an analysis to determine its recommended percentage adjustments for the nonexempt pay structures, exempt (non-officer/NEO) salary ranges, and salary increase budgets. Generally, the analysis conducted each year by the Company includes four steps:

- First, the Company reviews the prior year's actual salary increases granted and salary structure adjustments applied to what was projected to occur in the market. For example, in 2021, Southwest Gas reviewed the Company's actual 2020 salary increases and salary structure adjustments and compared them to the actual market increases and adjustments that occurred in the market.[1] This review allowed the Company to validate that its actions did in fact align with what the market experienced and its wages aligned with the market for that given period. A comparison of the 2020 projected versus

[1] See Exhibit__(FH-1).

actual adjustments for salary increases and structures are shown in the tables below:

Salary Increase Budgets 2020 Projected Versus Actual					
National Survey Source	Scope	Projected		Actual	
		Exempt	Non-Exempt	Exempt	Non-Exempt
AON Hewitt	Energy	3.0%	3.0%	3.2%	3.0%
Conference Board	Utilities	3.0%	3.0%	3.0%	3.0%
Korn Ferry	Utilities	3.0%	3.0%	3.0%	3.0%
Mercer	Utilities	3.0%	3.0%	2.8%	2.8%
Towers Watson	Utilities	3.0%	2.9%	3.1%	3.0%
World@Work	Utilities	2.9%	2.8%	2.9%	2.8%
PayFactors	Utilities	3.1%	3.0%	3.4%	3.2%
Survey Average		**3.0%**	**3.0%**	**3.1%**	**3.0%**
Southwest Gas		**3.0%**	**2.0%**	**2.0%**	**2.0%**

Structure Adjustments 2020 Projected Versus Actual			
National Survey Source	Scope	Projected	Actual
		Exempt	Exempt
AON Hewitt	Energy	2.0%	2.1%
Conference Board	Utilities	2.0%	2.0%
Korn Ferry	Utilities	2.0%	2.0%
Mercer	Utilities	2.2%	2.3%
Towers Watson	Utilities	1.7%	2.3%
World@Work	Utilities	2.0%	2.2%
PayFactors	Utilities	1.5%	1.7%
Survey Average		**2.0%**	**2.1%**
Southwest Gas		**2.0%**	**0.0%**

- Second, the Company evaluates multiple national salary surveys to assess projected market activity for the current year. The surveys are used to assess potential wage and salary adjustments, as well as any structure movement that may be necessary. The Company relies more on utility projections rather than national projections due to the unique jobs and skills associated with the utility and gas industries. The surveys serve as a guide for reasonable movement in both salaries and structure to ensure the

Company is continuing to align with the market and maintaining competitive pay levels.

- Third, the Company evaluates internal compensation data such as the current pay levels for exempt employees compared to where they fall within the salary range for their positions (compa-ratios),[2] as well as historical salary adjustments.
- Finally, this information is compiled, and the recommended wage and salary adjustments are presented to the Employee Resource Committee (ERC), which is comprised of senior level executives from within the Company. The ERC reviews and approves proposed annual salary increase budgets and structure adjustments.

III. REASONABLENESS OF THE WAGE AND SALARY ADJUSTMENTS GRANTED IN THE TEST YEAR.

Q. 19 Did the Company grant wage and salary adjustments in the test year in the instant docket?

A. 19 Yes. In July 2021, the Company granted a wage increase for nonexempt employees of 3.02%, comprised of a 2.3% base wage increase and a step increase amount of 0.72%. For exempt employees, the Company granted a salary increase budget of 3.5%, comprised of 2.3% base salary adjustment and 1.2% discretionary. As previously described, exempt salary increases are awarded based on individual work performance.

[2] A compa-ratio represents an employee's pay relative to the midpoint of the salary range of the position. Generally, an employee with a low compa-ratio is new to the position or role, whereas an individual with a high compa-ratio is more tenured in that position or role.

Officers and NEOs also received increases during the test year. The Company contracted with Korn Ferry consultants to conduct a competitive compensation assessment of the seven top executives, which included five NEOs. A copy of the report is attached as Confidential Exhibit No.___(FH-2). The proxy analysis matches the top executives/NEOs by function and pay rank to the Southwest Gas Proxy Peer Group, which is comprised of 20 like companies. The analysis indicated that in aggregate, target TDC for the top executives tracks at market median (3% above). Non-NEO officers received an average increase of 5% based on market conditions and survey benchmarks. The below table includes the market projected 2021 salary structure and wage adjustments.

Salary Increase Budgets (2021 Projected)			
National Survey Source	**Scope**	**Exempt**	**Non-Exempt**
Aon Hewitt	Energy	3.2%	3.0%
Conference Board	Utilities	3.0%	2.9%
Korn Ferry	Utilities	3.0%	3.0%
Mercer	Utilities	2.8%	2.8%
PayFactors	Utilities	3.1%	3.0%
Towers Watson	Utilities	3.0%	3.0%
World@Work	Utilities	3.1%	3.1%
Survey Average		**3.0%**	**3.0%**

Structure Adjustment Budgets (2021 Projected)		
National Survey Source	**Scope**	**Exempt**
Aon Hewitt	Energy	2.0%
Conference Board	Utilities	2.0%
Korn Ferry	Utilities	2.0%
Mercer	Utilities	2.2%
PayFactors	Utilities	1.7%
Towers Watson	Utilities	2.3%
World@Work	Utilities	2.1%
Survey Average		**2.0%**

Q. 20 Does the Company plan to grant wage and salary adjustments in 2022?

A. 20 Yes. The Company has made an adjustment to the revenue requirement to reflect a planned wage and salary adjustment in 2022. Please refer to the prepared direct testimony of Company witness Randi L. Cunningham for the impact on the revenue requirement of this known and measurable adjustment.

IV. INCENTIVE COMPENSATION

Q. 21 Please identify the incentive compensation programs offered by Southwest Gas.

A. 21 Southwest Gas offers incentive compensation through its Management Incentive Plan (MIP) and its Restricted Stock Unit Plan (RSUP). As discussed more fully below, the RSUP includes two types of awards – Performance Share Units (PSU) and Restricted Stock Units (RSU). The Company also offers Service Planning Incentives (SPI) to certain employees.

Q. 22 Please describe the MIP.

A. 22 The MIP is an annual incentive program that provides executives and other participating management employees with an opportunity to receive variable, at-risk pay based upon the achievement of specific benchmarks that are critical to

the short-term and long-term success of the Company and that reward superior performance for the benefit of the Company's customers. For each participating employee, the MIP includes the following five performance metrics:

(i) Net Income (40% of target MIP weighting).

Given that Southwest Gas' customer rates are subject to review and approval, the inclusion of a Net Income metric focuses participating employees on prudent management of utility expenses to maximize net income in a given year, a benefit to both shareholders and customers. The Net Income metric, combined with the Customer Satisfaction and Safety metrics, help to ensure that expenses are managed in a sustainable manner that results in an efficient operation of the Company that delivers superior customer service and does so safely.

(ii) Operations & Maintenance (O&M) Expense Per Customer (20% of target MIP weighting);

This metric incentivizes efficient operations and requires participating employees to manage Operations & Maintenance expenses while providing superior customer performance. Managing O&M expenses benefits the customer as lower expenses help Southwest Gas maintain lower customer rates.

(iii) Customer Satisfaction (20% of target MIP weighting);

This metric is explicitly tied to customer satisfaction and benefits the Company's customers. If the Company's management chose to delay investment in infrastructure to improve its performance on the Net Income metric (weighted at 40% in the MIP), management would risk diminished performance over time with respect to the Customer

Satisfaction metric and Safety metrics, in which case the MIP payouts with respect to those factors would decline. The Customer Satisfaction metric (as well as the Safety metrics), therefore, works with the Net Income and O&M metrics to ensure that management focuses on customer welfare and customer satisfaction regarding the Company's financial performance. Put another way, if management chooses to emphasize the Company's financial performance to the detriment of its customers, the MIP is designed to penalize management through lower performance on Customer Satisfaction and Safety metrics.

(iv) Safety – Damage Per 1,000 Tickets (10% of target MIP weighting);

This metric provides a direct benefit to customers and the public in general by focusing on the Company's damages per 1,000 tickets in providing services. The MIP's focus on the Company's gas distribution system helps ensure that safety is a priority throughout the organization.

(v) Safety – Incident Response Time within 30 minutes (10% of target MIP weighting).

This metric is designed to reward improvement on incident response times; as with the other Safety metric within the MIP, this metric provides a direct benefit to customers and the public in general.

Q. 23 Has the MIP design changed since the Company's last general rate case?

A. 23 No.

Q 24 How are the MIP performance metrics designed?

A. 24 The five MIP performance metrics are designed to reward participants as outlined below:

1. Net Income. Designed to reward the efficient operation and performance of the entire organization structured under Southwest Gas Holdings, Inc., for the Corporate Strategy Executives, and the efficient operation and performance of Southwest Gas Corporation (gas segment only) for the remaining participants.
2. O&M per Customer. Designed to reward efficient operations.
3. Customer Satisfaction. Designed to reward success in achieving a predetermined customer satisfaction percentage.
4. Safety – Damage per 1,000 Tickets. Designed to reward success in minimizing damages per 1,000 tickets.
5. Safety – Incident Response Time within 30 Minutes. Designed to reward improvement on incident response times.

Q. 25 Who are the Corporate Strategy Executives and what adjustment to incentive compensation has been made for these executives?

A. 25 The Corporate Strategy Executives are the President/CEO, Executive Vice President, Chief Financial Officer, and Vice President/Strategy & Corporate Development. The Company has made an adjustment in the revenue requirement to remove a portion of the incentive compensation (MIP, PSU, and RSUP) awarded to the Strategy Executives for the portion of their incentive compensation related to Centuri Group (Centuri).

Q. 26 Are there other design considerations for the MIP?

A. 26 Yes. The Net Income metric is calculated on a consolidated basis for the Corporate Strategy Executives; for the remaining Executives, Net Income is calculated with respect to the organization's gas segment by backing out Net Income allocable to Centuri. For all participants, the Net Income metric is

measured without regard to Company-Owned Life Insurance (COLI) returns. In addition, for each metric, actual performance may vary from 70% to 140% of the target incentive opportunity based on performance relative to the target. No MIP award is paid in any year unless the Company achieves a minimum 80% of the Company's targeted earnings for the performance year.

Q. 27 How many Company employees were eligible for the MIP in plan years 2018, 2019 and 2020?

A. 27 The table below reflects the number of employees eligible for the MIP in plan years 2018, 2019 and 2020.

Eligible Employees -- by Division	MIP Plan Year 2018	MIP Plan Year 2019	MIP Plan Year 2020
Corporate	104	99	142
Arizona	11	13	25
Other Divisions	17	16	26
Total	**132**	**128**	**193**

Q. 28 Please provide the five MIP metric targets for plan years 2018, 2019, 2020 and the actual results achieved each year.

A. 28 The tables below reflect the targets and actual results for each MIP metric in plan years 2018, 2019 and 2020.

Table 1: Utility Net Income

Plan Year	Actual	Minimum	Target	Maximum
2018	134,632	119,970	129,000	138,030
2019	145,771	131,130	141,000	150,870
2020	149,918	144,615	155,500	166,385

Table 2: O&M Per Customer

Plan Year	Actual	Minimum	Target	Maximum
2018	$211.04	$216.00	$213.00	$210.00
2019	$213.18	$218.00	$215.00	$212.00
2020	$203.92	$215.00	$211.00	$208.00

Table 3: Customer Service Satisfaction

Plan Year	Actual	Minimum	Target	Maximum
2018	95.10%	88%	92%	95%
2019	95.92%	90%	93%	96%
2020	95.50%	91%	94%	97%

Table 4: Safety - Incident Response within 30 Minutes

Plan Year	Actual	Minimum	Target	Maximum
2018	70.10%	67%	70%	73%
2019	74.60%	67%	71%	74%
2020	75.80%	70%	74%	77%

Table 5: Safety - Damages Per 1,000 Tickets

Plan Year	Actual	Minimum	Target	Maximum
2018	1.43	1.80	1.50	1.20
2019	1.11	1.60	1.40	1.20
2020	1.14	1.40	1.15	1.00

Q. 29 Is there a "reasonable range" or industry standard that sets performance expectations?

A. 29 Yes. Both safety measures are well understood in our industry. These targets are benchmarked against AGA peer companies and set the expectation for performance Company-wide. Similarly, the Customer Satisfaction metric is also a measure of focus in our industry. Performance is measured monthly by an independent third party. The O&M per Customer metric is calculated as total utility operations and maintenance expenses divided by average billed

customers during the year. This metric focuses on efficient operations that benefit the customer. The Utility net income is a comprehensive measure of gas segment performance. Targeted and actual results exclude COLI returns. With a 40% weighting, overall short-term payout ratio will be highly influenced by this "bottom-line" result again focusing on financial results that benefit our customers. Each of the targets for MIP measures are revisited annually to ensure their reasonableness

Q. 30 Are the MIP costs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 30 Yes. The MIP is in-line with peer group incentive plans and includes market-competitive terms. The MIP incentivizes management to operate the Company in an efficient manner that minimizes customer rates while maximizing customer satisfaction and safety.

Moreover, it is appropriate to include MIP costs in the rates approved through this proceeding because the MIP is part of the total compensation that keeps MIP-level employee positions competitive with the market. As discussed above, Southwest Gas benchmarks total compensation to the 50th percentile. If the Company did not offer the MIP, these positions would fall below the 50th percentile and would no longer be competitive. Consequently, the Company would have difficulty attracting and retaining the talent necessary to provide customers safe and reliable natural gas service. MIP costs are therefore a reasonable and prudently incurred expense that should be authorized for recovery through customer rates in this proceeding.

Q. 31 Please describe the Restricted Stock Unit Plan (RSUP).

A. 31 The RSUP plan is a long-term incentive (LTI) plan designed to reward sustained performance over a three-year period with each grant made under the plan. Plan Year 2016 was the last year the RSUP awards were made; beginning with Plan Year 2017, RSUP was replaced by Time Lapse Restricted Stock Units (RSU) and Performance Shares Units (PSU).

Since 2017, the Company has granted two forms of award – the PSUs and the RSUs. Executives are eligible to receive PSU awards and both Executives and Director-level employees are eligible to receive RSU awards. PSU and RSU awards are granted annually.

PSU awards granted to the Corporate Strategy Executives include two financial measures: (i) 3-Year Consolidated Earnings Per Share (EPS), weighted at 60% of the target award, and (ii) 3-Year Utility Return on Equity (ROE), weighted at 40% of the target award. As discussed above, the revenue requirement for Corporate Strategy Officers awards is adjusted to exclude awards related to Centuri.

PSU awards granted to the remaining executives do not include an EPS metric but instead include 3-Year Utility Net Income, weighted at 60% of the target award. Each PSU award is subject to a modifier based on performance of the Company over the performance period (PSUP), relative to a peer group of public companies. If the Company's 3-year PSUP is at or above the 75th percentile relative to the peer group, the PSU award amount will be adjusted upward by 30%; if Company performance falls between the 25th and 75th percentiles, there is no adjustment to the PSU award amount.

In November 2020, the Compensation Committee of the Board of Directors approved a modification wherein if Company performance falls below the 25th percentile relative to the peer group, the PSU award would be adjusted downward by 30% rather than the previous downward adjustment of 15%. This change allowed for a symmetrical payout, i.e., 30% downward adjustment for a bottom quartile ranking and a 30% upward adjustment for a top quartile ranking. Additionally, the Committee added a below-maximum cap on payout in years where the Company's Total Shareholder Return (TSR) is negative. The level of the cap will depend on the Company's Relative Total Shareholder Return (RSTR), which is a measure of Company performance relative to the peer group. When the Company's RTSR performance is between the 50th and 75th percentiles, the cap is 115% of target; when it is at or below the 50th percentile, the cap is 100% of target.

RSUs are time-vested awards that vest over a three-year period from the date of grant (40% at the end of the first year and 30% at the end of the second- and third years following grant, respectively). RSUs are a form of long-term incentive based on time. They are provided to employees at the Director level and above and are not tied to any performance criteria. The awards are calculated based on a percentage of salary that is converted to shares. As the shares vest over a three-year period, they are considered a long-term retention tool.

For both the PSUs and RSUs, dividend equivalents are payable upon vesting in the applicable award to reflect dividends paid during the performance/service period, as applicable.

Q. 32 Are the RSUP costs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 32 Yes. As a component of the long-term incentive (LTI) plan which is designed to reward sustained performance over a three-year period, these costs are reasonable and prudent. Moreover, it is appropriate to include these costs in the rates approved through this proceeding because the RSUs and PSUs are part of the total compensation that keeps eligible employee positions competitive with the market. As discussed above, Southwest Gas benchmarks total compensation to the 50th percentile. If the Company did not offer an LTI plan, these positions would fall well below the 50th percentile and would no longer be competitive. Consequently, the Company would have difficulty attracting and retaining the talent necessary to provide customers safe and reliable natural gas service. These costs are therefore a reasonable and prudently incurred business expense that should be authorized for recovery through customer rates in this proceeding.

Q. 33 Please describe the SPI.

A. 33 SPI is a performance incentive provided to Southwest Gas' Energy Solutions group (formerly referred to as Key Account Management). The objective of the SPI is to incent the group to achieve exceptional performance in the areas of customer service, project development, project management and contract negotiations related to maintaining or improving the Company's margin.

Q. 34 Are the SPI costs reasonable and prudent and appropriate for inclusion in the rates authorized in this proceeding?

A. 34 Yes. The SPI is designed to incentivize eligible employees to maximize the use of the Company's distribution system by larger customers which benefits and

protects residential customers by spreading fixed cost recovery over a greater number of customers/volumes. Employees achieve this by:

1. Maintaining and increasing margin from qualified new and existing customers through installations of new, additional, or incrementally larger natural gas equipment.
2. Ensuring that Company facility investments meet required criteria and that security/risk concerns are appropriately addressed.
3. Maximizing annual margin collection from customers that can demonstrate the ability to use an alternate energy source.

V. NON-CASH COMPENSATION PROGRAMS

Q. 35 Please identify the non-cash component of the Company's compensation program.

A. 35 Exhibit No.__(FH-3) lists the Company's non-cash compensation programs.

Q. 36 Are the non-cash compensation costs reasonable?

A. 36 Yes. Southwest Gas regularly reviews its plans to carefully manage its benefits program costs. These benefits are reasonable, in the public interest, and the Company should recover these costs in customer rates established in this proceeding.

VI. PENSION PROGRAM AND OTHER POST-EMPLOYMENT BENEFITS (OPEB)

Q. 37 Please generally describe the Pension and OPEB programs that are available to Southwest Gas employees.

A. 37 The Company provides the following Pension and OPEB programs:

- **Pension:** The Company maintains a tax-qualified defined benefit retirement plan (Retirement Plan), which is available to all Company employees and under which

benefits are based on an employee's years of service, up to a maximum of 30 years, and the 12-month average of the employee's highest five consecutive years' salaries, excluding bonuses, within the final 10 years of service. The Internal Revenue Code (IRC) places a limit on the annual compensation that may be paid under the plan, which may be increased periodically to reflect cost-of-living increases. Base salary amounts deferred by Executives under the Executive Deferral Plan (EDP) are not included for purposes of determining pensionable benefits under the Retirement Plan.

- **Supplemental Executive Retirement Plan (SERP):** The SERP is designed to supplement the Retirement Plan for participating executives by providing an opportunity for executives to receive a comparable retirement benefit at a level of 50% to 60% of base salary without regard to the IRC limits that apply to the Retirement Plan. To qualify for a normal retirement benefit under the SERP, an Executive must have reached age 55 with 20 years of service or age 65 with 10 years of service.

  The SERP also provides a limited retirement benefit for Executives who defer base salary under the EDP but who do not qualify for a normal retirement benefit under the plan. The limited benefit in the SERP accounts for base salary amounts that are deferred under the EDP that are not included in calculating pensionable benefits under the Retirement Plan. The SERP is a non-qualified plan under which participating executives are general unsecured creditors of the Company with respect to benefits payable under the plan. Benefits payable under the SERP are offset by benefits payable under the Retirement Plan to

avoid double payment of benefits to Executives.

- **Employees Investment Plan (EIP):** The Southwest Gas Corporation Employees' Investment Plan (EIP) is a tax-qualified defined contribution (401(k)) plan that is available to all its employees. The EIP permits participants to contribute between 2 and 60 percent of their base salaries to the plan and receive a corresponding Company matching contribution up to 3.5% of a participant's annual salary. Participant contributions to the EIP are subject to annual IRC limits that apply to the plan. Executives are not eligible to receive Company matching contributions under the EIP.
- **Executive Deferral Plan (EDP):** The EDP provides salary deferral opportunities for executives by permitting them to annually defer up to 100% of base salary and non-equity incentive compensation. To address the ineligibility of Executives to receive Company matching contributions under the EIP, Southwest Gas provides matching contributions under the EDP that parallel the contributions it makes to participants under the EIP, which is up to 3.5% of the Executive's base salary. Deferred contribution amounts and Company matching contributions bear interest at 150% of the Moody's Seasoned Corporate Bond Rate. The EDP is a non-qualified plan under which participating Executives are general unsecured creditors of the Company with respect to benefits payable under the plan. Additionally, base salary deferred under the EDP is not included in the formula used to calculate an Executive's pensionable benefit under the Company's tax-qualified defined benefit retirement plan.

Q. 38 Has the design of any of these programs changed since the Company's last general rate case?

A. 38 No.

Q. 39 Are the costs for these programs reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 39 Yes. These programs are essential to the Company efforts to attract and retain high performing individuals by providing supplemental retirement benefits as part of a competitive compensation package. This continuity of service benefits the Company's customers and the EDP and SERP, which constitute part of the Company's reasonable compensation program for its Executives, should be recoverable through customer rates.

Q. 40 Is the Company requesting full recovery of SERP?

A. 40 No. Notwithstanding that SERP is a reasonable retirement benefit for Executives, the Company is only seeking to recover the restorative amount of its SERP expenses in this proceeding.

VII. BOARD OF DIRECTORS' COMPENSATION

Q. 41 Does the Company provide compensation to its Board of Directors?

A. 41 Yes. The Company compensates the members of its independent Board of Directors (at the holding company level). This compensation is intended to recruit and retain highly qualified Directors and express the importance of these roles as a representation of the Company's attitudes towards corporate governance.

Q. 42 Please explain how the Company determines appropriate salary ranges for Board of Director compensation.

A. 42 The Compensation Committee is responsible for periodically reviewing the compensation of the independent Directors and recommends changes to the Board where appropriate. The Committee's compensation consultant, Korn Ferry, completed a review of the Director's compensation in August 2021 (Confidential Exhibit No. FH-4) where the level of director compensation was assessed relative to companies.

Q. 43 Are the Board compensation expenses allocated to Southwest Gas reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 43 Yes. The Securities Exchange Commission (SEC) requires Southwest Gas Holdings, as a publicly traded company, to have a Board of Directors comprised of mostly independent members. The Board provides guidance and oversight to ensure that the Company provides safe and reliable service to its customers, which helps facilitate the Company's ability to access capital markets at reasonable rates. Moreover, the Company reviews its Board compensation to ensure that it is set at levels that are reasonable compared to market.

Q. 44 What is D&O insurance and why should it be recoverable?

A. 44 D&O liability insurance covers the Board of Directors and officers of the Company against lawsuits alleging a breach of fiduciary duty. This coverage is provided so that executives can serve confidently as leaders of the organization without fear of personal financial loss. Board members and officers are not only responsible to the employees and shareholders but are also responsible to the Company's customers in carrying out their responsibilities in a judicious manner.

D&O insurance provides protection to the assets of the organization and therefore benefits its customers. These costs should be fully recoverable.

VIII. VOLUNTARY RETIREMENT INCENTIVE PROGRAM

Q. 45 Please describe the Voluntary Retirement Incentive Program (VRIP).

A. 45 The Voluntary Retirement Incentive Program (VRIP) was a program offered to Information Services (IS) department employees who met program-established eligibility criteria. To participate in the VRIP, at the time of offer the IS employee must have been at least 55 years of age with at least 10 years of service with the Company.

The monetary incentive offered through the VRIP was a one-time, lump sum cash payment calculated at one week of the employee's current salary for every year of service with the Company. The program also offered an additional one-time separation bonus in the amount of $10,000. In order to receive these payments, the employee was required to execute a severance agreement and separation bonus agreement.

The Company offered the VRIP at two different times, once in October 2020 and again in May 2021. The first offering excluded IS Project Horizon employees due to project criticality. Once the Project Horizon stabilization period concluded, IS employees working on Project Horizon were given the same opportunity to participate in the VRIP if they met the same established criteria. Employees that elected to participate in the October 2020 VRIP offering separated from the Company no later than January 29, 2021. Employees that elected to participate in the May 2021 VRIP offering separated no later than July 30, 2021.

Q. 46 Why were IS employees offered the VRIP?

A. 46 Changes in technology have accelerated the shift in required workforce skills and the Company needed to make changes to stay competitive. By offering the VRIP, retirement-eligible employees could choose to develop new skills and stay with the Company or could proceed with retirement.

Q. 47 Did the employees who accepted the severance receive any enhanced retirement benefits?

A. 47 No. The employees who elected to participate in the transformational offering only received the retirement benefits afforded to them under the Company's retirement plan.

Q. 48 Is it a common practice for Companies to offer severance?

A. 48 Yes, more employers are offering severance benefits to workers, which is considered indicative of a trend toward designing an improved employee experience that includes separation. In a 2019 survey conducted by career transition services firm RiseSmart, 44% of 1,500 HR respondents offered severance benefits to all workers, which represented a six percent increase over 2017. The amount and type of severance benefits varies, but generally all of them require a minimum years of company service in order to be eligible.

IX. CONCLUSION

Q. 49 Does this conclude your prepared direct testimony?

A. 49 Yes.

SUMMARY OF QUALIFICATIONS
FREDERICA HARVEY

I am a graduate of University of Nevada, Las Vegas having received a Bachelor of Science degree in Business Administration. I also hold the Certified Compensation Professional (CCP) designation from WorldatWork and the Senior Certified Professional designation from the Society of Human Resources Management (SHRM-SCP).

I have over 25 years of compensation and human resources experience. Prior to joining Southwest Gas, I've developed, implemented, and maintained compensation programs within the government, utilities, healthcare, and hospitality industries. The size of the organizations has ranged from approximately 2,000 to over 70,000 employees. In July 2019, I joined Southwest Gas as Director/Compensation and Benefits where I am responsible for all aspects of the Company's compensation and benefits administration.

2021
Salary Adjustment Recommendations

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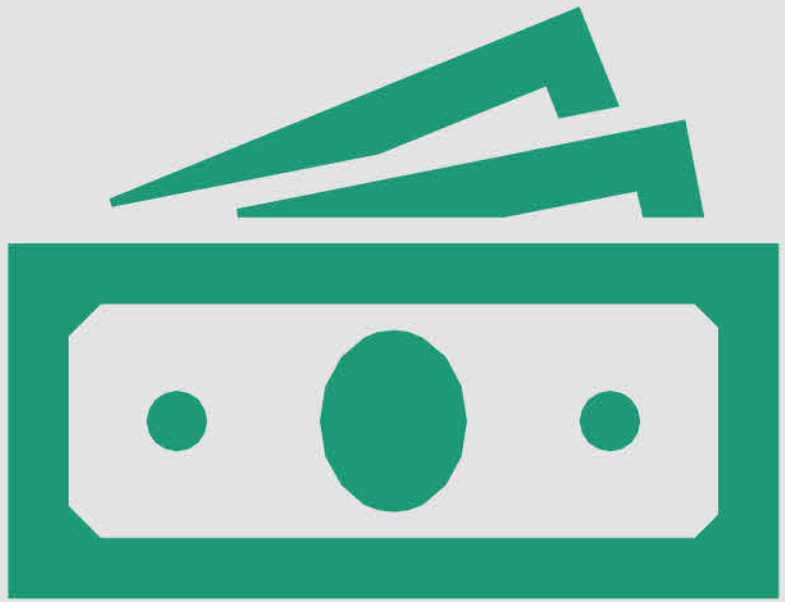
Agenda

- Current SWG Employee Pay Review
  - Non-Exempt Employee Wages, Grade Structures
  - Exempt Employee Compa-Ratios
- National Energy & Utility Industry Market Review
  - 2020 Salary Survey Results
  - 2021 Salary Survey Results
- SWG Salary Adjustment Review & Recommendation
  - SWG Historical Data
  - Recommendations

Employee Salaries



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Non-Exempt Wage Schedules

Grandfathered Wage Schedule

- **568** Employees

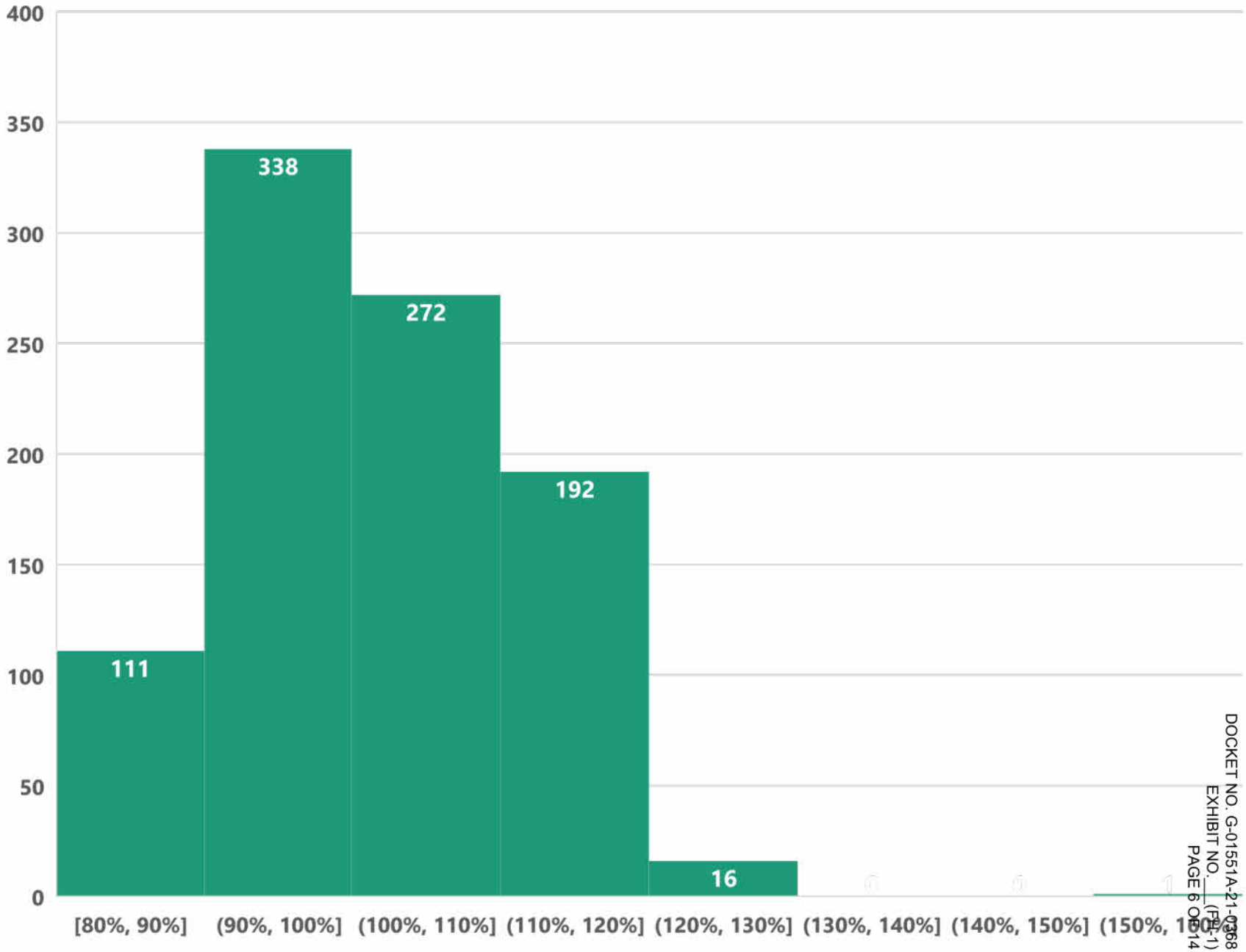
New Wage Schedule (effective 6/21/2010)

- **741** Employees

Non-Exempt Grade Step Details

Grade Step	Grandfathered Wage Schedule	New Wage Schedule	Total Headcount	Percent of Total
1	0	23	**23**	**1.8%**
2	0	61	**61**	**4.7%**
3	0	73	**73**	**5.6%**
4	0	88	**88**	**6.7%**
5	0	94	**94**	**7.2%**
6	1	118	**119**	**9.1%**
7	1	78	**79**	**6.0%**
8	5	71	**76**	**5.8%**
9	561	135	**696**	**53.2%**
Total	**568**	**741**	**1309**	**100%**

Exempt Compa-Ratios



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Market Review

National Energy & Utility Industry

Salary Survey Results

2020 Projected *vs* Actuals

Projected Salary Increase Budget*		Actual Salary Increase Grant*	
Exempt	Non-exempt	Exempt	Non-exempt
3.0%	**3.0%**	**3.1%**	**3.0%**

Projected Structure Adjustment	Actual Structure Adjustment
Exempt	Exempt
2.0%	**2.1%**

**Represents National Energy/Utility Industry Average*

2021 Projected Structure Adjustments

National Survey Source	Scope	Exempt
AON Hewitt	Energy	**2.0%**
Conference Board	Utilities	**2.0%**
Korn Ferry	Utilities	**2.0%**
Mercer	Utilities	**2.2%**
PayFactors	Utilities	**1.7%**
Towers Watson	Utilities	**2.3%**
World@Work	Utilities	**2.1%**
Survey Average		**2.0%**

2021 Projected Salary Increase Budgets

National Survey Source	Scope	Exempt	Non-Exempt
AON Hewitt	Energy	3.2%	3.0%
Conference Board	Utilities	3.0%	2.9%
Korn Ferry	Utilities	3.0%	3.0%
Mercer	Utilities	2.8%	2.8%
PayFactors	Utilities	3.1%	3.0%
Towers Watson	Utilities	3.0%	3.0%
World@Work	Utilities	3.1%	3.1%
Survey Average		**3.0%**	**3.0%**

Wage & Salary Structure

Adjustment Recommendations

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Historic

SWG Salary Adjustments

Year	Exempt *(Base + Discretionary)*	Non-Exempt *(+Step Increase)*
2016	2.2% + 1.3% = 3.5%	2.2% (+.45%)
2017	2.3% + 1.3% = 3.6%	2.3% (+.56%)
2018	2.3% + 1.3% = 3.6%	2.3% (+.61%)
2019	2.3% + 1.0% = 3.3%	2.3% (+.70%)
2020	2.0%	2.0% (+.74%)

Salary Adjustment Recommendations

(Represented in Thousands of Dollars)

Non-Exempt = 2.2% Base, 0.72% Step Increase; Exempt = 2.2% Base, 1.0% Discretionary (3.2% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Non-Exempt	$90,425	$2,640	$1,320			
Exempt	$94,969	$3,039	$1,520			
Total	$185,394	$5,679	$2,840	$3,422	**$583**	**$429**

Non-Exempt = 2.3% Base, 0.72% Step Increase; Exempt = 2.3% Base, 1.0% Discretionary (3.3% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Non-Exempt	$90,425	$2,731	$1,366			
Exempt	$94,969	$3,134	$1,567			
Company	$185,394	$5,865	$2,933	$3,422	**$490**	**$336**

Non-Exempt = 2.3% Base, 0.72% Step Increase; Exempt = 2.3% Base, 1.2% Discretionary (3.5% Total)

	Total Salaries	Total Cost	2021 Year-End Cost	Total Budget	Variance	Adjusted Variance*
Nonexempt	$90,425	$2,731	$1,366			
Exempt	$94,969	$3,324	$1,662			
Company	$185,394	$6,055	$3,028	$3,422	**$395**	**$241**

**Adjusted Variance = after estimated officer increases*

June 24, 2021

Salary Adjustment Effective Date

**Payable on Paycheck Dated July 09, 2021*

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Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-2)

CONFIDENTIAL

SOUTHWEST GAS CORPORATION

Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-2)

Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Medical/RX Dental Vision	Employee	Coverage available to employees and eligible dependents one month following date of hire.	X	X	X	X
Life Insurance	Company	1.0 times annual base salary one month following date of hire	X	X	X	X
Supplemental Life Insurance	Employee	Employee can purchase additional life insurance for self up to 5 times annual base salary to a maximum of $2,500,000. Coverage for spouse and children also available.	X	X	X	X
Accidental Death & Dismemberment (AD&D)	Company	1.0 times annual base salary in the event of accidental death. Lump sum benefit is paid for dismemberment.	X	X	X	X
Supplemental AD&D	Employee	Employee can purchase additional AD&D insurance for self and family, up to a maximum of $500,000.	X	X	X	X
Business Travel Insurance	Company	1.0 times annual base salary beginning date of hire	X	X	X	X
Salary Continuation (Short-Term Disability)	Company	After 6 months of continuous employment, employees are eligible for Salary Continuation and receive a % of their salary for up to 26 weeks. The amount received is based on years of service and prior usage.	X	X	X	X
Long Term Disability (LTD)	Company	After one year of service, employees are eligible for LTD after experiencing six months of continuous disability. LTD is paid at 66-2/3% of basic monthly earnings during the period of disability.	X	X	X	X
Health Care Flexible Spending Account (FSA)	Employee	The Health Care FSA allows employees to set aside tax-free ddollars to pay for eligible health care expenses not covered by their health care plan.	X	X	X	X
Dependent Care Flexible Spending Account (FSA)	Employee	The Dependent Care FSA allows employees to set aside tax-free ddollars to pay for eligible dependent day care expenses.	X	X	X	X
Employee Assistance Program (EAP)	Company	The EAP is a confidential, short-term counseling and referral service designed to help employees and household members deal with personal or work-related problems, including but not limited to marriage/relationship problems, financial issues, elder care, and bereavement. Eligibility begins on date of hire.	X	X	X	X

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Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Health Savings Account (HSA)	Employee	Allows employees to set aside pre-tax or tax-deductible dollars to pay for qualified health care expenses not covered by their health care plan. Maximum contribution limits are determined each year by the IRS. At the beginning of the calendar year, the Company contributes $1,000 to each employee's HSA account who met healthy biometic screening criteria during the previous calendar year.	X	X	X	X
Retirement (Pension)	Company	Tax-qualified, non-contributory defined benefit pension plan. Employees are fully vested after 5 years of service and can receive a pension at age 65. With 10 or more years of Company service, employee can elect early retirement at age 55.	X	X	X	X
Employees' Investment Plan (EIP) -- 401(k)	Employee / Company	Employees are eligible to participate in EIP on date of hire and can contribute from 2% to 60% of salary to a tax-deferred retirement account. After-tax Roth contributions are also available. The Company matches 50% of the first 7% that employee contributes.	X	X	X	X
Supplemental Executive Retirement Plan (SERP)	Company	Provides a benefit equal to the difference between the amount that would have been payable under the Retirement plan, in the absence of laws limiting pension benefits and earnings.	X	X		
Vacation	Company	Employees receive vacation time each year based on their years of service: 1 to <5years, 2 weeks; 5-<15 years, 3 weeks; 15-<25 years, 4 weeks; 25 years, 5 weeks	X	X	X	X
Sick Time	Company	Employees receive up to 40 hours of Sick Time each year after 90 days of continuous service. The amount of hours received is prorated based on the pay period when the 90 days ends.	X	X	X	X
Paid Absence Time	Company	Employees receive up to 40 hours of Paid Absence Time each year after 90 days of continuous service. The amount of hours received is prorated based on the pay period when the 90 days ends.	X	X	X	X
Company Holidays	Company	Employees are eligible for 10 holidays per year as of their first workday.	X	X	X	X
Personal Holidays	Company	Active employees as of January 1 of any calendar year are eligible for 2 personal holidays; employees hired between January 1 and June 30 of the calendar year, are eligible for 1 personal holiday; and employees hired after June 30 of the calendar year are not eligible for personal holidays.	X	X	X	X
Employee Appliance Purchase Program	Company	After one year of service, an employee may purchase a gas or combination gas/electric appliance and decide between two payment programs: pay cash and be reimbursed by the Company, or arrange for the Company to pay the dealer. The employee may then use payroll deductions to make payments for up to 5 years with no interest or finance charges.	X	X	X	X
Matching Gifts Program	Company	Each year, the Southwest Gas Foundation will match any eligible participant's contributions to colleges and universities between $25 and $2,500.			X	X

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Southwest Gas - Non-Cash Compensation Program Summary

Program	Paid By	Description	Eligible Employee Group			
			Officers	Exec	Exempt	Non-Exempt
Employee Education Assistance Program	Company	Reimbursement for tuition, registration, lab fees, and books to a maximum of $5,250 per year.			X	X

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Confidential Exhibit No.___(FH-4)

CONFIDENTIAL

SOUTHWEST GAS CORPORATION

Docket No. G-01551A-21-0368

Confidential Exhibit No.___(FH-4)

Tab D

Direct Testimony
of
Timothy S. Lyons

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
TIMOTHY S. LYONS

ON BEHALF OF
SOUTHWEST GAS CORPORATION

December 3, 2021

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Prepared Direct Testimony
of
Timothy S. Lyons

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Appendix A – Summary of Qualifications of Timothy S. Lyons

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Timothy S. Lyons

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Timothy S. Lyons. My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

Q. 2 Please describe your current position.

A. 2 I am a Partner at ScottMadden, Inc. ("ScottMadden").

Q. 3 Please summarize your educational background and professional experience.

A. 3 My educational background and professional experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously sponsored testimony before a regulatory commission?

A. 4 Yes, I have previously sponsored testimony before 21 regulatory commissions. A summary of my qualifications is included in Appendix A.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor Southwest Gas' (Southwest Gas or Company) Class Cost of Service Study (CCOSS) and proposed rates, including the continuation of the Delivery Charge Adjustment (DCA), for the Company's Arizona rate jurisdiction, which

includes Central Arizona, Southern Arizona, Bullhead City and the recently acquired Graham County Utilities.[1]

Q. 6 How is your prepared direct testimony organized?

A. 6 My prepared direct testimony is organized into the following sections:

- *Development of the Class Cost of Service Study;*
- *Development of the Rate Design; and*
- *Support for Continuation of the Delivery Charge Adjustment (DCA).*

II. DEVELOPMENT OF THE CLASS COST OF SERVICE STUDY

Q. 7 Please summarize the results of the Class Cost of Service Study

A. 7 The results of the Company's CCOSS show the current rate design produces a disparity in class rates of return ("ROR") for the Arizona rate jurisdiction, as shown in Figure 1 (below). Figure 1 summarizes each rate class's "unit" ROR (where "unit" ROR is the class ROR as a factor of the system or overall ROR).

[1] The Company notes that Graham County Utilities customers currently pay different rates than other Southwest Gas Arizona customers. The Company proposes that upon conclusion of this case, Graham County Utilities customers will pay the Commission approved rates in this proceeding.

Figure 1: Class ROR vs. System ROR

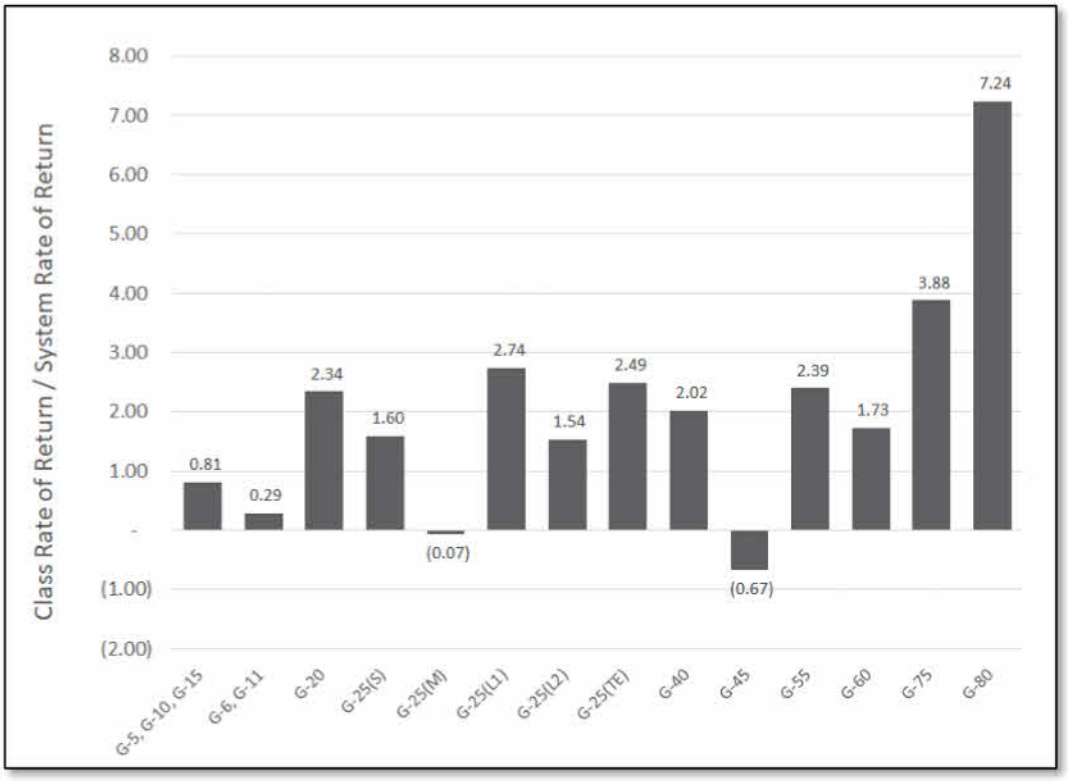

Figure 1 shows that certain rate classes produce RORs at current rates that are less than the system ROR (i.e., the unit ROR is less than 1.00), indicating the current rates recover less than the cost of service for that rate class. The remaining rate classes produce RORs that are higher than the system ROR (i.e., the unit ROR is greater than 1.00), indicating the current rates recover more than the cost of service for that rate class.

Q. 8 Please explain the purpose of a CCOSS.

A. 8 The purpose of a CCOSS is to allocate a utility's overall cost of service to the appropriate rate class in a manner that reflects the underlying cost of service for each of the rate classes included in the study.

Q. 9 Please explain how the CCOSS sponsored in this testimony was developed.

A. 9 The CCOSS sponsored in this testimony was developed by identifying the relationship between the service requirements for each rate class and their respective cost drivers. This approach is well established in industry literature[2] and is consistent with the Company's approach adopted by the Commission in the Company's most recent rate case (Decision No. 77850). Specifically, the CCOSS utilizes the spreadsheet models adopted by the Commission in Decision No. 77850 and incorporates the same three step process to cost allocation: (1) functionalization, or cost assignment into functional categories; (2) classification, or cost assignment according to whether costs are related to serving peak demands, customer service requirements, or commodity demands; and (3) allocation, or cost assignment to rate classes consistent with the functionalization and classification steps described above.

Q. 10 Please describe the data used to prepare the CCOSS.

A. 10 The CCOSS includes the number of customers, usage under normal weather conditions, and revenues by rate class. Revenues at present rates reflect the Company's current margin rates. The CCOSS also includes rate base items, including intangible plant, distribution, and general plant-in-service as well as (a) additions to rate base, including cash working capital, materials and supplies, and prepayments, and (b) reductions to rate base, including deferred income taxes, customer deposits, and customer advances. The CCOSS also includes operations and maintenance (O&M) expenses, including distribution, customer service, customer account, sales, and administrative and general expenses as

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[2] *See* "Principles of Public Utility Rates" by James C. Bonbright.

well as taxes other than income, such as payroll and property taxes, and income taxes.

Q. 11 What is Functionalization and how was it used to develop the CCOSS?

A. 11 Cost functionalization consists of separating rate base and expense items into major operating functions that generally consist of production, storage, and distribution including customer accounting pursuant to the Federal Energy Regulatory Commission (FERC) Uniform System of Accounts.

Q. 12 What is classification?

A. 12 Classification involves the process of separating rate base and expense items into three categories based on cost drivers, commonly referred to as customer, demand and commodity classifications.

Q. 13 Please describe the classification process used to develop the CCOSS.

A. 13 The CCOSS classified costs into one of three classification categories:

- Customer – costs that vary with providing customer access to the natural gas system as well as on-going customer services, such as meter reading and billing services.
- Demand – costs that vary with meeting customer peak demand requirements
- Commodity – costs that vary with meeting customer commodity requirements.

In some cases, costs were classified into only one of the three categories. The cost of meter reading, for example, was classified as customer. Meter reading costs vary with the number of customers. In other cases, costs were classified into more than one category. The cost of distribution mains, for example, was

classified as both customer and demand. Distribution main costs vary with the number of customers and peak day demands.

Q. 14 Please describe the classification of distribution mains.

A. 14 Distribution mains typically represent the largest plant investment for a natural gas utility. The classification of distribution mains reflects two cost drivers. The first cost driver is the number of customers. Distribution mains are designed to provide customer access to the natural gas system. The second cost driver is peak day demand. Distribution mains are designed to meet customer demands on the design day.[3]

Distribution mains in the CCOSS were classified as 50 percent customer and 50 percent demand, consistent with the Company's approach approved by the Commission in Decision No. 77850.

Q. 15 Did the Company prepare an analysis to support the classification of distribution mains?

A. 15 Yes. The Company prepared an analysis to support the classification of distribution mains utilizing the minimum size main method.

Q. 16 What is the minimum size main method?

A. 16 The minimum size main method is based on the estimated cost of the distribution system assuming all mains were installed at the unit cost of the smallest (or minimum size) main installed in the distribution system. The estimated cost of the minimum size main is considered that portion that varies with customer access – and is classified as customer. The difference between the total system

[3] Design day demand is the highest estimated gas demand for a 24-hour period and is used as a basis for designing the capacity of the transmission and distribution system.

cost and minimum size main cost is considered that portion that varies with demand – and is classified as demand.

Q. 17 How was the estimated cost of a minimum size main determined?

A. 17 The estimated cost of the minimum size main was based on two-inch and below plastic mains, which are the smallest mains installed by the Company. Multiplying the unit cost of two-inch and below plastic mains by the actual number of feet in the distribution system yielded a theoretical cost of a system comprised of two-inch and below plastic mains. The customer portion of distribution mains was calculated as the ratio of the cost of two-inch and below mains cost to the total system cost.

Q. 18 What were the results of the minimum size main method?

A. 18 The results of the minimum size main method show the customer portion of the mains investment is 58.58 percent, as shown in Figure 2 (below).

Figure 2: Results of Minimum Size Main Method (Arizona)

Arizona Minimum Size Main Analysis		
Total Quantity		98,549,487
Min-System Unit Costs	$	23.68
Min-System Costs	$	2,333,337,823
Total System Costs	$	3,983,330,419
Customer-Related		58.58%

The Figure shows for the Arizona jurisdiction the estimated cost of a minimum size main is $2.3 billion, which is based on the estimated cost of two-inch and below plastic mains and the actual footage of main in the distribution system. The customer portion of distribution mains of 58.58 percent was calculated as

the ratio of the cost of minimum size main of $2.3 billion to the total cost of the mains of $4.0 billion. The demand portion of the mains investment was 41.42 percent.

Q. 19 What is the Company's recommendation regarding the classification of distribution main?

A. 19 The Company recommends classifying distribution mains in this proceeding as 50.00 percent customer and 50.00 percent demand. The approach is consistent with the approach approved by the Commission in Decision No. 77850 and is supported by the results of the minimum size system method.

Q. 20 Please discuss the classification of other rate base items.

A. 20 Other rate base items were similarly classified based on their underlying cost drivers. For example, meter cost, meter installation, service cost, and regulator investments were classified as customer since they provide customer access to the natural gas system. Rate base items not directly associated with one of the classification categories, such as general plant, were classified through a composite classifier based on the related costs.

Q. 21 Please discuss classification of operations and maintenance (O&M) expenses.

A. 21 O&M expenses were classified similar to their respective plant items. For example, Maintenance of Services (Account 892) was allocated based on the allocation of Services plant (Account 380).

O&M expense items not directly associated with one of the classification categories, such as administrative and general expenses, were classified through a composite classifier based on related costs.

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Q. 22 What is allocation?

A. 22 Allocation consists of assigning rate base and expense items to individual rate classes based on allocators that reflect their underlying cost of service.

Q. 23 Please describe the allocation process used to develop the CCOSS.

A. 23 Costs were allocated to each rate class based on the costs incurred to serve that rate class. In short, cost allocation follows cost causation. This is an established industry approach and is consistent with the Company's approach in Docket No. G-01551A-19-0055. This approach requires development of cost allocators that reflect the design of the natural gas system.

The CCOSS in this filing was developed based on three types of allocators:

1. Class determinants – class characteristics, such as number of customers, usage, and peak demands by rate class.
2. Special studies – detailed analysis of specific plant or expense items, such as meters and services.
3. Internal – composite of how other costs are allocated.

Q. 24 Please describe the process used to develop the demand allocator.

A. 24 The demand allocator is based on peak month sales. The allocator reflects each rate class's responsibility to peak month sales. The approach is consistent with the method approved by the Commission in the Company's most recent rate case proceeding.

Q. 25 Please describe the process used to develop the special studies allocators.

A. 25 There were two special studies developed to allocate meter investments, meter installations, and service investments. The allocators were developed separately for the Company's Arizona rate jurisdictions.

- Meters and Meter Installation investments were allocated to each rate class based on the average installed cost of a meter in each rate class.
- Service investments were allocated to each rate class based on the average installed cost of a service line in each rate class.

The results of the most recent meter and service special studies were blended with the results of the meter and service special studies utilized in the prior rate case to create a composite allocator that was used in the CCOSS. The "composite allocator" approach helps to minimize the impact of variations in the results of the special studies.

Q. 26 Please summarize the results of the Company's CCOSS.

A. 26 The results of CCOSS are shown in Figure 1 (above). The Figure compared the calculated ROR for each rate class based on current rates to the system or overall ROR.

Q. 27 What conclusions can be reached when a rate class ROR is higher or lower than the system ROR?

A. 27 If a rate class produces a ROR that is lower than the system ROR, then the revenues recovered from the rate class are less than the cost of service. Conversely, if a rate class produces a ROR that is higher than the system ROR, then the revenues recovered from the rate class are more than the cost of service. As discussed below, the CCOSS results were used to inform the proposed rate design for each rate class.

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III. DEVELOPMENT OF THE RATE DESIGN

Q. 28 Is the Company proposing any changes to its currently authorized rate design?

A. 28 No. As discussed below, the Company believes that the current rate design, including the basic service charge, remains in the public interest and should not be modified.

Q. 29 Please provide an overview of the Company's currently effective rates.

A. 29 Customers are presently served under rate schedules based on the type of service and load characteristics. The Company's current rate structure consists of delivery charges that recover the cost of delivering gas to customers, gas cost charges that recover purchased gas costs and rate adjustment mechanisms. The delivery charges include a monthly Basic Service Charge and per therm commodity charge. The Transportation Service class G-25 (TE) also includes a demand charge that recovers the delivery cost of service.

Q. 30 Please describe the principles used to guide the development of the proposed rate design.

A. 30 The proposed rate design was guided by several principles common throughout the industry, including: (a) rates should recover the overall cost of providing service; (b) rates should be fair, minimizing inequities to the maximum extent possible; and (c) rate changes should be tempered by rate continuity concerns.[4]

Because these principles can conflict, the rate design process also includes a level of judgment to balance these principles.

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[4] See Bonbright, James, Danielsen, Albert, and Kamerschen, David. "Principles of Public Utility Rates." Public Utilities Reports, Inc. pp. 377-407 (2nd Ed. 1988).

Q. 31 How were the principles applied to the proposed rate design?

A. 31 First, rates were designed to recover the Company's overall cost of service. This was done by developing customer and usage charges based on adjusted test year bills and usage. In addition, rates were designed to be fair and equitable. This was done by setting revenue targets that reflect each rate class's cost of service subject to rate continuity considerations. As discussed earlier, the results of the CCOSS show that some rate classes produce less than the overall ROR. The goal of the proposed rate design was to eliminate that deficiency, subject to rate continuity considerations.

Q. 32 What is the total revenue requirement that you used as a starting point for the rate design?

A. 32 The total revenue requirement used as a starting point for the rate design is described in the prepared direct testimony of Company Witness Randi L. Cunningham.

Q. 33 Please describe the process used to set the revenue targets for each rate class.

A. 33 The proposed revenue targets for each rate class were based on the results of the CCOSS and resulted in classes with RORs lower than the system ROR receiving greater percentage increases than classes with RORs that are higher than the system ROR.

Q. 34 Please describe the proposed rate design for each rate class.

A. 34 The proposed rate design for each rate class is provided in the Schedule H-2. The proposed Residential rate design is described below.

<u>Basic Service Charge</u>

The Company proposes to maintain the current residential basic service charge. The current single-family residential (G-5) basic service charge is $10.70 per month, and the current multi-family residential (G-6) basic service charge is $9.70 per month.

Delivery Charges

The Company proposes a residential delivery charge that recovers delivery costs not recovered through the Basic Service Charge. The Company proposes a delivery charge of $1.10224 per therm for single-family residential customers (G-5), and $1.30601 per therm for multi- family residential customers (G-6). The Company proposes to simplify its low income rates by providing a 30 percent discount off the applicable residential single-family and multi-family rates year-round. The Company also proposes to maintain the discount on its air conditioning rate over 15 therms of $0.16952 per therm.

Q. 35 Why is the Company not proposing any change to its Basic Service Charge?

A. 35 The Company's proposal to maintain the current customer charges addresses potential bill impact concerns on low-use customers, who would be most impacted by an increase in the Basic Service Charge. The Company believes the proposal strikes a reasonable balance between minimizing intra-class inequities and addressing potential bill impact concerns on low-use customers. It is important to note the Company's primary concern with maintaining the current customer charges is that more of the Company's revenue requirement will be recovered through volumetric charges, thus increasing the likelihood that the Company will over-collect or under-collect its authorized revenue

requirement since a majority of the Company's revenue requirement is fixed and does not change with changes in volumes.

The Company's concerns, however, are currently addressed through its proposal to continue the DCA. The DCA addresses the Company's concerns regarding the over- and under-collection of the authorized revenue requirement as higher revenues under colder-than-normal weather, for example, are refunded to customers under the DCA and lower revenues under warmer-than-normal weather, for example, are recovered from customers.

As discussed below, the Company believes the DCA (1) addresses the Company's concerns regarding recovery of the revenue requirement through volumetric charges, (2) provides benefits to the Company and its customers, and (3) should be continued.

The Company notes that if the DCA is removed from the Company's tariffs – as was recommended by Arizona Grain, Inc. in the Company's most recent rate case proceeding – then it is important to replace it with an alternative rate design that provides similar benefits to the Company and its customers while addressing the Company's concerns regarding the under- and over-collection of its revenue requirement.[5]

Q. 36 What rate structure is the Company proposing for the general service customers?

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[5] Direct Testimony of Scott J. Rubin (Revenue Requirements) on behalf of Arizona Grain, Inc., Docket No. G-01551A-19-0055, at 44.

A. 36 The Company proposes to retain its existing rate structure for the general service customers. The four General Service rate classes (G-25(S), G-25(M), G-25(L1), G-25(L2),) have a two-part rate structure, consisting of a monthly Basic Service Charge and a single commodity charge. The Transportation-Eligible General Gas Service rate class (G-25(TE)) has a three-part rate structure, consisting of a monthly Basic Service Charge, a single commodity charge, and a demand charge based on the customers' highest monthly gas demand in the most recent 12-month period, ending two months prior to the current billing period.

Q. 37 Which schedules evaluate the impact of the proposed rate design on customers?

A. 37 Schedule H-4 evaluates the impact of the proposed rate design on customers. The schedule compares average customer bills at the present and proposed rates, as shown in Figure 3 (below) for single-family residential customers. The bill impact analysis compares the proposed and current tariff rates for residential customers during an average summer, average winter, and average annual month. The bill impact analysis also compares the proposed and current tariff rates for residential customers at 75.0 percent and 125.0 percent of an average summer and average winter month.

Figure 3: Comparison of Proposed and Current Residential Bills

Bill Impact Analysis: Single-Family Residential Gas Service	Monthly Consumption (Therms)	Month Bill ($) Proposed Rates	Month Bill ($) Current Rates	Increase / (Decrease) Dollars ($)	Increase / (Decrease) Percent (%)
Summer Season Bills					
75 Percent of Average Use	8	$ 23.60	$ 21.89	$ 1.71	7.81%
Average Summer Use	11	28.44	26.09	2.35	9.01%
125 Percent of Average Use	14	33.28	30.29	2.99	9.87%
Winter Season Bills					
75 Percent of Average Use	27	$ 54.24	$ 48.47	$ 5.77	11.90%
Average Winter Use	36	68.75	61.07	7.68	12.58%
125 Percent of Average Use	45	83.26	73.66	9.60	13.03%
Annual Average Bills					
Average Monthly Use	24	$ 49.40	$ 44.28	$ 5.12	11.56%

The Figure shows the proposed single-family residential rates will increase winter bills for the average customer using 36 therms in a winter month by $7.68 per month, or 12.58 percent, summer bills for the average customer using 11 therms in a summer month by $2.35 per month, or 9.01 percent, and average monthly bills for the average customer using 24 therms per month by $5.12, or 11.56 percent. Actual customer bill impacts at the time of approval by the Commission will vary depending on a number of factors, such as gas costs or rate adjustments, at the time the Commission issues a Decision in this case.

Q. 38 Has Southwest Gas included schedules showing the proposed revenue changes by rate schedule?

A. 38 Yes. Schedules H-1 and H-2 show the proposed revenue changes by rate schedule.

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IV. SUPPORT FOR CONTINUATION OF THE DELIVERY CHARGE ADJUSTMENT

Q. 39 What is revenue decoupling?

A. 39 Revenue decoupling breaks or "decouples" the link between utility revenues and sales volumes, helping to ensure that a utility does not over- or under-recover its authorized revenue requirement. There are two basic forms of revenue decoupling:

- Partial or Limited Revenue Decoupling – this type addresses specific variances between actual and authorized revenues, such as the impact of weather or energy efficiency.
- Full Revenue Decoupling – this type addresses the total variance between actual and authorized revenues. Variances can be measured based on total revenues, or revenues per customer ("RPC").

The Company's Delivery Charge Adjustment ("DCA") is a form of full revenue decoupling.

Q. 40 What are the primary benefits of revenue decoupling?

A. 40 The primary benefits of revenue decoupling are:

1. It ensures that the utility does not over- or under-recover its Commission-authorized revenue per customer.
2. It avoids disputes over billing determinants.
3. It corrects the basic misalignment between utility rates and costs.
4. It supports achievement of certain policy objectives, such as energy efficiency initiatives.
5. It helps stabilize utility cost recovery as well as customer bills.

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Q. 41 Please discuss the basic misalignment between utility rates and costs.

A. 41 Gas utilities incur three types of costs in providing natural gas service to customers:

- Customer costs – including meter, billing and a portion of distribution costs that generally vary by the number of customers
- Demand-related costs – including transmission and distribution costs that generally vary by demand
- Commodity-related costs – including variable Operating and Maintenance expenses that generally vary by usage or natural gas consumed

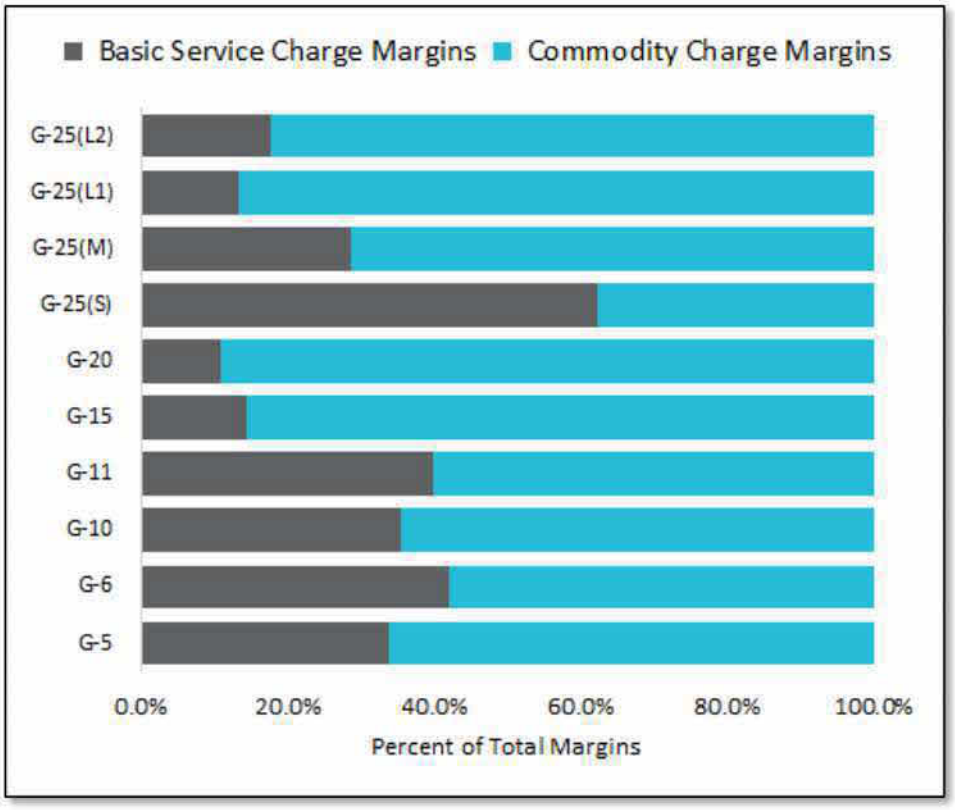
Utility rates are designed to recover all of these costs or authorized revenue requirements. However, a significant portion of the costs are recovered based on consumption charges, reflecting usage at the time rates are established (i.e., rates are set based on an assumed level of usage). Thus, to the extent that actual usage is significantly lower than the assumed level of usage in rates, the utility rates recover less than the authorized revenue requirement. Conversely, to the extent that actual usage is significantly higher than the assumed level of usage in rates, then utility rates recover more than the authorized revenue requirement.

Revenue decoupling corrects for this misalignment by adjusting revenues to match the authorized revenue requirement.

Q. 42 Do the Company's current rates exhibit this misalignment between utility rates and costs?

A. 42 Yes. The Company's current rates recover a significant portion of revenues through usage charges, as shown in Figure 4 (below).

Figure 4: Rate Margins as Percent of Total Margins[6]



The Figure shows that a significant portion of the Company's margins are recovered through commodity or usage charges. The single-family residential class (G-5), for example, recovers 33.8 percent of its revenue requirement through a basic service or fixed charge and 66.2 percent of its revenue requirement through a commodity or usage charge. The Company's decoupling mechanism alleviates much of the concern associated with the recovery of its largely fixed revenue requirement through commodity or usage charges as approximately 91.90 percent of its tariff sales margins are subject to the DCA.

Q. 43 Please discuss how revenue decoupling supports certain policy objectives.

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[6] The DCA applies to the rate classes included in Figure 4.

A. 43 Revenue decoupling supports certain Commission policy objectives, such as energy efficiency initiatives. Recovery of fixed costs through variable charges creates an inherent financial disincentive for utilities to promote initiatives that reduce customer consumption and has been referenced as a "primary barrier to aggressive utility investment in energy efficiency."[7]

Revenue decoupling removes this financial disincentive, facilitating policies aimed to encourage energy efficiency. The Commission has noted: "Revenue decoupling may offer significant advantages over alternative mechanisms for addressing utility financial disincentives to energy efficiency, as it establishes better certainty of utility recovery of authorized fixed costs and better aligns utility and customer interests."[8]

Q. 44 Has the utility industry recognized the benefits of revenue decoupling in achieving policy objectives?

A. 44 Yes. Revenue decoupling is recognized by the utility industry as an essential tool in promoting energy efficiency initiatives. The American Council for an Energy-Efficient Economy (ACEEE), an authority on utility energy efficiency programs, states: "For energy efficiency to flourish, the use of decoupling needs to be expanded so that utilities can recover their fixed costs even if sales decline."[9] Moreover, the benefits of revenue decoupling are recognized in

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[7] National Action Plan for Energy Efficiency (2007): Aligning Utility Incentives with Investment in Energy Efficiency, at p. ES-3

[8] Final ACC Policy Statement Regarding Utility Disincentives to Energy Efficiency and Decoupled Rate Structures, Docket Nos. E-000005-08-0314 and G-00000C-08-0314, Policy Statement 3.

[9] ACEEE The Future of the Utility Industry and the Role of Energy Efficiency (June 2014), at p. viii

regulatory jurisdictions throughout the U.S. Full revenue decoupling is currently in effect in 22 jurisdictions.[10]

Q. 45 Has the Commission approved a revenue decoupling mechanism for Southwest Gas?

A. 45 Yes, the DCA is the Company's Commission-approved full revenue decoupling mechanism. The Company's DCA was originally approved in the 2010 rate case[11] and modified in the 2016 rate case[12]. In the Company's latest rate case, the Commission approved the continuation of the DCA mechanism stating that:

> "We find that the continuation of the DCA mechanism is appropriate at this time. As noted by the Company, the DCA mechanism has been functioning as expected and the benefits associated with the DCA mechanism identified in the Company's last rate case remain valid in this case. Accordingly, we adopt and approve the continuation of the DCA mechanism."[13]

Q. 46 What is the purpose of the Company's DCA provision?

A. 46 The DCA accounts for annual differences between actual billed margin per customer and margin per customer authorized by the Commission in the most recent rate case. Over-collected amounts for a given year are refunded to customers and under-collected amounts are recovered from customers. The

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[10] S&P Global Market Intelligence. Data as of April 12, 2021

[11] Decision 72723 in Docket No. G-01551A-10-0458

[12] Decision 76069 in Docket No. G-01551A-16-0107

[13] Decision 77850 in Docket No. G-01551A-19-0055

mechanism ensures that the Company will only recover its Commission-authorized margin per customer. The Company maintains accounting records that accumulate the difference between authorized and actual billed margin per customer in the Delivery Charge Adjustment Balancing Account (DCABA).

Q. 47 Please describe the performance of DCA in the most recent reporting period?

A. 47 The DCABA showed an under-collected balance of $32,643,150 at December 31, 2019. During the period of January 1, 2020 through December 31, 2020 the Company's billed revenues were $13,104,542 less than authorized revenues, and the Company recovered $44,806,734 through the DCA[14] resulting in an under-collected balance of $1,001,062 at December 31, 2021. Based on this balance, the DCA rate would have been set at $.00198 per therm. However, the Company supported a DCA rate of $0.00 per therm until the next annual DCA balance update in the first quarter of 2022..

Q. 48 Has the DCABA balance changed since the most recent reporting period?

A. 48 Yes, the DCABA shows an over-collected balance of $6,464,785 at September 30, 2021 due in large part to higher customer usage from colder than normal temperatures during Winter Storm Uri in February 2021.

Q. 49 Has the Commission recognized benefits of the Company's DCA provision?

A. 49 Yes. The Commission has recognized the benefits of the DCA in the Company's most recent rate case, including:

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[14] Based on the DCA rate of $0.00 per therm approved on May 23, 2020 in Decision No. 77623 (Docket No. G-01551A-20-0078), and the DCA rate of $0.14902 per therm approved on May 15, 2019 in Decision No. 77174 (Docket No. G-01551A-16-0107)

1. preventing utility profit from increased sales;
2. ensuring customers pay no more than costs authorized by the Commission;
3. including customer protection from high winter bills due to a severe weather event;
4. allowing for both upward and downward rate adjustments;·
5. addressing the long-tern declining usage issue for SWG; and
6. retaining immediate permanent customer saving on commodity costs.

Specifically, the Commission noted in the Company's most recent rate case decision, "...the benefits associated with the DCA mechanism identified in the Company's last rate case remain valid in this case." [Decision 77850 at 80]

Importantly, the DCA removes the Company's financial disincentive to promote energy efficiency and conservation efforts as well as address customer bill impact concerns, particularly among low use customers. Specifically, the DCA enables the Company to maintain its basic service charges at their current levels – for example, the single family residential basic service charge is proposed to remain at $10.70.

Q. 50 What is the Company's recommendation regarding the DCA provision?

A. 50 The Company requests authority to continue the DCA provision. The Company's 2021 Annual Revenue Decoupling report "demonstrates that the DCA continued to perform as designed and authorized by the Commission"[15].

[15] Southwest Gas Corporation 2021 Revenue Decoupling Report, p.1

Q. 51 Does this conclude your prepared direct testimony?

A. 51 Yes, it does.

Summary of Qualifications

Tim Lyons is a partner with ScottMadden with more than 30 years of experience in the energy industry. Tim has held senior positions at several gas utilities and energy consulting firms. His experience includes rates and regulatory support, sales and marketing, customer service and strategy development. Prior to joining ScottMadden, Tim served as Vice President of Sales and Marketing for Vermont Gas. He has also served as Vice President of Marketing and Regulatory Affairs for Providence Gas Company, Director of Rates at Boston Gas Company, and Project Director at Quantec, LLC, an energy consulting firm.

Tim has sponsored testimony before 21 state regulatory commissions. Tim holds a B.A. from St. Anselm College, an M.A. in Economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Areas of Specialization

- Regulation and Rates
- Retail Energy
- Utilities
- Natural Gas

Capabilities

- Regulatory Strategy and Rate Case Support
- Strategic and Business Planning
- Capital Project Planning
- Process Improvements

Articles and Speeches

- "Country Strong: Vermont Gas shares its comprehensive effort to expand natural gas service into rural communities." ***American Gas Association***, June 2011 (with Don Gilbert).
- "Talking Safety With Vermont Gas." ***American Gas Association***, February 2009 (with Dave Attig).
- "Consumers Say 'Act Now' To Stabilize Prices." ***Power & Gas Marketing***, September/ October 2001 (with Jim DeMetro and Gerry Yurkevicz).
- "Rate Reclassification: Who Buys What and When." ***Public Utilities Fortnightly***, October 15, 1991 (with John Martin).

Sponsor	Date	Docket No.	Subject
Regulatory Commission of Alaska			
Cook Inlet Natural Gas Storage Alaska, LLC	7/21	Docket No. U-21-058	Sponsored testimony supporting the lead-lag study/cash working capital requirement for a general rate case proceeding.
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted and sponsored testimony supporting a lead-lag study for a general rate case proceeding.
Arkansas Public Service Commission			
Liberty Utilities (Pine Bluff Water)	10/18	Docket No. 18-027-U	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding.
California Public Utilities Commission			
Liberty Utilities (CalPeco Electric)	5/21	Docket No. A 21-05-017	Sponsored testimony supporting the lead-lag study/cash working capital, marginal cost study, rate design and bill impact analysis for a general rate case proceeding.
Southwest Gas Corporation (Southern California, Northern California and South Lake Tahoe jurisdictions)	8/19	Docket No. A.19-08-015	Sponsored testimony on behalf of three separate rate jurisdictions supporting revenue requirements, lead-lag/ cash working capital, and class cost of service, rate design and bill impact analysis for a general rate case proceeding.
Connecticut Public Utilities Regulatory Authority			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony supporting the review and evaluation of gas expansion policies, procedures and analysis.
Illinois Commerce Commission			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. 16-0401	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
Iowa Utilities Board			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. RPU-2016-0003	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
Kansas Corporation Commission			
The Empire District Electric Company	12/18	Docket No. 19-EPDE-223-RTS	Sponsored testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Maine Public Utilities Commission			
Maine Water Company	03/21	Docket No. 2021-00053	Sponsored testimony supporting a proposed rate smoothing mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/19	Docket No. 2019-00092	Sponsored testimony supporting a proposed capital investment cost recovery mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/15	Docket No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
Maryland Public Service Commission			
Sandpiper Energy, a Chesapeake Utilities company	12/15	Case No. 9410	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.

Sponsor	Date	Docket No.	Subject
Massachusetts Department of Public Utilities			
Liberty Utilities (New England Gas Company)	08/20	Docket No. DPU 20-92	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2020/2021 through 2024/2025.
Liberty Utilities (New England Gas Company)	07/18	Docket No. DPU 18-68	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2018/2019 through 2022/2023.
Liberty Utilities (New England Gas Company)	07/16	Docket No. DPU 16-109	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2016/2017 through 2020/2021.
Boston Gas	10/93	Docket No. DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.
Boston Gas	03/90	Docket No. DPU 90-55	Sponsored testimony supporting the weather and other cost of service adjustments, rate design and customer bill impact studies for a general rate case proceeding.
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Michigan Public Service Commission			
Lansing Board of Water & Light and Michigan State University	04/20	Docket No. U-20650	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Lansing Board of Water & Light and Michigan State University	04/19	Docket No. U-20322	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Midland Cogeneration Ventures, LLC	09/18	Docket No. U-18010	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Minnesota Public Utilities Commission			
Northern States Power Company (XcelEnergy)	10/21	Docket No. E002/GR-21-630	Sponsored testimony supporting a Return on Equity (ROE)adjustment mechanism that would allow the Company to symmetrically adjust its ROE to reflect significant changesin financial market conditions.
Missouri Public Service Commission			
The Empire District Gas Company	08/21	Docket No. GR-2021-0320	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
The Empire District Electric Company	05/21	Docket No. ER-2021-0312	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Spire Missouri, Inc.	12/20	Docket No. GR-2021-0108	Sponsored testimony supporting class cost of service, rate design, and lead-lag study proposals for a general rate case proceeding. The testimony also included support for a proposed revenue adjustment mechanism.
The Empire District Electric Company	08/19	Docket No. ER-2019-0374	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a weather normalization mechanism.

Sponsor	Date	Docket No.	Subject
Liberty Utilities (Midstates Natural Gas)	09/17	Docket No. GR-2018-0013	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
Missouri Gas Energy	04/17	Docket No. GR-2017-0216	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Laclede Gas Company	04/17	Docket No. GR-2017-0215	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
New Hampshire Public Utilities Commission			
Unitil (Northern Utilities, Inc.)	8/21	Docket No. DG 21-104	Sponsored testimony supporting a revenue decoupling mechanism.
Unitil Energy Systems, Inc.	4/21	Docket No. DE 21-030	Sponsored testimony supporting a revenue decoupling mechanism.
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	11/17	Docket No. DG 17-198	Sponsored testimony supporting a levelized cost analysis for approval of firm supply and transportation agreements.
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
Nevada Public Utilities Commission			
Southwest Gas Corporation	09/21	Docket No. 21-09001	Sponsored testimony supporting the class cost of service,rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
Southwest Gas Corporation	02/20	Docket No. 20-02023	Sponsored testimony supporting the class cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
New Jersey Board of Public Utilities			
South Jersey Gas Company	03/20	Docket No. GR20030243	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Elizabethtown Gas Company	04/19	Docket No. GR19040486	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	08/16	Docket No. GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Corporation Commission of Oklahoma			
The Empire District Electric Company	03/19	Cause No. PUD 201800133	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
The Empire District Electric Company	04/17	Cause No. PUD 201600468	Adopted direct testimony and sponsored rebuttal testimony supporting the revenue requirements for a general rate case proceeding. The testimony included proposals for alternative ratemaking mechanisms.

Sponsor	Date	Docket No.	Subject
Rhode Island Public Utilities Commission			
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony supporting the changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony supporting the extension of a rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony supporting the de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony supporting a rate plan that fixed all billing rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for a rate design proceeding.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for a rate design proceeding.
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony supporting the rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for a rate design proceeding.
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.
Railroad Commission of Texas			
Texas Gas Service Company – Central Texas and Gulf Coast Service Areas	12/19	GUD No. 10928	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Beaumont/ East Texas Division	11/19	GUD No. 10920	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	08/18	GUD No. 10766	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	06/18	GUD No. 10739	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/17	GUD No. 10669	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Rio Grande Valley Service Area	06/17	GUD No. 10656	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor	Date	Docket No.	Subject
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Public Utility Commission of Texas			
CenterPoint Energy Houston Electric, LLC	04/19	Docket No. 49421	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Vermont Public Utilities Commission			
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the market served by $90 million natural gas expansion project to Addison County, VT. Also described the terms and economic benefits of a special contract with International Paper.
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.
Virginia State Corporation Commission			
American Electric Power - Appalachian Power Company	3/20	Case No. PUR-2020-00015	Sponsored testimony supporting the Lead/Lag study for the 2020 triennial review of base rates, terms, and conditions.

Tab E

Direct Testimony
of
John R. Olenick

IN THE MATTER OF

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
JOHN R. OLENICK

ON BEHALF OF

SOUTHWEST GAS CORPORATION

December 3, 2021

Table of Contents
of
Prepared Direct Testimony
of
JOHN R. OLENICK

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Appendix A – Summary of Qualifications of John R. Olenick

Exhibit No.__(JRO-1)

Exhibit No.__(JRO-2)

Exhibit No.__(JRO-3)

Exhibit No.__(JRO-4)

Exhibit No.__(JRO-5)

Exhibit No.__(JRO-6)

Exhibit No.__(JRO-7)

Exhibit No.__(JRO-8)

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
John R. Olenick

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is John R. Olenick. My business address is 8360 South Durango Drive, Las Vegas, Nevada 89193.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Gas Supply department. My title is Director/Gas Supply.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony before Public Utilities Commission of Nevada, the Arizona Corporation Commission (Commission), and the California Public Utilities Commission.

Q. 5 What is the purpose and summary of your prepared direct testimony in this proceeding?

A. 5 The purpose of my prepared direct testimony is to: 1) support the proposed optional Move2Zero Program that will permit the Company's Arizona customers to participate in reducing greenhouse gas emissions through the purchase of carbon offset credits; and 2) support the reasonableness and prudence of the Company's

gas procurement activities from January 2019 to August 2021 ("Covered Period").

II. MOVE2ZERO PROGRAM

Q. 6 Please describe the Company's proposed Move2Zero Program.

A. 6 The Move2Zero Program ("Move2Zero Program" or "Program") is optional program that provides the Company's Arizona customers the ability to offset combustion-related greenhouse gas (GHG) emissions associated with natural gas usage through the Company's purchase and retirement of certified carbon offset credits. Southwest Gas proposes to offer its Arizona customers the option to participate in the Move2Zero Program, however, there is no requirement that a customer participate in the Move2Zero Program, and only customers that participate in the Move2Zero Program will incur any incremental costs associated with the Program. The Program will be available to customers who voluntarily elect to participate in the Move2Zero Program. The Company will procure carbon offset credits through a third-party on behalf of customers who participate in the Program. Customers who do not elect to participate in the Program will not in any way pay or be otherwise impacted by any Program related costs.

Please refer to the Direct Testimony of Company Witness, Matthew D. Derr, for support as to how rates will be established and costs associated with the Program will be accounted for.

Q. 7 Why is the Company proposing the Move2Zero Program?

A. 7 The Company is proposing the Program to provide an option for its customers to reduce their carbon footprint and assist in reducing GHG emissions.

Q. 8 What is a carbon offset and how does it differ from a carbon offset credit?

A. 8 Carbon offsets and carbon offset credits are somewhat interchangeable, but their meanings are slightly different. A carbon offset "broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration

or the planting of trees) – that is used to compensate for emissions that occur elsewhere."[1] A carbon offset credit "is a transferrable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric ton of CO2, or an equivalent amount of other GHGs."[2] The distinction between the two is that a carbon offset credit can be used "to transfer a net climate benefit from one entity to another."[3]

Q, 9 How are carbon offset credits produced?

A. 9 Activities or projects that reduce GHG emissions or increase carbon sequestration can produce carbon offset credits.[4] Activities or projects that produce carbon offset credits are commonly referred to as carbon offset projects.

Q. 10 What is a carbon offset program?

A. 10 Carbon offset programs provide oversight to the production of carbon offset credits and: 1) develop and approve carbon offset credit standards; 2) review carbon offset projects against those standards; and 3) operate registries that issue, transfer, and retire carbon offset credits.[5] Southwest Gas would purchase any carbon offset credits that would be used in the Move2Zero Program through a carbon offset program to ensure that the carbon offset project that produced the credits meet the proper standards and those credits are reviewed, issued, transferred, and retired with third-party oversight.

Q. 11 Please describe how carbon offset credits will be used in structure of the Move2Zero Program.

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[1] https://www.offsetguide.org/understanding-carbon-offsets/what-is-a-carbon-offset/; see also, Exhibit No.__(JRO-1), Securing Climate Benefit: A Guide to Using Carbon Offsets, Broekhoff, D., Gillenwater, M., Colbert-Sangree, T., Cage, P., Nov. 13, 2019, p. 6.
[2] Id.
[3] Id.
[4] Exhibit No.__(JRO-1), p. 7.
[5] Id at p 8.

A. 11 The Move2Zero Program will be offered to Arizona customers through a "block" design. One "block" represents the equivalent of ten therms of combustion-related natural gas usage that will be offset through the purchase and retirement of a carbon offset credit through a carbon offset program. Each "block" will cost a fixed amount per month, and customers can choose how many "blocks" they would like to purchase. A customer may elect to purchase blocks that equate to more or less therms than that customer's actual usage. This approach provides customers the opportunity to reduce GHG emission beyond their emissions related to their own natural gas usage.

Q. 12 How is the "block" price and equivalent natural gas usage offset determined?

A. 12 The cost of each "block" is determined based on multiple variables, including the cost and quantity of carbon offset credits purchased, other Program costs, and the level of customer participation. To ensure only customers who elect to participate in the Program are responsible for Program-related expenses, the "block" price is designed to include the cost of the carbon offset credit as well as all other Program related expenses. A therm equivalent can be derived using the previously referenced US EPA's default emission factor relating to the combustion of natural gas (0.0053 metric tons C02-e/therm).

Upon approval from the Commission to offer the Move2Zero Program, the Company would solicit offers from carbon offset programs for carbon offset credit procurement and Program administration. The price of each "block" would be finalized at the time the Program costs are established with the selected third-party carbon offset program(s). The carbon offset programs are further discussed below.

. . .

Q. 13 What is the cost of each "block" that the Company is proposing?

A. 13 The Company proposes a $5.00 per "block" charge as reflected in the Proposed Tariff Sheet No. 94. Southwest Gas Witness, Matthew D. Derr, provides more information related to proposed additions to the Company's tariff in his testimony in this proceeding.

III. CARBON OFFSET CREDIT AND QUALITY REPORTING

Q. 17 What type of carbon offset credits will Southwest Gas purchase under the proposed Move2Zero Program?

A. 17 Southwest Gas will purchase carbon offset credits for the Program through third-party vendors. The third-party vendors must demonstrate that each carbon offset credits is real, additional, verifiable, enforceable, and permanent. Moreover, each carbon offset credit must be registered by a widely used and reputable carbon offset program such as American Carbon Registry, Climate Action Reserve, Verra, Green-e, etc. This will provide the ability to demonstrate the purchase, transfer, and retirement of all carbon offset credits purchased for the Carbon Offset Program.

Q. 18 Does Southwest Gas propose to provide annual reporting related to the Program?

A. 18 Yes. As part of an annual compliance filing with the Commission, Southwest Gas would provide annual Program status updates and any proposed adjustments to the "block" cost. These reports will include customer enrollment levels, carbon offset credit purchases, carbon offset programs utilized, carbon offset project that are producing the carbon offset credits for the Program, and the quantity of GHG emissions offset by the Program.

. . .

. . .

IV. GAS COSTS AND SUPPLY ACQUISITION FOR THE COVERED PERIOD

Q. 19 Has Southwest Gas made any substantive changes to its gas purchase policies, processes, or procedures since gas costs were reviewed in Docket No. G-01551A-19-0055?

A. 19 Yes. The Company made various changes to the Gas Purchases & Transportation Portfolio Selection Procedures and Gas Purchasing and Nomination Procedures. The updated document is contained in Exhibit No.__(JRO-2) and Exhibit No.__(JRO-3) contains a redline version to the previous document. In addition, the Company implemented the Arizona Gas Supply Policy Statement, which is included as Exhibit No.__(JRO-4). The Company also follows the Arizona System Supply Acquisition, a copy of which is included as Exhibit No.__(JRO-5).

Q. 20 Please summarize the changes made to the Gas Purchases & Transportation Portfolio Selection Procedure and Gas Purchasing and Nomination Procedures which are highlighted on Exhibit No.__(JRO-3) and the rationale for those changes.

A. 20 The changes highlighted in Exhibit No.__(JRO-3) provide additional steps that the Company's personnel should follow when determining the quantity and purchase location for monthly or daily spot purchases. The Company made the changes referenced in Exhibit No.__(JRO-3) to help Southwest Gas personnel identify potential critical weather events or market pricing anomalies that could lead to supply disruptions or daily gas price increases.

Southwest Gas believes that these procedure and process changes are reasonable and prudent and may help to 1) identify market anomalies and critical weather events; 2) prepare for those conditions; and 3) reduce the potential for supply disruptions.

. . .

. . .

Q. 21 Did the Company experience any out of the ordinary events since the Commission last reviewed gas costs in Docket No. G-01551A-19-0055 that affected gas prices and overall gas costs?

A. 21 Yes. In February 2021, extreme cold weather gripped the central part of the United States. This cold weather event, commonly referred to as winter storm Uri, led to gas supply shortages and power outages in Texas, and caused a significant, and unprecedented, increase in daily natural gas spot market prices throughout the United States. Daily spot market natural gas prices for the areas where Southwest Gas routinely purchases gas supplies for its Arizona customers rose from slightly over $2.60/Dth at the beginning of February 2021 to prices that exceeded $300.00/Dth on February 17, 2021.

As a result of the market dynamics from Texas, there were substantial cuts to gas supplies Southwest Gas procured from the Permian Basin. Southwest Gas relies upon Permian Basin gas supplies to serve much of its Arizona customers. These supplies were obtained to meet Arizona customers' requirements during this time period.

After winter storm Uri subsided and EPNG's COC concluded, gas prices fell quickly, back to under $3.00/Dth by February 25, 2021. These price increases were unprecedented in my experience -- I personally had never seen daily gas prices that high in the San Juan and Permian production regions in the almost 30 years since the Federal Energy Regulatory Commission deregulated natural gas prices.

Exhibit No.__(JRO-6) shows the daily market prices for February 2021 Permian and San Juan Basin supplies and illustrates the dramatic increase in daily gas prices that occurred during winter storm Uri. The increase in daily gas prices caused Arizona gas supply costs for February 2021 to increase to previously unseen levels.

Despite purchasing and nominating gas supplies more than the forecasted demands of the Company's Arizona customers, the supply shortages in the Permian Basin caused a large portion of those gas supplies to be cut and unscheduled by EPNG and customer usage in Arizona exceeded the available supplies that were scheduled by EPNG. Arizona customers were never in jeopardy of losing service due to winter storm Uri and the ensuing gas supply shortages, EPNG's invoice to Southwest Gas for February 2021 gas flows initially included over $65 million in COC charges related to EPNG COC Event.

Q. 22 What was the magnitude of gas purchase costs made during February 2021?

A. 22 Total Arizona gas costs, including upstream pipeline transportation charges for February 2021 were approximately $191 million. By way of comparison, for the full year of 2020, Southwest Gas incurred approximately $133 million in gas costs and upstream transportation charges for Arizona customers. These gas cost and upstream pipeline charges are recovered through the Company's Monthly Gas Cost mechanism. Please refer to the Direct Testimony of Matthew D. Derr for additional information on this mechanism.

Q. 23 Were the Arizona gas purchases made during February 2021 reasonable and prudent?

A. 23 Yes. The Company needed to purchase those gas supplies to meet the Company's obligation to serve its customers' requirements.

Had Southwest Gas not purchased gas during winter storm Uri at the high daily market prices, it either would have been required to drastically curtail customer demand or face the potential for even higher COC charges during the EPNG COC Event. Southwest provided notices to customers voluntarily reduce usage[6] and did curtail some low priority loads.[7]

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[6] See Exhibit No.__(JRO-7).
[7] See Exhibit No.__(JRO-8) (Yuma Cogen).

The only market area storage facility available to Southwest Gas in Arizona is the Tucson LNG facility Southwest Gas prudently vaporized about 10,500 Dth (approximately five-percent of the LNG inventory in the tank), which resulted in gas cost reductions and potential COC charges of approximately $3 million.

Q. 24 What is the Arizona Price Stability Plan?

A. 24 The Arizona Price Stability Plan (APSP) refers to purchases that Southwest Gas previously made at fixed prices (or a combination of an index-priced supply and the purchase of a fixed-for-floating index price swap) as a method to reduce the volatility in customer rates. Southwest Gas suspended APSP purchases with the 2020/2021 gas portfolio year because: 1) the Company's purchased gas cost adjustor mechanism mitigates volatility in the monthly gas cost rates charged to customers; and, 2) APSP purchases only provide minimal additional volatility benefits. The Company discussed this change to the APSP with Utilities Division Staff on October 15, 2019 and this change was referenced in the Commission's order in Docket No. G-01551A-19-0055.[8]

Q. 25 If Southwest Gas did not suspend APSP purchases and instead continued to make APSP purchases, would the gas cost increase that occurred during winter storm Uri been reduced?

A. 25 No. The gas cost increase experienced during winter storm Uri was directly related to increases in the daily market prices for gas. The daily gas purchase quantity made during winter storm Uri at those high daily prices would have been the same with or without the suspension of APSP purchases. This is because the quantity of gas supplies the Company previously baseloaded under the APSP are essentially the same quantities the Company now baseloads and purchases under the Baseload Supply Plan (BSP).

[8] See Docket No. G-01551A019-0055, Decision No. 77850, 96:10 -20.

Q. 26 What substantive steps did Southwest Gas take to minimize the potential for EPNG's COC charges during winter storm Uri?

A. 26 Southwest Gas took the following steps to attempt to minimize EPNG's COC charges during winter storm Uri:

* Southwest Gas purchased and nominated gas supplies that were in excess of the forecasted usage for its Arizona customers;
* Southwest Gas purchased and nominated gas supplies off of Transwestern Pipeline that included supplies to the Germann delivery point directly reducing the risk of COC charges being incurred at EPNG's DSWG PHX Delivery Code (D-Code);
* Southwest Gas asked its customers to voluntarily reduce usage;
* Southwest Gas curtailed low priority gas usage;
* Southwest Gas provided EPNG timely notice of a force majeure;
* Southwest Gas liquefied LNG from the Tucson LNG facility reducing the quantity of gas delivered to Tucson from EPNG's system;
* Southwest Gas timely disputed the COC related charges EPNG applied to its February 2021 invoice by initiating a formal billing dispute with EPNG;
* Southwest Gas exchanged multiple letters with EPNG and had multiple conversations with EPNG personnel; and,
* Southwest Gas filed a complaint with the Federal Energy Regulatory Commission (FERC) alleging various claims and requesting that the FERC either determine that EPNG's tariff did not permit assessment of the COC charges or in the alternative require that EPNG waive the COC charges it included on the February 2021 invoice.

Further, Southwest Gas personnel discussed winter storm Uri and the Company's gas procurement activities with Commission staff on February 18, 2021 and provided follow-up information requested at that meeting in early March

2021.

Q. 27 What was the ultimate outcome of the Company's efforts to minimize the COC charges included by EPNG on the February 2021 invoice?

A. 27 Shortly after Southwest Gas and other EPNG customers filed complaints against EPNG at FERC[9], EPNG made a filing at FERC seeking authority to waive all COC related charges it previously assessed related to the COC during winter storm Uri. FERC granted EPNG's request on August 11, 2021, which mooted all the outstanding complaints filed at FERC by Southwest Gas and the other EPNG customers.

Q. 28 So the end result was that EPNG waived all of the COC charges?

A. 28 Yes. In the end, neither Southwest Gas nor its customers were required to pay any COC charges previously assessed by EPNG for activity during winter storm Uri.

V. CONCLUSION

Q. 29 Were the Company's gas supply purchases and transportation purchases and costs incurred during the Covered Period made pursuant to the Company's policies, processes, and procedures in place at the time of purchase?

A. 29 Yes. The Company made the gas supply purchases and utilized the transportation contracts in place during the Covered Period pursuant to the policies, processes, and procedures in place at the time of each purchase.

Q. 30 Does the combination of your prepared direct testimony and exhibits provide an affirmative demonstration of the reasonableness and prudence of the gas supply purchases and transportation purchases and costs incurred during the Covered Period?

[9] On June 22, 2021 the Commission filed a Notice of Intervention and Protest in Docket No. RP21-887 which was the FERC docket for Southwest Gas' complaint against EPNG.

A. 30 Yes. Prudent and reasonable gas supply and transportation acquisition for any utility consists of a policy, a process, and procedures that are appropriate for that utility, followed by adherence to the process and procedures to meet the goals set forth in the policy.

The Portfolio Selection Procedures and Gas Acquisition Policy Statement (Procedures and Statement), Exhibit No.__(JRO-2), provides a detailed view of the many steps that are appropriate for Southwest Gas to use in the creation of a reasonable and prudently acquired gas supply portfolio for its customers. The Procedures and Statement set forth the responsibilities of the various parties and departments in completing those steps for all categories of supply purchases, on an annual, monthly, and daily basis.

Exhibit No.__(JRO-4) sets forth the high-level policy followed by the Company when purchasing gas supplies and upstream resources for Arizona.

Exhibit No.__(JRO-5) provides the Arizona jurisdiction specific gas purchase strategies and criteria and provides further support that the Company has a reasonable set of policies and procedures in place to guide gas procurement for the Arizona jurisdiction.

Southwest Gas purchased its gas supply, procured upstream transportation resources, and managed and performed under its previously contracted for transportation resources during the Covered Period pursuant to the process and procedures set forth in Exhibit Nos.__(JRO-2) and (JRO-5), and with the information and knowledge available at the time purchases were made. The upstream transportation capacity in place during the Covered Period is essential for meeting current and future customer design-day demands. Further, the purchases for the Covered Period were consistent with this Commission's previously issued directives and orders. Consequently, the purchases and costs for the Covered Period are reasonable and prudent.

Q. 31 Does this conclude your prepared direct testimony?

A. 31 Yes.

SUMMARY OF QUALIFICATIONS
JOHN R. OLENICK

I hold a Bachelor of Science degree in Chemistry from the University of Nevada Las Vegas and a Juris Doctorate degree from the Williams S. Boyd School of Law, University of Nevada Las Vegas. I am licensed to practice law in the State of Nevada, the United State District Court for the District of Nevada, and the United States Court of Appeals for the Ninth Circuit.

I first worked for Southwest Gas Corporation between February 1988 and June 1993. During that period I held the positions of Gas Dispatch Technician, Regulatory Analyst, and Gas Control Technician. My primary responsibilities during this period included the control and monitoring of the Southern Nevada natural gas distribution and transmission systems; analyzing gas supply and transportation contracts using linear optimization models, summarizing results, and recommending least cost alternatives; and, the daily and monthly administration of tariffs related to the transportation of customer secured gas supplies.

In June 1993 I began work at Nevada Power Company where I held the positions of Fuels Analyst and Manger Gas & Oil Procurement. My primary responsibilities included the daily purchasing and scheduling of Nevada Power Company's natural gas fuel requirements, soliciting, negotiating, and contracting for gas supply and transportation resources for Nevada Power Company's natural gas and oil related fuel requirements; and, the administration of gas and oil supply and transportation contracts.

After leaving Nevada Power in November 1999, I entered law school. Starting in January 2002, I was employed by Ryan Marks Johnson & Todd, first as a law clerk where my responsibilities included drafting motions, oppositions, discovery requests and answers, researching legal issues, and drafting memorandum summarizing research and recommendations. After graduation and passing the Nevada Bar exam, I was promoted to Associate Attorney and my responsibilities included defending residential construction subcontractors in lawsuits involving construction defect claims.

In January 2005, I started at Morris Pickering & Peterson where I defended business entities in litigation concerning real estate escrow transactions, multifamily residential financing agreements, personal injury claims, products liability, and contract disputes.

In May 2007 I returned to work at Southwest Gas Corporation where I previously held the positions of Manager/Gas Purchases & Transportation and Senior Manager/Gas Purchases & Transportation. In February 2014, I was promoted to Director/Gas Supply. My responsibilities include soliciting, negotiating, and contracting for the gas supply and transportation resources required to meet the needs of the Southwest Gas Corporation's core customers. I am also responsible for nominations and confirmations of gas supplies on upstream interstate pipelines and the confirmation of all gas supplies at the delivery points into Southwest Gas Corporation's distribution system and the scheduling of those supplies to the Company's customers. Finally, I have responsibility for the support of the Gas Transaction System that Southwest Gas Company uses to track gas purchases, transportation capacity, nominations, confirmations, scheduled quantities, and the settlement of gas procurement transactions.

Securing Climate Benefit: A Guide to Using Carbon Offsets

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ACKNOWLEDGEMENT

We are grateful to the High Tide Foundation for supporting the development of this guidance and the accompanying web resource. The mission of the High Tide Foundation is to have a significant, measureable impact on climate change mitigation.

ADDITIONAL ACKNOWLEDGEMENTS

Thank you also to our many expert reviewers who helped to improve this guide. In particular, we thank Claire Carver (Colorado State University), Craig Ebert and Max DuBuisson (Climate Action Reserve), Barbara Haya (UC Berkeley), Anja Kollmus (Carbon Market Watch), Benjamin C Pierce (University of Pennsylvania), Lambert Schneider (Oeko Institute), Jerry Seager (Independent Expert), Mark Trexler (Climatographers), and Ruby Woodside (Second Nature).

Thank you to Amy Falcione from Big Picture Marketing for design templates. Thank you to Erika Barnett from GHGMI for formatting and design implementation for this guidance document and its companion website offsetguide.org. Thank you to Molly White for design assistance and for support in creating offsetguide.org.

Date of Publication: November 13, 2019

For an updated version of this guide, please see OffsetGuide.org

Please cite this document as *Broekhoff, D., Gillenwater, M., Colbert-Sangree, T., and Cage, P. 2019. "Securing Climate Benefit: A Guide to Using Carbon Offsets." Stockholm Environment Institute & Greenhouse Gas Management Institute. Offsetguide.org/pdf-download/*

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Title image credit: reforestation and restoration of degraded mangrove lands, sustainable livelihood and community development project in Myanmar.

HOW TO USE THIS GUIDE

You should use this guide in combination with www.OffsetGuide.org, which provides more detail on the topics covered in this guide. For example, the website expands on the following topics:

- Global warming potential and CO_2 equivalent
- Comparing offset credits with green power and other environmental instruments and investments
- Common types of offset projects
- What carbon offset programs do
- How to acquire carbon offset credits
- Achieving carbon neutrality
- Air Travel & Climate
- Concerns about carbon offset quality
- Additionality
- Avoiding social and environmental harms
- How carbon offset programs address social and environmental harms
- Domestic or Foreign Projects
- Conducting project due diligence when vetting offset projects

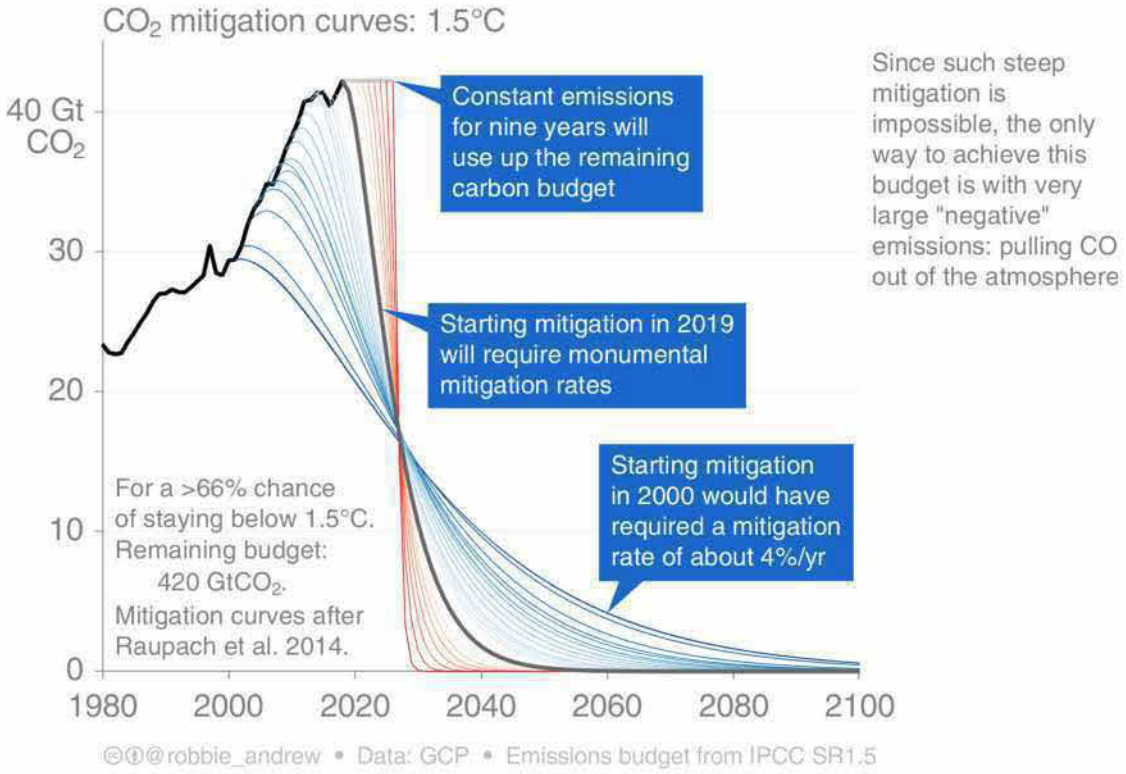
Internet links are provided throughout this PDF guide to access expanded and updated information. Links are presented as a clickable button ( ) at the end of each related section.

1. INTRODUCTION

According to the Intergovernmental Panel on Climate Change (IPCC), the world has until 2030 to cut human-caused carbon dioxide (CO_2) emissions in half (and cut other greenhouse gas emissions considerably) to maintain a 50% chance of avoiding the worst effects of climate change.[1] By 2050, CO_2 emissions will need to reach "net zero" – where emissions are in balance with removals[2] – to sustain this chance. Such reductions will require worldwide action by national and local governments, along with businesses and civil society (Figure 1).

The urgency is clear: incremental steps to address greenhouse gas (GHG) emissions will not be enough. Companies and organizations will need to use every tool at their disposal to achieve emission reduction goals. "Carbon offsets" are one such tool that – if used responsibly – can accelerate action to avert dangerous climate change.

Figure 1. Required emission reduction rates for limiting global warming to 1.5°C



This guide is for companies and organizations seeking to understand carbon offsets and how to use them in voluntary GHG reduction strategies. It may also be useful for individuals interested in using carbon offsets to compensate for their personal emissions.

We begin, in Section 2, with an explanation of the basics of carbon offsets, how to acquire them, and how they can (or should) be used in carbon management strategies. Section 3 addresses common criticisms of carbon offsets. Section 4 clarifies the essential elements of carbon offset quality, explains how carbon offset certifiers try to ensure that quality, and includes basic questions prospective buyers can ask about quality. Section 5 describes strategies buyers can use to avoid lower quality offset credits. This guide ends with Section 6, which provides links to further resources.

Fig. 1 source: Robbie Andrew (CICERO), http://folk.uio.no/roberan/t/global_mitigation_curves.shtml

2. UNDERSTANDING CARBON OFFSETS

The term "carbon offset" is shorthand for GHG emission reductions or removals that compensate for CO_2 emissions. In this section, we define carbon offsets, as well as explain the difference between offset credits, projects, and programs; detail how buyers can obtain offset credits; and describe how offset credits can (or should) be used in an organization's GHG management strategies.

2.1 WHAT IS A CARBON OFFSET?

The terms carbon offset and carbon offset credit (or simply "offset credit") are used interchangeably, though they can mean slightly different things. A carbon offset broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere. A carbon offset credit is a transferable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric tonne of CO_2, or an equivalent amount of other GHGs (see Box 1). The purchaser of an offset credit can "retire" it to claim the underlying reduction towards their own GHG reduction goals.

Box 1. Establishing a common denomination for different greenhouse gases

CO_2 is the most abundant GHG produced by human activities, and the most important pollutant to address for limiting dangerous climate change. However, human beings create and emit numerous other GHGs, most of which have a far greater heat-trapping effect, pound for pound, than CO_2. The most prevalent of these gases are methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). Fully addressing climate change will require reducing emissions of all GHGs. Scientists and policymakers have established "global warming potentials" (GWPs) to express the heat-trapping effects of all GHGs in terms of CO_2-equivalents (annotated as "CO_2e"). This makes is easier to compare the effects of different GHGs and to denominate carbon offset credits in units of CO_2-equivalent emission reductions.

Learn more about GWP

The key concept is that offset credits are used to convey a net climate benefit from one entity to another. Because GHGs mix globally in the atmosphere, it does not matter where exactly they are reduced. From a climate change perspective, the effects are the same if an organization: (a) ceases an emission-causing activity; or (b) enables an equivalent emission-reducing activity somewhere else in the world. Carbon offsets are intended to make it easier and more cost-effective for organizations to pursue the second option.

As explained later in this guide, offset claims are only defensible under a set of rigorous conditions. Although organizations sometimes use other kinds of investments to make GHG reduction claims – such as the purchases of "renewable energy credits" – these other instruments usually do not meet the criteria for effective carbon offset claims.

How do I compare offset credits with green power and other environmental instruments and investments?

2.2 CARBON OFFSET PROJECTS

Carbon offset credits can be produced by a variety of activities that reduce GHG emissions or increase carbon sequestration. In most cases, these activities are undertaken as discrete "projects." A carbon offset project, for example, may involve:

- Renewable energy development (displacing fossil-fuel emissions from conventional power plants);
- The capture and destruction of high-potency GHGs like methane, N_2O, or HFCs; or
- Avoided deforestation (which can both avoid the emission of the carbon stored in trees, as well as absorb additional carbon as trees grow).

Projects can range in scale from very small (e.g., reducing a few hundred tonnes of CO_2e per year) to very large (e.g., millions of tonnes reduced per year). Carbon offset credits are also sometimes produced by large-scale "programs of activities,"[3] which aggregate together many similar small projects or coordinated efforts across entire jurisdictions (such as in the case of avoided deforestation).[4]

What other types of offset projects are common?

In many cases, carbon offset projects produce social and environmental benefits beyond just GHG reductions. Depending on the project type, these "co-benefits" can include: improvements to community employment opportunities; enhanced air or water quality; biodiversity and habitat conservation; improved energy access; and better access to community health and education services. Many offset credit buyers seek projects that yield a broad range of benefits. Carbon offsets can thus be part of a comprehensive strategy for corporate social responsibility, combining efforts to address climate change with contributions to other public goods.

One challenge is that the types of projects that make for higher-quality carbon offsets tend to be those with the fewest co-benefits – and vice versa (see Section 5.2).

2.3 CARBON OFFSET PROGRAMS

Carbon offset credits are not a simple commodity. As with many products whose quality is difficult for casual buyers to assess, standard-setting organizations have been established to provide quality assurance for carbon offsets. These carbon offset programs[5] range from international or governmental regulatory bodies – such as the United Nation's Clean Development Mechanism (CDM) Executive Board, which oversees carbon offsets under the Kyoto Protocol – to independent non-governmental organizations (NGOs). Historically, governmental bodies certified offset credits for regulatory purposes ("compliance programs"), while NGOs primarily served voluntary buyers ("voluntary programs"); more recently, both types of programs have begun to serve both types of markets (Table 1). Each carbon offset program issues its own labelled "brand" of credit.

Offset programs perform three basic functions: (1) they develop and approve standards that set criteria for the quality of carbon offset credits; (2) they review offset projects against these standards (generally with the help of third-party verifiers); and (3) they operate registry systems that issue, transfer, and retire offset credits.

More detail on how carbon offset programs seek to ensure the quality of offset credits (along with some of their limitations) can be found in Section 4 of this guide.

Villagers learn how to use bio-gas as a fuel source for cooking supplied by small-scale anaerobic digesters. Image credit: Sichuan Rural Poor-Household Biogas Development Programme

Learn more about what carbon offset programs do

Table 1. Examples of major carbon offset programs

"Compliance" carbon offset programs (run by governmental bodies)	Geographic Coverage	Label used for offset credits
Clean Development Mechanism (CDM)[6]	Low & middle income countries	Certified Emission Reduction (CER)
California Compliance Offset Program	United States	Air Resources Board Offset Credit (ARBOC)
Joint Implementation (JI)[7]	High income countries	Emission Reduction Unit (ERU)
Regional Greenhouse Gas Initiative (RGGI)	Northeast United States	RGGI CO_2 Offset Allowance (ROA)
Alberta Emission Offset Program (AEOP)	Alberta, Canada	Alberta Emissions Offset Credit (AEOC)
"Voluntary" carbon offset programs (run by NGOs)	**Geographic Coverage**	**Label used for offset credits**
American Carbon Registry	United States, some international	Emission Reduction Tonne (ERT)
Climate Action Reserve (CAR)	United States, Mexico	Climate Reserve Tonne (CRT)
The Gold Standard	International	Verified Emission Reduction (VER)
Plan Vivo	International	Plan Vivo Certificate (PVC)
The Verified Carbon Standard	International	Verified Carbon Unit (VCU)

2.4 HOW TO ACQUIRE CARBON OFFSET CREDITS

Although there are some trading exchanges that facilitate offset credit transactions, most transactions occur "off-exchange", making price discovery difficult. The price of an offset credit can range from under US$1 to well over US$35. Prices tend to vary mostly by project type, generally with small differences between offset credit labels.[8]

Although offset credit buyers do not need to be familiar with every carbon offset program rule and procedure, they should have a basic understanding of how carbon offset credits are generated, transferred, and used. Purchasing options can depend on where in this "lifecycle" a buyer gets involved. In general, the earlier in the lifecycle, the better the nominal price and terms will be – but the greater the delivery risk and the longer it may take to actually receive offset credits.

The basic lifecycle for carbon offset credits looks like the following:

1. Methodology development. Before any GHG reductions can be certified for use as carbon offsets, they must be shown to meet carbon offset quality criteria. This process requires a methodology or protocol that is specific to the type of offset project generating the reductions. Most carbon offset programs have a library of approved methodologies covering a wide range of project types. However, project developers may also propose new methodologies for program approval and adoption.

Purchasing options: In rare cases, a prospective offset credit buyer may sponsor the development of a methodology for a new project type that is not already eligible in existing offset programs. This effort can be a resource-intensive – and risky – but could make sense for organizations with a strong interest in a new type of project activity.

2. Project development, validation, and registration. An offset project is designed by project developers, financed by investors, validated by an independent verifier, and registered with a carbon offset program. Official "registration" indicates that the project has been approved by the program and is eligible to start generating carbon offset credits after it begins operation (next step).

Purchasing options: Some offset credit buyers directly invest in an offset project in return for rights to (some portion of) the credits the project is able to generate. This approach can allow for deeper engagement and a fuller understanding of a project's strengths and weaknesses.

Alternatively, a commonly used purchasing option is to contract directly with a project developer for delivery of carbon offset credits as they are issued. Such contracts generally take the form of "Emission Reduction Purchase Agreements" (ERPAs). An ERPA provides project developers with confidence that they will be able to sell a reliable volume of offset credits. For buyers, the advantage is being able to lock in a price for offset credits that is typically lower than market prices (in exchange for some delivery risk). ERPAs can be structured in numerous ways, including as option contracts

3. Project implementation, verification, and offset credit issuance. An offset project is implemented, then monitored and periodically verified to determine the quantity of emission reductions it has generated. The length of time between verifications can vary, but is typically one year. A carbon offset program approves verification reports, and then issues a number of carbon offset credits equal to the quantity of verified CO_2-equivalent GHG reductions. Offset credits are generally deposited into the project developer's account in a registry system administered by the offset program.

Purchasing options: In some cases, project developers may have unsold offset credits for which they are seeking buyers. Purchasing directly from a project developer can avoid some transaction costs. However, projects with unsold credits (e.g., not contracted through an ERPA) may sometimes raise quality concerns (see Section 4.1.2).

4. Offset credit transfer. After they are issued, carbon offset credits can be transferred into different accounts in an offset program's registry. Transfers are usually undertaken as a result of a purchase or trade (so, after a purchase, the offset credits will be transferred from the project developer's account into an account owned by the purchasers). Offset credit buyers may then use the offset credits by retiring them (see next step), hold them, or transfer them to other accounts. Offset credits may change hands multiple times (getting transferred among multiple accounts) before they are ultimately retired and used.

Purchasing options: As with other commodities, numerous firms act as brokers for carbon offset credits. Brokers procure offset credits and then transfer (or retire) them on clients' behalf. Brokers can make it easier to identify a mix of offset credits from different project types, and facilitate large or small transactions. Some brokers sell offset credits from projects they have invested in, in addition to projects developed by others. This practice may provide efficiencies in pricing, but it can affect the ability of the broker to be impartial about the credits they sell.

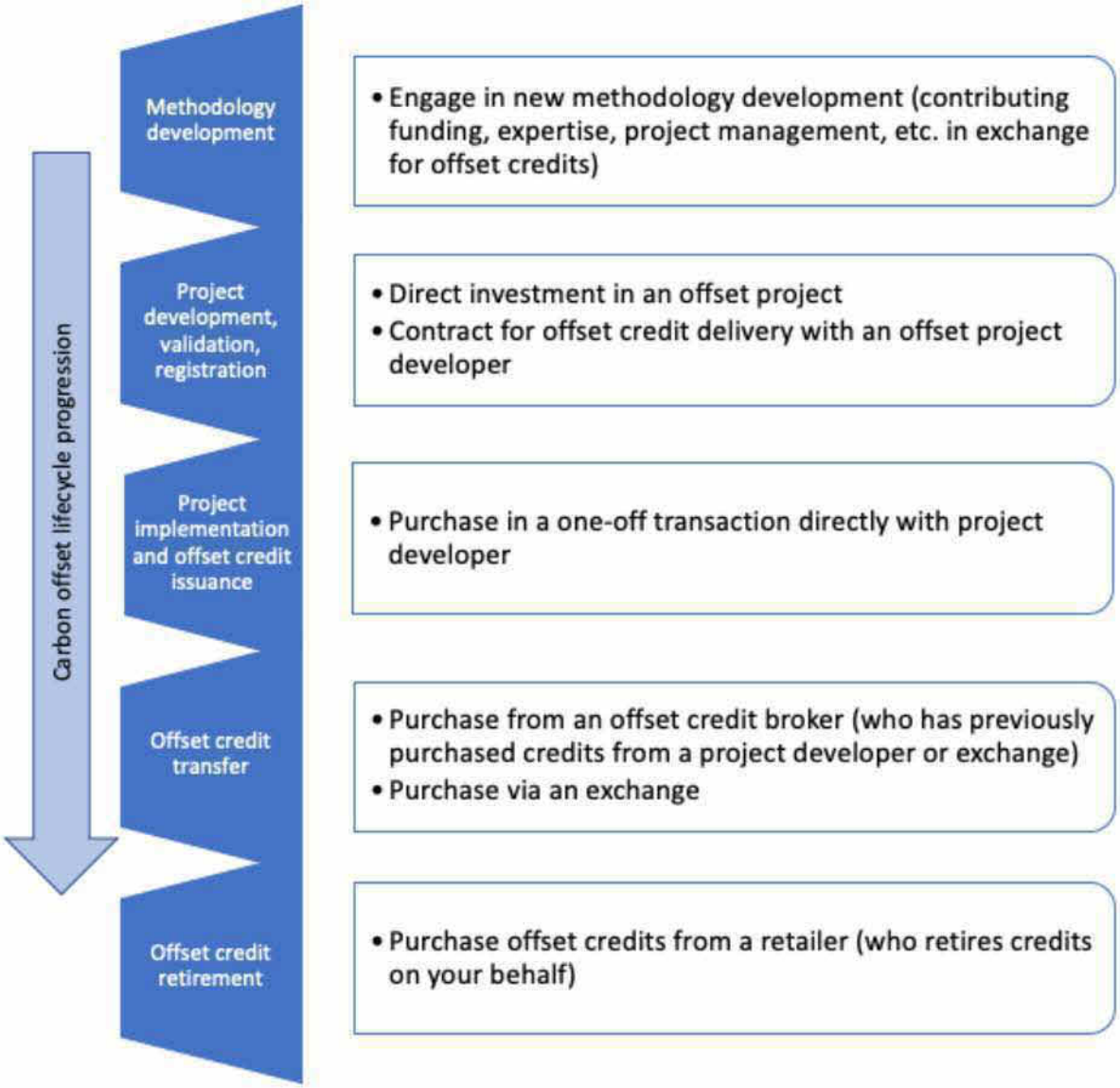
Another option is to purchase offset credits on an exchange. There are a number of environmental commodity exchanges – mostly in North America and Europe – that list carbon offset credits for sale and work with registries to enable transfers. Purchasing offset credits on an exchange can be relatively quick and easy, but it can be harder to obtain the information needed to evaluate the quality of these credits.

5. Offset credit retirement. Offset credit holders must "retire" carbon offset credits in order to use them and claim their associated GHG reductions towards a GHG reduction goal. Retirement occurs according to a process specified by each carbon offset program's registry. Once an offset credit is retired, it cannot be transferred or used (meaning it is effectively taken out of circulation).

Purchasing options: For buyers looking to acquire only a small number of offset credits (such as small companies or individuals), the most feasible option is to go through a retailer. Retailers can provide access to offset credits from a range of different projects, and will provide at least basic information about those projects. In most cases, the retailer will maintain accounts on carbon offset program registries, and will retire offset credits directly on a buyer's behalf.

Learn more about how to acquire carbon offsest credits

Figure 2. Carbon offset credit lifecycle and buyer purchase options at each stage



2.5 THE ROLE OF OFFSETS IN CARBON MANAGEMENT STRATEGIES

In principle, carbon offset credits offer a convenient and cost-effective way to reduce GHG emissions. Often, this means offset credits are used to compensate for (or "offset") an organization's GHG emissions, in lieu of reducing those emissions directly. For example, since most organizations find it impractical to completely eliminate their carbon footprint using only internal measures, carbon offsets offer the only practical way to claim "carbon neutrality." If your organization pursues carbon neutrality, however, it should still seek to use carbon offsets sparingly (Section 2.5.1).

In the future, international policy efforts could make it more difficult for organizations to establish valid voluntary offset claims (see Section 2.5.2). This could change how most buyers approach the use of offset credits. Instead of offsetting GHG emissions, for example, credits may be used to indicate an organization's charitable contribution to external climate change mitigation efforts. One indication of this shift in thinking is the increasing use of the term "carbon credit" rather than "offset credit" to refer to the commodity being purchased. In this guide, we continue to use the term "offset credit" since the underlying principles involved remain the same.

2.5.1 ACHIEVING CARBON NEUTRALITY

Carbon neutrality refers to achieving a net carbon footprint of zero.[9] The term is often applied to an entire organization (or committed individual), but can also be applied to a product or activity (such as air travel). Since it is not possible for most organizations or individuals to completely eliminate all GHG emissions associated with their activities and products, carbon neutrality is typically premised on the idea of using external GHG reductions to balance emissions that cannot readily be eliminated. Carbon offset credits are the primary tool for achieving such reductions.

Carbon neutrality goals are growing in popularity, and on their face are highly ambitious. Achieving "net zero" emissions by 2050, for example, is increasingly seen as the benchmark for a "science-based" GHG reduction target.[10] One risk, however, is that carbon neutrality can mask what is ultimately required to avert climate change. Given their ease of use, it can be tempting to rely on carbon offsets as a primary means for meeting a carbon neutrality goal. In fact, as originally conceived, carbon offset credits were seen primarily as a way to lower the cost of meeting a particular GHG target, including carbon neutrality.

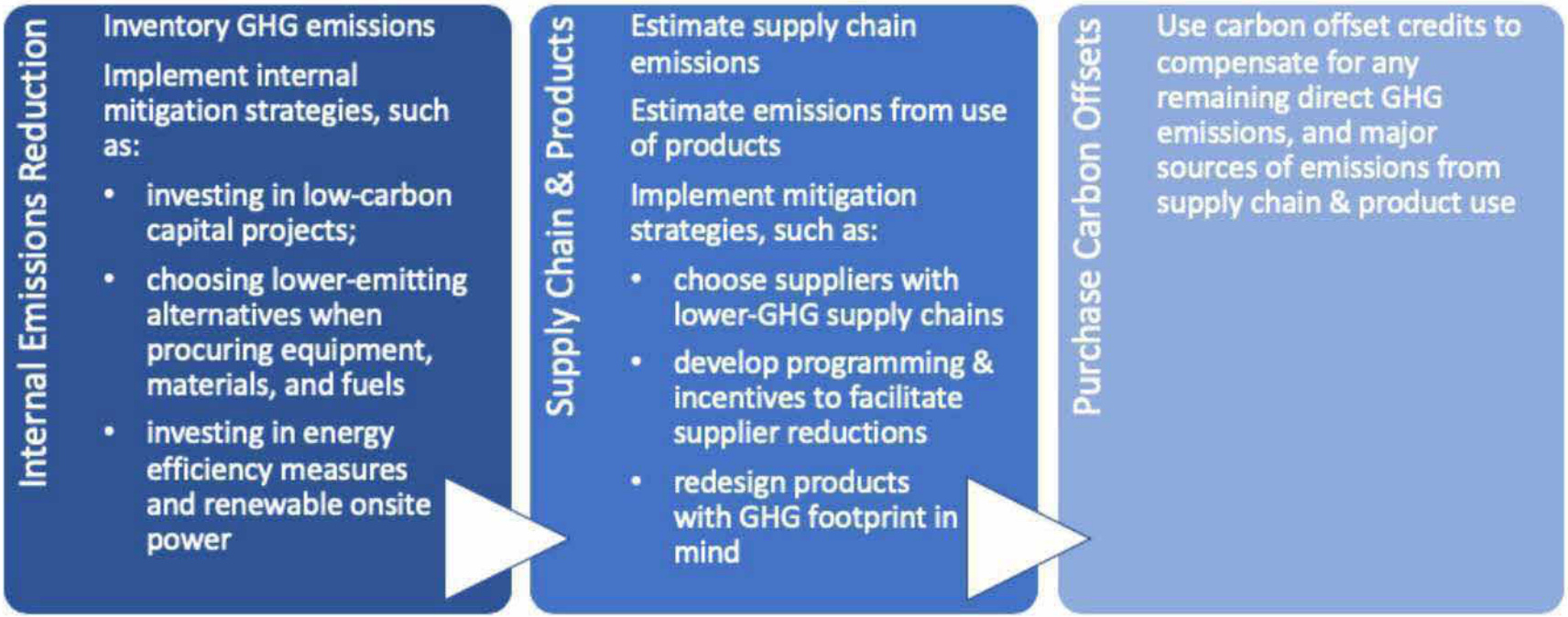
Under current circumstances, this approach to using carbon offsets would be a mistake. Collectively, all CO_2 emissions from burning fossil fuels must cease altogether well before the end of the century: there will be little room for anyone to "net out" their emissions using someone else's GHG reductions. Thus, although the idea of achieving zero net emissions is compelling and even necessary, the focus should be on reducing GHG emissions directly (and dramatically) in line with global mitigation goals. Arguably, organizations should only use carbon offsets on top of efforts to reduce their own emissions to near-zero by 2050.

A basic strategy would look like the following (Figure 3):

- Inventory your company's GHG emissions.[11]
- Implement internal mitigation strategies in line with global goals (for example, halving CO_2 emissions by 2030, and achieving net-zero emissions by 2050).
- Reduce supply chain emissions, such as by selecting suppliers with lower-GHG supply chains, and emissions from the use of consumer products, such as by designing energy-efficient products.
- Use carbon offset credits to cover any remaining GHG emissions from sources your organization owns or controls, and if possible, from your supply chain and product use.

Achieving carbon neutrality

Figure 3. Steps to achieving carbon neutrality



2.5.2 CARBON OFFSETS AFTER 2020: THE WORLD UNDER PARIS

The practice of carbon offsetting has arisen in a world where far too little is being done to address climate change. At a global level, relatively few organizations have taken meaningful action to reduce GHG emissions. As a result, for companies committed to taking action, it has not been hard to find low-cost carbon offsets. The potential supply of GHG reductions is huge, because there are so many sources of GHG emissions that face no legal or economic incentives to reduce.

The 2015 Paris Agreement could change this. For the first time, nearly every country in the world has identified explicit actions (i.e., "contributions") they agree to make to reduce GHG emissions and adapt to climate change. This approach is a major change from the Kyoto Protocol, where only industrialized countries committed to reduce emissions. Under Kyoto, offsetting was an explicit and prominent strategy: industrialized countries could fund offset projects in developing countries, providing them with needed investment and promoting sustainable development. In exchange, industrialized countries could more cheaply meet their obligations, by claiming the reductions achieved by these projects. Developing countries benefited from such an exchange, because they faced no obligations themselves and therefore gave nothing up in allowing emission reductions to be "transferred."

The Paris Agreement complicates this older picture considerably. The fact that every country has agreed to reduce emissions means there will be fewer opportunities for additional reductions – i.e., reductions that go beyond what countries have pledged (and would otherwise not happen in the absence of a carbon offset market - see Section 4.1). This does not mean the end of carbon offsetting. In fact, Article 6 of the Paris Agreement explicitly recognizes the possibility for international cooperation through the transfer of emission reductions. However, if a country allows an emission reduction to be claimed by another party (either another country or some other entity), it should no longer be able to count the reduction towards its own GHG target. The Paris Agreement has language expressly prohibiting such "double counting" among countries.

Currently, it is envisioned that double counting will be avoided through "robust" accounting methods (the language used in Article 6). Specifically, if a country transfers an emission reduction, it will adjust its GHG balance sheets so that the reduction is not counted toward its pledged "contribution," while a country receiving the transfer can apply the reduction to its own GHG balance sheet.[12] Similar accounting will likely be done for emission reductions funded by the international aviation industry, which has pledged to offset any increase in its GHG emissions after 2020.[13] In principle, the same methods could be applied to backstop claims for carbon offset credits purchased by private voluntary buyers.

Players in the voluntary carbon offset market are still sorting out what this will all mean. [14] Whatever happens, the criteria for what makes a quality credit will not change. In the remainder of this guide, we highlight some common concerns about carbon offset credits, explain the essential criteria for a "high quality" offset credit, and indicate what buyers can do to avoid lower-quality credits.

Air travel and climate

3. COMMON CRITICISMS OF CARBON OFFSETS

Carbon offsets are frequently criticized by the press and some environmental advocates. Some observers object to "market-based" approaches for solving environmental problems, and oppose carbon offsets on that basis. Even those who are open to such approaches, however, often have reservations about carbon offsets. Their concerns fall into two categories:

- How carbon offset credits are used
- The quality of carbon offset credits

Some criticisms are more valid than others, but many have at least some validity and are important for buyers of carbon offset credits to keep in mind.

3.1 CONCERNS ABOUT HOW OFFSET CREDITS ARE USED

Examples of criticisms:

- "Carbon offsets allow polluters to go on polluting" (i.e., they are a form of "greenwashing")
- "Carbon offsets are not a long-term solution and can 'lock in' high-carbon infrastructure"
- "Carbon offsets create an incentive to avoid regulating certain sectors and industries"

These kinds of criticisms are not so much about whether carbon offsets are a valid form of climate change mitigation, but rather whether they create "perverse" incentives. Carbon offsets were conceived as a way to facilitate investment in cost-effective mitigation options that organizations would otherwise not be able to access. The temptation, however, can be for organizations to use carbon offset credits to achieve all (or large parts) of their GHG reduction goals, rather than make the investments needed to significantly reduce their own carbon footprint. The counterproductive result can be that they continue to pursue high-emitting activities – and invest in high-emitting equipment and facilities – effectively "locking in" higher emissions over the long run. This concern is the primary reason that many observers advocate for treating carbon offsets as a complement to aggressive internal climate action, not a primary means of mitigation.

Another possible perverse incentive created by carbon offsets is to discourage needed regulation.[15] Regulations that require GHG reductions could deprive project developers of revenue from selling offset credits, because the reductions would no longer be "additional" (see Section 4.1). Project developers would likely resist such regulatory changes. From a climate policy perspective, therefore, carbon offsets have been viewed as an interim solution — a way to accelerate action in the near term, but one that must ultimately (and explicitly) be replaced by more comprehensive policy action in the future.

3.2 CONCERNS ABOUT CARBON OFFSET QUALITY

Examples of criticisms:

- "Carbon offset credits do not represent valid GHG mitigation; if they are used as a substitute for real climate action, they only make climate change worse."
- "Carbon offset projects have adverse impacts on local communities and may make other environmental problems worse."

These criticisms are probably the most immediate concern for most offset credit buyers. Carbon offset credits are of little use in mitigating climate change if they are not a valid substitute for an organization's own internal GHG reductions. Unfortunately, despite the efforts of carbon offset programs, a number of independent studies have identified serious problems with some carbon offset credits. For example, studies of the world's two largest offset programs – the Clean Development Mechanism (CDM) and Joint Implementation (JI), both administered by the United Nations under the Kyoto Protocol – suggest that up to 60-70% of their offset credits may not represent valid GHG reductions.[16] Other critiques have highlighted instances of carbon offset projects that harmed local communities or resulted in broader environmental damage.[17] An official report commissioned by the United Nations in 2012 catalogued many of the CDM's shortcomings and identified areas of potential improvement.[18]

These critiques are troubling and should give pause to prospective buyers of offset credits. Major carbon offset programs, however, have responded to at least some of the concerns raised by these studies.[19] These responses include amending quantification methodologies to prevent over-estimation of GHG reductions,[20]

Some species, such as bamboo, may rapidly sequester carbon, but planting non-native or invasive species of plants can lead to damaging outcomes. Photo source: Misha FroLove/Bigstockphoto.com

as well as reconsidering the eligibility of certain project types.[21] Nevertheless, it is still wise to approach the carbon offset market with healthy scepticism.

Buyers can employ a number of strategies to improve their likelihood of acquiring higher-quality offset credits. In the next section, we explain the essential elements of a "high-quality" carbon offset credit and indicate some basic questions buyers can use to vet potential purchases. In Section 5, we provide some general strategies for avoiding "low-quality" offset credits.

Concerns about carbon offset quality

4. WHAT MAKES A HIGH-QUALITY CARBON OFFSET?

The central idea behind a carbon offset is that it can substitute for GHG emission reductions that an organization would have made on its own. For this to be true, the world must be at least as well off when you use a carbon offset credit as it would have been if you had reduced your own carbon footprint.[22] **When people talk about the "quality" of a carbon offset credit, they are referring to the level of confidence one can have that the use of the credit will fulfil this basic principle.**

This concept- **frequently referred to as preserving "environmental integrity"**- sounds straightforward, but it is challenging to guarantee in practice. Quality has two main components. First and foremost, a quality offset credit must represent at least one metric tonne of additional, permanent, and otherwise unclaimed CO_2 emission reductions or removals. Second, a quality offset credit should come from activities that do not significantly contribute to social or environmental harms.

A variety of terms are frequently used to define quality criteria for carbon offsets, including that associated GHG reductions must be "real," "quantifiable," and "verifiable." Most of these terms have their origin in regulatory criteria established for air pollutant credits under the U.S. Clean Air Act (going back to 1977). However, these terms have distinct regulatory meanings under U.S. law that do not always translate meaningfully to carbon offsets. The term "real," for example, has no commonly agreed definition across carbon offset programs and standards, and is often used as a vague catch-all. [23]

For this guide, therefore, we have distilled the essential elements of carbon offset quality down to five criteria. In short, quality carbon offset credits must be associated with GHG reductions or removals that are:

- Additional
- Not overestimated
- Permanent
- Not claimed by another entity
- Not associated with significant social or environmental harms

Carbon offset programs were created with the intention of ensuring the quality of carbon offset credits (Section 2.3). In the remainder of this section, we describe the approaches carbon offset programs use to address the quality criteria listed above. As indicated in Section 3, however, many observers believe that carbon offset programs have a mixed track record. Part of the challenge is that offset quality is not black and white. The multiple criteria involved – plus the fact that critical criteria like "additionality" are a matter of confidence rather than absolute truth (see below) – means that quality exists along a continuum. Carbon offset programs, by contrast, are forced to make a binary decision: do they issue an offset credit or not? Most carbon offset programs will say that every credit they issue is equally valid, but buyers should feel justified in questioning this assertion. Think of scoring the quality of an offset on a 100-point scale. A carbon offset program may decide to issue credits for every GHG reduction that exceeds a score of 50. But as a buyer, is a score of 51 really "good enough"?[24]

Astute buyers will understand this difficulty and actively seek out higher quality offset credits. For each offset quality criterion

below, we highlight some questions that buyers can ask about specific offset projects to better ascertain their relative quality. Even for sophisticated buyers, however, getting detailed answers to these questions may be difficult. Thus, in Section 5, we identify a range of strategies buyers can use to steer clear of lower quality offset credits and improve the chances of acquiring higher-quality credits.

Tree planting carbon offset projects can provide many co-benefits to local communities. Image credit: The international small group and tree planting program.

4.1 ADDITIONALITY

GHG reductions are additional if they would not have occurred in the absence of a market for offset credits. If the reductions would have happened anyway – i.e., without any prospect for project owners to sell carbon offset credits – then they are not additional. Additionality is essential for the quality of carbon offset credits – if their associated GHG reductions are not additional, then purchasing offset credits in lieu of reducing your own emissions will make climate change worse.

Evaluating whether GHG reductions are additional can be deceptively difficult. The challenge is that GHG-reducing activities occur all the time.[25] Sometimes this is because the activities are required by law. Landfill operators in California, for example, are required to install equipment that captures and destroys methane. In other cases, investments that reduce emissions are made simply because they are profitable, without any consideration of carbon offset credits. An investment in energy-saving lighting, for example, can pay for itself through avoided energy costs. Similarly, renewable energy technologies, like wind and solar, are increasingly cost competitive with fossil fuels, without revenue from carbon offset sales. For an activity or project to be additional, the possibility to sell carbon offset credits must play a decisive ("make or break") role in the decision to implement it.

Additionality is a topic about which there is frequent misunderstanding. One commonly heard claim, for example, is that a project can be considered additional if GHG emissions are lower than they would have been "in the absence of the project." This is incorrect. If a project would have been pursued without the sale of carbon offset credits, it is not additional, even if it reduces

emissions below what they would have been in the project's absence. It is also common to hear discussion of different "kinds" of additionality, using terms like "financial additionality" or "regulatory additionality," as if these are distinct concepts. In fact, the only definition of additionality relevant to offset quality is the one presented here. Legal and financial considerations come into play when making determinations about additionality, but are not separate benchmarks for what it means for GHG reductions to be "additional."

Furthermore, while additionality is the most essential ingredient of carbon offset quality, its determination is subjective. Additionality is frequently talked about in binary terms: a GHG reduction is either additional or it is not. In practice, however, determining whether an activity is additional requires comparing it to a scenario without revenue from the sale of carbon offsets. Such a scenario is inherently unknowable, and must be determined using educated predictions (such as about future fuel, timber, or electricity prices). The determination can also fall prey to "information asymmetry": only a project developer can say whether the prospect of selling carbon offset credits was truly decisive, but regardless of the truth, every project developer has an incentive to argue that it was. **In light of these uncertainties, it best to think of additionality in terms of risk: how likely is a project to be additional?**

Additionality

4.1.1 HOW CARBON OFFSET PROGRAMS ADDRESS ADDITIONALITY

Carbon offset programs have developed two main approaches to determining the additionality of a project: "project-specific" and "standardized." Each of these approaches has strengths and weaknesses.

Renewable energy carbon offset projects like this wind farm, must be highly scrutinized for their additionality and the role of potential offset revenue incentivizing the project to occur. Image credit: Los Santos Wind Power Project.

Project-specific approaches rely on an analysis of an individual project's characteristics and circumstances to determine whether it is additional. For example, they may involve:

- A demonstration that the proposed project activity is not legally required (or that non-enforcement of the legal requirements is wide-spread); and
- An "investment analysis" of whether the project is financially attractive in the absence of offset credit revenues; and/or
- A "barriers analysis" demonstrating that at least one alternative to the project would not be prevented by (non-financial) implementation barriers (e.g., social, institutional, or technical barriers); and
- A "common practice analysis" demonstrating that the proposed project is not common practice, or is distinct from similar types of activities that are common practice.

Project-specific approaches can be effective when applied rigorously, but can also be time consuming. Moreover, they often require subjective judgments (such as in the evaluation of financial parameters or the identification of barriers) and strongly hinge on uncertain assumptions about the future (such as fuel prices). It is often challenging for offset program staff and verifiers to judge whether project developers are biasing these assumptions in their favor. All voluntary carbon offset programs rely heavily on project-specific approaches, except for the Climate Action Reserve (CAR).

"Standardized" approaches to determining additionality were developed in response to the perceived shortcomings of project-specific approaches. A standardized approach evaluates projects against a set of pre-determined eligibility criteria (e.g., performance benchmarks that—in principle—distinguish additional from non-additional projects). Standardized approaches require upfront analysis to establish these eligibility criteria. Their main advantages are that they can reduce the administrative burdens of making additionality determinations, and they reduce elements of subjectivity in assessing projects. Their main drawback is that they may be imprecise in distinguishing additional and non-additional projects. Of the major voluntary carbon offset programs, the CAR has been the primary adopter of standardized approaches,[26] although other programs (e.g. VCS) apply them to some project types.

For many project types, it can be difficult to define objective criteria that reliably screen out non-additional projects, while not mistakenly excluding truly additional projects. Consequently, standardized approaches are available for a smaller set of project types. For example, CAR, which uses a standardized approach, has adopted less than 20 protocols, in contrast to the VCS and Gold Standard, which incorporate over 200 project-specific methodologies/protocols.

4.1.2 QUESTIONS FOR BUYERS TO ASK ABOUT ADDITIONALITY

None of the program-administered screens for additionality are perfect. Some key questions to avoid lower quality projects include the following:

- Did the project secure a buyer for offset credits before implementation? Given the risks and uncertainties of the carbon market, it is rare for a project that truly needs offset credit revenue to go forward without first securing buyers for some or all of the credits it expects to produce. Forward contracts generally take the form of "emission reduction purchase agreements" (ERPAs). Although there are exceptions, if a project began implementation without an ERPA, its claims to additionality should be further examined.
- How large is the project's offset credit revenue stream compared to other revenue streams or cost savings achieved by the project? Claims of additionality are often tenuous if carbon offset revenues constitute a small portion of a project's total revenues. For example, if 95% of the total revenues for a renewable energy project derive from electricity sales and only 5% are from offset credit revenue, the project's additionality should be questioned.
- Would the project cease reducing emissions if it did not continue to receive carbon offset revenues? Even if a project's offset credit revenue is comparable to (or greater than) other revenue streams, those other revenues may be sufficient to cover costs – meaning that the project may continue reducing emissions even if it stopped selling carbon offset credits. While such projects are not necessarily non-additional -- the decision to implement the project, for example, may still have been based on the prospect of carbon offset sales – they may pose a higher risk of being non-additional.

Sometimes GHG reduction activities are required by law. Landfill operators in California, for instance, are required to install equipment that captures and destroys methane. Photo source: Panaramka/ Bigstockphoto.com

- If the project is not (currently) legally required, is there reason to believe that it is being undertaken in anticipation of future legal requirements (or to avoid triggering such requirements in the future)? Programs may differ in the extent to which they examine prospective legal requirements. For example, a landfill gas flaring project may not be currently required by law, but landfill owners may seek to implement such a project anyway if they anticipate being mandated to control landfill emissions in the future (e.g., as the landfill grows to where it exceeds a regulatory size threshold). Thus, they could claim that the project is additional today, even though it would be implemented anyway in the (near) future.

4.2 AVOIDING OVERESTIMATION

Suppose that, for every 50 additional tonnes of CO_2 that are reduced by an offset project, the project developer reports reducing 100 tonnes, and 100 offset credits are then issued to the project. Half of these credits would have no effect in mitigating climate change, and using them in lieu of reducing your own emissions would make climate change worse. Overestimation of GHG reductions can occur in several ways:

- Overestimating baseline emissions. The first – and most subtle – way GHG reductions can be overestimated is if a project's baseline emissions are overestimated. Baseline emissions are the reference against which GHG reductions are calculated, and are closely tied to additionality: they are the emissions that would have occurred in the absence of demand for offset credits.[27] Baselines are easier to determine for some types of projects than others. For a project that captures methane from a landfill and destroys it, the amount of methane that would have been emitted is generally equal to the amount that is captured and destroyed.[28] In contrast, there can be much greater uncertainty when estimating how many GHG emissions will be displaced on an electricity grid by a solar power project – leading to greater risk of overestimation if methods are not appropriately conservative.
- Underestimating actual emissions. Many kinds of carbon offset projects reduce, but do not eliminate, GHG emissions. A project's GHG reductions are quantified by comparing the actual emissions that occur after the project is implemented to its predicted baseline emissions. In the same way that baseline emissions can be overestimated, actual emissions can be underestimated – with both contributing to an overestimation of GHG reductions. One way actual emissions can end up underestimated is through measurement error. For example, determining the increase in the amount of carbon stored in trees in any given year is subject to measurement uncertainty, and sampling errors can lead to overestimating carbon sequestration (the equivalent of underestimating GHG emissions).
- Failing to account for the indirect effects of a project on GHG emissions (aka "leakage"). To quantify GHG reductions, actual and baseline emissions are determined for sources (or sinks) affected by a project. Often, however, a project will have both intended and unintended effects on GHG emissions. If quantification methods fail to account for GHG emission increases caused by the project at some sources (even indirectly), then the total net GHG reductions will be overestimated. Unintended increases in GHG emissions caused by a project outside of its boundaries are referred to as "leakage." The classic example is a forest preservation project that avoids the emissions caused by clearing one parcel of forest, but ends up shifting the production of timber through deforestation to other areas.
- Forward crediting. Although rare, offset credits may be issued for GHG reductions that a project developer expects to achieve in the future. Such "forward crediting" is usually problematic, because it can lead to an over-issuance of offset credits if a project fails to perform as expected.[29] It can also pose issues if future events (e.g., regulatory changes) lead to additionality or emission reduction ownership concerns.

Finally, to control for all these possible causes of overestimation, it is important to monitor and verify a project's performance.[30] It is important for measurement and data collection procedures – and for any calculations or estimates derived from these data – to be scientifically sound and methodologically robust. Furthermore, it is important for project monitoring data to be rigorously verified. Verification entails assessing the veracity of data provided by project developers, often through an audit of selected data samples. Carbon offset project developers have an incentive to report data that maximize the number of carbon offset credits they can sell. Verification helps to assure that reported data are accurate and do not overstate GHG emission reductions.

Forestry-based offset projects have the potential to shift deforestation from the project location to unprotected areas causing project leakage to occur. Image credit: Biofilica Resex Rio Preto – Jacundá REDD+.

4.2.1 HOW CARBON OFFSET PROGRAMS ADDRESS OVERESTIMATION

Carbon offset programs try to ensure that GHG reductions are not overestimated by requiring the use of detailed quantification methods specific to individual project types. In general, these methods prescribe:

- GHG accounting boundaries that define the GHG sources and sinks that must be considered in quantifying a project's baseline and actual GHG emissions. [31]
- Baseline emission estimation methods that prescribe how a project's baseline scenario is defined, including acceptable assumptions regarding baseline technologies and practices.
- Monitoring requirements that prescribe the data to be collected for predicting baseline emissions and quantifying a project's actual emissions. These methods also specify how to conduct measurements, what kinds of estimates are acceptable, and what calculation formulas must be used. [32]

Importantly, carbon offset programs require verification by independent, third-party verifiers, who check that projects have properly applied prescribed quantification methods (see Box 2). In most cases, offset credits are only issued after GHG reductions or removals have already occurred and been verified.

Finally, offset programs also limit the crediting periods during which projects can generate creditable GHG reductions. Crediting periods are typically from 7 to 10 years, which is often shorter than the operational lifetime of a project's equipment. Programs generally allow crediting periods to be renewed (usually one or two times, depending on project type), as long as a project remains eligible under its standard. [33]

Box 2. What do carbon offset project verifiers do?

Third-party verifiers have two main responsibilities in the context of a carbon offset program. First, they perform project validation, which entails confirming that a proposed project meets a program's eligibility criteria. Second, verifiers conduct project verification, which entails confirming that project monitoring data was collected in accordance with a program's requirements, as well as reviewing calculations to confirm that the project's GHG reductions were estimated according to the approved methodology/protocol.[34] The verification process usually involves a site visit combined with auditing (or sampling) of monitoring data to confirm with "reasonable assurance" that the data are accurate.

Verifiers are generally paid by project developers, which creates a conflict of interest. To reduce the risk of bias, most carbon offset programs review verification arrangements, require verifiers to legally certify that they are free of conflicts, and limit the number of times that the same verifier can verify a project. Programs also regularly audit the work of verifiers to ensure their objectivity.

4.2.2 QUESTIONS FOR BUYERS TO ASK ABOUT OVERESTIMATION

Examining in detail how a project's GHG reductions were quantified can be difficult and time-consuming. However, two relatively straightforward questions can point to areas of potential risk:

- Does the project apply any deviations from the protocol/methodology and appropriately justify these deviations? Several carbon offset programs allow projects to deviate from a protocol's requirements if the project developer can justify an alternative approach to program staff. Deviations are often temporary, and typically involve situations where a project is not able to produce monitoring data according to prescribed methods, but is able to estimate them using alternative methods. Programs will generally try to ensure that alternative methods are more conservative than what a protocol prescribes. Offset credit buyers may nevertheless wish to review cases where a deviation was applied for and approved.
- Are there any gaps or other discrepancies in project monitoring data, and have these discrepancies been properly explained and addressed? Major carbon offset programs have rules and procedures to address gaps or discrepancies in project monitoring data (for example, if a flow meter temporarily breaks down and fails to collect data for a period of time). Such instances should be transparently reported, along with methods to address them. If monitoring reports and relevant data are not available and easily accessible (usually online), this lack of transparency should raise concerns about overestimation.

4.3 PERMANENCE

One challenge with using carbon offsets to compensate for CO_2 emissions is that the effects of CO_2 emissions are very long-lived. Most of the carbon in a tonne of CO_2 emitted today will – eventually – be removed from the atmosphere. However, around 25% remains in the atmosphere for hundreds to thousands of years.[35] To compensate for this, offset credits must be associated with GHG reductions that are similarly permanent. If a GHG reduction or removal is "reversed" (i.e., GHGs are subsequently emitted so that no net reduction occurs),[36] then it no longer serves a compensatory function.

For most kinds of carbon offset projects, reversals are either physically impossible or extremely unlikely.[37] The greatest risk occurs with projects that store carbon in "leaky" reservoirs. The classic example is a forestry project that keeps carbon in trees and soils (and adds to those carbon stores over time, as the forest grows). Such a project will reduce CO_2 emissions – and increase removals – if the trees would have been cut down otherwise. But, if a fire later burns down the project's trees, some or all of the carbon may be (re)emitted, leading to a reversal.

One common misunderstanding is that – for carbon offsets – "permanent" means something less than hundreds or thousands of years. A standard convention, for example, is that carbon only needs to be kept out of the atmosphere for 100 years (or less, in some cases) to be considered "permanent." Such compromises are frequently made in the context of carbon offset programs seeking to balance technical requirements with the practical constraints of insuring against reversals. But, scientifically, anything less than a full guarantee against reversals into the indefinite future is not "permanent."

4.3.1 HOW CARBON OFFSET PROGRAMS ADDRESS PERMANENCE

Most carbon offset programs have established "buffer reserves" to address the risk of GHG reductions being reversed.[38] Under this approach, offset credits from individual projects are set aside into a common buffer reserve (or "pool"), which functions as an insurance mechanism. Reserved credits can be drawn upon to compensate for reversals from any project. If a reversal occurs, credits are retired or cancelled from the buffer reserve on behalf of the project's buyers. The number of credits a project must contribute to the buffer reserve is usually based on an assessment of the project's risk for reversals. Over finite time periods, this approach can fully cover catastrophic losses affecting individual projects, as long as the buffer reserve is sufficiently stocked with credits from projects across an entire program.

Carbon offset programs also encourage – or require – projects to reduce the risk of reversals. Some programs, for example, allow lower buffer reserve contributions if project developers implement risk mitigation measures (such as fuel treatments, and the use of conservation easements or other legally binding restrictions on land use). Other programs make reversal risk mitigation a requirement for eligibility.

Buffer reserves can effectively compensate for reversals due to natural disturbance risks—such as fire, disease, or drought affecting forests and soils. However, they present a "moral hazard" problem if used to compensate for human-caused reversals, such as intentional timber harvesting.[39] If a landowner faces no penalty for harvesting trees for their timber value, for example – because any reversals caused by harvesting would be compensated out of a buffer reserve – then the landowner could face a strong incentive

to harvest. Offset programs approach this issue in different ways. Some programs use buffer reserves only to compensate for natural disturbances, and impose contractual obligations on landowners to compensate for any "avoidable" reversals (including reversals due to negligence or willful intent). Others will cover such reversals using buffer reserves, but will not issue further offset credits to a project until the reversal is remedied.

4.3.2 QUESTIONS FOR BUYERS TO ASK ABOUT PERMANENCE

No reversal risk can be insured against in perpetuity. Over the very long run, the chance of reversal for projects that store carbon in trees and soils approaches 100%. Buyers should keep this in mind when considering offset credits from these kinds of projects. As a rule of thumb, if your goal is strictly to offset GHG emissions, avoiding reversible GHG reductions altogether is the safest approach. However, addressing emissions from agriculture, forestry, and land use is critically important for mitigating climate change globally – and these kinds of projects often have desirable co-benefits. If your primary goal is to contribute to mitigation efforts (not offset per se), then purchasing credits representing additional GHG reductions from these projects can be a great choice.

Assuming some risk of reversibility is acceptable, questions for buyers to consider include:

- Does the project have a formal plan for managing and reducing reversal risks, and is this plan being followed? Higher quality carbon sequestration projects will have management plans in place to lower the risk of reversals. These plans may cover physical measures like thinning or other treatments to reduce the risks of fire and disease in forests; financial management practices to reduce risk of project failure or bankruptcy; and/or easements, legal restrictions, or other measures to guard against over-harvesting or land conversion. Projects with strong plans, along with implementation and enforcement provisions, are likely to have higher quality offset credits.
- How long is "permanence" guaranteed by the offset program that issued the credits? Offset programs differ significantly in terms of the length of time that they will guarantee compensation for reversals. The majority do so only through the end of a project's lifetime, which under some programs may be as short as 10 years. Other programs offer a minimum guarantee of 100 years from the time a credit is issued. Offset programs are not always transparent about what their minimum guarantee is, so it is worth inquiring either with project proponents or directly with program staff. The longer the guarantee, the higher the relative quality of the offset credits.

4.4 EXCLUSIVE CLAIM TO GHG REDUCTIONS

Carbon offset credits must convey an exclusive claim to GHG reductions. Imagine if two different companies laid claim to the same 100 tonnes worth of CO_2 reductions. Together they would claim a total of 200 tonnes of reductions, but the actual reduction would only be 100 tonnes. Again, climate change would be made worse, compared to a situation where both companies simply reduced 100 tonnes of their own emissions. This type of "double counting" can happen in three ways:[40]

- **Double issuance** occurs if more than one offset credit is issued for the same GHG reduction. For example, a carbon offset program can mistakenly issue two credits to the same project for one tonne of CO_2-equivalent reductions. More likely, however, is that a program issues credits to two different projects, each of which claims the same reduction. An example would be if both the producer and consumer of biofuels claim GHG reductions associated with using the same liters of fuel – and a program issues offset credits to both of them without realizing the overlap. Established carbon offset programs are generally good at avoiding this error within their system, but a somewhat greater risk is that two different programs issue offset credits for these kinds of overlapping claims (not realizing that another program has recognized the same reductions).
- **Double use** occurs if two different parties count the same offset credit towards their GHG reduction claims. Again, most carbon offset programs have procedures to prevent this from happening. The most likely way for it to occur is for an unscrupulous seller to represent to multiple buyers that the credit was retired on their behalf. To avoid such fraud, it is essential for carbon offset programs to require that the purpose of any offset credit retirement is clearly recorded in their registry systems – including on whose behalf the retirement was made.
- **Double claiming** can happen if offset credits are issued to a project, but another entity (e.g., a government or private company) then counts the same GHG reductions towards its own GHG reduction goal. For example, double claiming would occur if an energy efficiency project obtains offset credits for reducing emissions at a power plant covered by a (regulatory or voluntary) emission reduction target. In this case, both the project and the power plant would claim the same reduction: the project through offset credits, and the power plant, through a reduction of emissions relative to its target. Such overlapping claims must be carefully avoided. As described in Section 2.5.2, a potentially significant double claiming issue could arise under the Paris Agreement. Specifically, unless governments agree not to count an offset project's GHG reductions towards their national mitigation targets, the reductions will effectively be double claimed.

4.4.1 HOW CARBON OFFSET PROGRAMS ADDRESS EXCLUSIVE CLAIMS

Carbon offset programs apply a number of methods to ensure that offset credits convey an exclusive claim to GHG reductions.

Double issuance is avoided primarily by:

- Ensuring that offset credits are only issued after program approval of emission reduction verification reports and other supporting documentation;
- Checking that the accounting boundaries used to quantify GHG reductions for different projects do not overlap
- Actively monitoring project registrations – including at other programs—to check that a project is not issued credits by more than one program for the same emission reductions[41]

Double use is avoided primarily through registry systems that assign unique serial numbers to individual offset credits, track their transfer and ownership, and record the purpose of their use and retirement.[42]

Double claiming is avoided though:

- Restricting the eligibility of project types (e.g., excluding those are known to be subject to GHG reduction mandates or competing claims); and/or
- Requiring project developers to sign legal attestations asserting exclusive claims to any credited emission reductions, and agreeing to legally convey such claims to the buyers of offset credits.

Offset programs are still deliberating on how to reconcile competing claims for GHG reductions that are covered by countries' climate action pledges under the Paris Agreement (see Section 2.5.2).

4.4.2 QUESTIONS FOR BUYERS TO ASK ABOUT OWNERSHIP CLAIMS

Although carbon offset programs generally have effective measures in place to assure that the emission reductions are not double counted, there are still some steps that credit buyers should take to make sure they have an exclusive claim to emission reductions. Key questions to ask include:

- When offset credits are retired, is the purpose of the retirement clearly indicated in a carbon offset program registry? Buyers should ask to see proof of offset credit retirement on the relevant registry – including certificate numbers or a transaction ID that match the quantity purchased – along with a clearly identified purpose and the beneficiary of the retirement.
- Were the offset credits issued for indirect emission reductions? Ownership claims are harder to police where they involve indirect emission reductions (i.e., reductions that occur at sources not owned or controlled by the project owners). Claims to these emission reductions are inherently riskier because there is always a chance that the entities who do own or control the sources may claim the reductions as well. Major carbon offset programs generally try to prevent conflicting claims by having project owners legally attest to having an exclusive claim to credited reductions. However, it can be difficult (if not impossible) to determine exactly where indirect reductions occur, making the truth of such attestations difficult to verify. Where risks of double claiming seem significant (for example, if GHG reductions occur in sectors with significant voluntary commitments or regulatory obligations), buyers should avoid offset credits associated with indirect reductions (e.g., from projects that displace fossil fuel emissions on an electricity grid).

4.5 AVOIDING SOCIAL AND ENVIRONMENTAL HARMS

Finally, for a project to produce high quality offset credits, it should not significantly contribute to social and environmental harms. For example, a project should demonstrate it complies with all legal requirements in the jurisdiction where it is located. Depending on the type of project and the jurisdiction where it is located, however, additional reviews and safeguards may be necessary to guard against negative outcomes unrelated to GHG emissions.

Avoiding social and environmental harms

4.5.1 HOW CARBON OFFSET PROGRAMS ADDRESS SOCIAL AND ENVIRONMENTAL HARM

Carbon offset programs generally have environmental and social safeguard policies designed to reduce the risk of any detrimental effects from registered projects. Nearly all require (and verify) that projects are in compliance with applicable legal requirements. Most offset programs also require local stakeholder consultations as part of the project approval process, and have established grievance mechanisms to address complaints about projects after implementation. Finally, some programs actively require that projects demonstrate social and environmental co-benefits (and not just avoid harms), as well as monitor and report on these benefits.

There are a number of "add-on" certification schemes focused on the social and environmental impacts of carbon offset projects. Organizations like the Climate, Community & Biodiversity Alliance (CCBA) and SOCIALCARBON, for example, certify the added co-benefits achieved by offset projects (but do not otherwise address offset quality).

How carbon offset programs address social and environmental harms

4.5.2 QUESTIONS FOR BUYERS TO ASK ABOUT SOCIAL AND ENVIRONMENTAL HARMS

Asking the following questions can help reduce the risk of purchasing offset credits from harmful projects:

- Prior to implementation, did the project developers engage and consult with local stakeholders potentially affected by the project? Stakeholder consultation can be particularly important in developing countries, where there are often fewer regulatory safeguards. If stakeholder outreach was not undertaken, this failure should raise concerns, though the seriousness may depend on the type of project involved and where it is located. Some types of projects pose fewer risks to local communities than others.
- Has the project received any program or third-party certifications affirming its environmental or social co-benefits? Generally, such certifications (e.g., from the CCBA; SOCIALCARBON; or offset programs themselves) can provide added assurance that a project will not cause harm and ensure that project developers have taken into account the concerns

of local stakeholders. Projects that have not received any co-benefit certification do not necessarily pose a high risk of harms, but it may be useful to inquire with project developers about why they did not seek certification, if it was an option.

- What has the project done to minimize risks and reduce potential harm? Annex 1 (also available at offsetguide.org) contains a list of general project types and identifies those for which the risk of social or environmental harms may be significant. Where there is significant risk, it is crucially important to understand a project's specific circumstances, how it has addressed potential risks and the concerns of local stakeholders, and what mechanisms it has in place to both avoid harms and compensate for them if they occur. The CCBS, for example, requires ongoing community impact monitoring associated with forestry projects.

Domestic or foreign projects

Agriculture-based carbon offset projects can create job opportunities through increased management intensity. Image credit: The international small group and tree planting program.

5. STRATEGIES FOR AVOIDING LOWER-QUALITY OFFSET CREDITS

As the prior sections make clear, carbon offset credits are not a typical commodity. Although carbon offset programs provide some assurance, purchasing high quality offset credits is not as simple as buying any "certified" credit issued by an offset program. It is common to tell credit buyers to "do their homework," and indeed such advice is appropriate for organizations with the time and resources to do so. In this section, we describe both thorough and simpler strategies for steering clear of lower-quality offset credits.

5.1 VETTING OFFSET PROJECTS

As indicated in the prior section, buyers can ask basic questions about offset projects that may help screen out lower quality options. In most cases, project developers and offset credit owners should be forthcoming with answers to such questions (if they are not, it is a red flag). For more sophisticated buyers or those with more resources, a fuller list of offset project "due diligence" questions can be applied.

How do I conduct more rigorous project due diligence?

One option is to engage the services of consultants or trusted retailers to examine projects, navigate different options, and put together a portfolio of offset credits that meet a buyer's goals (with respect to location, project type, offset quality, and co-benefits, for example). It is often a good idea to work with someone who has a detailed understanding of the sectors or project types being considered, which in some cases could involve enlisting multiple experts.

5.2 STICKING TO LOWER-RISK PROJECT TYPES

Although many kinds of projects can deliver GHG reductions, some types of projects have a harder time meeting essential carbon offset criteria than others. It is generally easy to show that industrial gas destruction projects are additional, for example: as long as they are not required by law, there are few if any reasons to undertake them aside from generating carbon credits.[43] For many renewable energy projects, on the other hand, careful scrutiny is required to determine whether the prospect of carbon credit sales played a decisive role in their implementation (and even with such scrutiny, it can be hard to be certain – they are often on the margin of viability with energy sales revenue alone).

Perhaps the easiest way to reduce the risk of buying low-quality offset credits is to restrict purchases to credits that come from lower-risk project types. Annex 1 (also available at offsetguide.org) provides an overview of the relative offset quality risks associated with common types of carbon offset projects.

There are two potential drawbacks to this approach. First, as Annex 1 indicates, there are only a handful of project types

that have low environmental integrity risks as a class. Second, the kinds of projects that can most easily meet environmental integrity requirements tend to be projects that offer the least in terms of environmental and social co-benefits – and vice versa. Often, a buyer must choose between a project type with lower quality risks and one with greater co-benefits. A project that avoids N_2O emissions at a nitric acid plant, for example, will generally be highly additional, easy to quantify, will pose no ownership or permanence concerns, and will not cause social or environmental harms – but it will do little to enhance people's livelihoods or otherwise improve the environment. An agroforestry project that sequesters carbon in trees across many small farms, on the other hand, may yield a multitude of local benefits – but its GHG impact will be harder to quantify, and the carbon stored in trees may not be permanent. These kinds of trade-offs can be observed in Annex 1, which also identifies project types that offer the greatest potential for social and environmental co-benefits.

5.3 "DISCOUNTING" OFFSET PURCHASES

One strategy to address quality risks is to simply retire extra offset credits. For example, to compensate for 100 tonnes of CO_2 emissions, a buyer could purchase and retire 200 offset credits from a range of different projects. This approach is commonly referred to as "discounting."[44]

Although this strategy does not address quality directly, it hedges against the risk that some offset credits may be associated with GHG reductions that are non-additional, over-estimated, non-permanent, or claimed by others. It can also help buyers focus on reducing their own emissions, since it effectively increases the cost of offsetting.

While discounting can be part of a responsible strategy for using carbon offsets, it should not be done in the absence of other methods to check for offset quality. Doubling the purchase of non-additional GHG reductions still contributes nothing to climate change mitigation!

Clean cookstoves reduce CO_2 through more efficient fuel usage while reducing indoor air pollution and providing financial savings to residents. Image (left) credit: Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America.

5.4 WEAKER METHODS: RELYING ON PRICE OR VINTAGE

In many markets, "cheap" is often synonymous with "low quality." Very cheap offset credits can indeed be a sign of low quality, especially for newer projects. If a project is selling offset credits for a price below US$1-2 per tonne (i.e., close to the transaction cost of getting a project developed, registered, and verified) then the case for additionality is probably weak; it can be hard to argue that the project truly depended on offset credit revenue for its implementation. However, some offset project types with high environmental integrity can produce GHG reductions at relatively low cost (e.g., industrial N_2O destruction or avoidance projects).

The inverse argument – that higher prices correlate with higher quality – is not reliably true either. Truly additional offset projects will have a higher intrinsic cost for generating GHG reductions, and will therefore need to charge a higher price for offset credits to be financially viable. However, there is nothing to prevent non-additional projects from also charging high prices, assuming they can find a gullible buyer. These projects may end up crowding out projects with higher actual costs. Looking only for higher-priced offset credits (without looking at other variables) is therefore not a wise strategy.

The "vintage" of an offset credit can refer either to the year in which it was issued, or the year in which its associated GHG reduction occurred (for some kinds of offset projects, there can be a significant lag between the latter and the former, because of longer verification cycles, e.g., with forestry projects). The vintage of an offset credit does not necessarily indicate anything about its quality.

However, older *issuance* vintages may present a quality concern where the following conditions are true:

- The offset credits under consideration have remained unsold for a long time; and/or
- The offset credits are being sold directly by the project developer, where the developer:
  - Did not contract with a dedicated offset credit buyer upfront (e.g., under an ERPA); and/or
  - Has carried forward a significant number of unsold offset credits; and
  - Has continued to operate the offset project for several years despite the lack of offset credit sales.

6. CONCLUSION

Recent years have seen a surge in interest in carbon offsets, and this is a good sign. It suggests public attention to climate change is growing, at a time when action to address it is more urgent than ever. As we make clear in this guide, offset credits are far from a perfect tool. If used carelessly, carbon offsets could slow progress on climate change and amount to little more than greenwashing. However, used responsibly, they can accelerate action on climate change beyond the slow pace that has so far been set and enabled through government policies.

Using offset credits responsibly requires, first, a strong plan for reducing one's own greenhouse gas emissions. Simply buying credits instead of taking more direct and aggressive action – flying less, for example, or investing in improving the energy efficacy of your buildings, equipment, and vehicles – is not defensible given the strong need for aggressive action in all areas of human activity.

Responsible use also requires spending time to understand and seek out high-quality credits. Carbon offset programs provide a necessary level of quality assurance for the credits they issue; you should avoid offsets that have not been certified by an established program. But, whether this assurance is sufficient is another question. As explained in Section 4, whether a carbon offset has "environmental integrity" is not a binary question. Quality exists along a continuum defined by the level of confidence one has in an offset project's additionality (first and foremost), as well as its quantification, permanence, exclusive claim to emission reductions, and avoidance of social and environmental harms. The issuance of an offset credit signifies – or should signify – that a project meets a minimum quality threshold. However, offset programs do not have spotless track records. You should not equate meeting a minimum threshold with high confidence in environmental integrity. It is important to understand the projects you are buying from, ask questions about key criteria (like whether a project has other revenue streams), and stick to project types that are more likely to fulfill basic quality requirements (as indicated in Annex 1).

Finally, voluntarily using carbon offsets to accelerate climate action is admirable, and arguably even necessary – there is no single "silver bullet" approach to solving climate change. However, buyers should never neglect the need for ambitious governmental policy responses. Using high quality offset credits to make a claim of carbon neutrality – even a highly defensible claim – is a detriment to climate action if it distracts companies, customers, and other stakeholders from pushing for stronger regulation and carbon pricing. Voluntary action cannot supersede policy action! And, coordination between voluntary actors and governments will be essential for ensuring a strong collective response to climate change. Carbon offsets should be seen as one element of this collective response, not a solution by themselves.

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We welcome your questions or any feedback you have about this guide. Please see www.offsetguide.org for updated guidance.

You may email GHGMI at info@ghginstitute.org

ANNEX 1: OFFSET PROJECT TYPES AND RELATIVE QUALITY RISKS

Some types of carbon offset projects have an easier time meeting essential carbon offset criteria than others. In the following tables, we distinguish between "lower risk" project types, where individual projects will frequently meet all offset quality criteria, and other project types, where more caution may often be necessary. For each project type, we indicate in the tables whether meeting a particular criterion could be relatively difficult and may therefore be of particular concern when considering an offset credit purchase. In Tables 3-5, if a cell is left blank, then the criterion is not a major concern for that project type.

Table 2. Relative offset quality risk for different project types

Lower risk	Medium risk	Higher risk
• CO_2 usage • Methane destruction (w/o utilization) • N_2O avoidance from nitric acid production • N_2O – adipic acid* • Ozone-depleting substance (ODS) destruction	• Methane capture and utilization • Methane avoidance • Energy distribution • Energy efficiency, household demand side • PFCs & SF_6 avoidance/ reuse • Renewable energy, small scale	• Agriculture • Biomass energy • Cement production • Energy efficiency, industrial demand side • Energy efficiency -- supply side • Forestry & land use • Fossil fuel switching • Fugitive gas capture or avoidance • Low-carbon transportation measures • Renewable energy, large scale

* Studies have found potential concerns with N2O avoidance projects at adipic acid plants. In principle, however, these could be lower risk projects if appropriate methodologies are applied.

Table 3. Lower risk project types

Project Type	Sub-Types Included	Additionality	Quantification & Leakage	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
CO_2 usage	Use of CO_2 from biomass or industrial tail gases to replace fossil or mineral CO2 in industrial applications				
Methane destruction	Coalmine ventilation air methane (VAM) destruction				Harms: Could be seen as supporting coal industry and therefore not a project type consistent with long-term climate goals.
	Landfill gas flaring	Varies by location. Projects are likely additional in most parts of the developing world. In developed countries, including the United States, some projects are pursued to avoid triggering regulatory requirements.	Some potential for baseline uncertainties (e.g., how much methane would have been generated in the absence of a project), but most are addressed through program quantification & eligibility rules.		Benefit: May reduce odor issues for communities near landfills.

Project Type	Sub-Types Included	Additionality	Quantification & Leakage	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
N_2O avoidance from nitric acid production	Various process improvements in nitric acid production		The baseline can be overestimated, as N_2O measurement is technically complex.		Harms: Could be seen as supporting the manufacture of synthetic fertilizer and therefore not consistent with long-term climate goals
N_2O destruction in adipic acid production	Destruction or reuse/ recycling of N_2O by-product from adipic acid production		Studies have found evidence of plants increasing their acid production to generate more N_2O to destroy for carbon offset credits. Current methodologies may correct for this tendency.		
Destruction of ozone depleting substances (ODS)	Collection and destruction of ODS used in insulating foams and refrigeration equipment		Some uncertainties may exist regarding baseline emission rates (e.g., how quickly ODS would leak if reused in old equipment). The high GWP for ODS gases can amplify quantification errors.		Benefit: Destruction of ODS helps to accelerate recovery of stratospheric ozone.

Table 4. Medium risk project types

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane capture and utilization for energy	Coal mine methane, coal bed methane	Carbon offset revenue can make up a large portion of return on capital investment; however, technical hurdles for these projects are no longer substantial and there are significant levels of business-as-usual methane usage at mines in some countries	Some projects may incentivize increased drainage of methane, leading to more methane destroyed than would have been released in the baseline. Most protocols control for this, however. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: May have air pollution benefits if captured methane is used to displace coal. Harms: Could be seen as supporting coal industry and therefore not a project type consistent with long-term climate goals.
	Livestock methane, manure management, biogas utilization	For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: Offset projects at industrial livestock operations may mitigate local environmental impacts. Similarly, biodigesters can provide energy families use for cooking, saving money on fuel and reducing the sanitary issues associated with burning of animal and human waste. A lower dependence on firewood due to biogas use reduces fuel wood use.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane capture and utilization for energy (cont.)	Other (waste water, industrial solid waste methane capture & utilization)	Regulatory drivers should be examined for many of these projects. For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefit: May reduce odor issues for communities near facilities.
	Landfill gas utilization (for energy, electricity)	Varies by location. Projects are likely additional in most parts of the developing world. In developed countries, including the United States, some projects are pursued to avoid triggering regulatory requirements, and projects that generate energy can be economical without carbon revenue.	Some potential for baseline uncertainties (e.g., how much methane would have been generated in the absence of a project), but most are addressed through program quantification & eligibility rules. Where methane is utilized for energy generation, some uncertainties can arise regarding the baseline for displaced emissions.	Ownership: Projects that generate energy using captured methane may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefit: May reduce odor issues for communities near landfills.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Methane emission avoidance	Composting; aerobic treatment of waste or wastewater; palm oil waste management / utilization	For composting and aerobic waste treatment, regulatory drivers should be carefully examined. For some projects in some locations, it is important to evaluate whether other revenue streams and funding sources would enable implementation without carbon revenues.	Some potential for baseline uncertainties, but most can be addressed through quantification & eligibility rules. If palm oil (or other) waste is used for energy generation, uncertainties can arise regarding baseline for displaced emissions.	Ownership: Projects that generate energy (e.g., from palm oil waste) may result in indirect emission reductions (e.g., at grid-connected power plants).	Benefits: Composting projects help reduce food waste, promote the environmental and health benefits of organic farming and reduce fossil-based fertilizer demand.
Energy distribution	District heating, connection of isolated grids, microgrid development, other	Additionality may be unclear in many cases; projects may be capital intensive and it is not clear that carbon revenues would be decisive for investment decisions.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally address this concern with sufficient conservativeness.	Ownership/double counting: Often results in indirect emission reductions. Where distribution displaces electricity applications (e.g., fewer space heaters used as a result of a district heating project), electricity generators could double count reductions.	Benefits: Can lead to significant air quality benefits where displacing inefficient distributed combustion (e.g., in home coal or peat stoves). Connecting isolated grids or microgrid development, provides more reliable energy access.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
Energy efficiency, household demand side	Improved cookstoves		Significant uncertainty and potential for over-crediting due to approaches used to estimate reduction in biomass fuel used with improved stoves, fraction of non-renewable biomass (i.e., emissions associated with land-use change impacts), emission factors for wood-fuel used in baseline, inclusion of "suppressed demand" for fossil fuels, and underestimation of stove abandonment or stove stacking.	Permanence: Where project includes accounting for avoided deforestation (i.e., increase in forest carbon stocks due to decreased use of biomass), carbon storage could be reversed.	Benefits: Can lead to significant air quality benefits where replacing inefficient distributed combustion (e.g., in home wood, coal, charcoal or peat stoves) and therefore significant health benefits for families using improved cookstoves. Can lead to creation of new employment through market for stoves. Can reduce time and expenditures on fuel by rural families.
	More efficient lighting, insulation, & appliances; HVAC systems; air conditioning; street lighting; water pumping and purification; etc.	For some projects, it may be hard to show that carbon revenues were a decisive factor, e.g. where energy cost savings exceed offset credit revenues. In many places, improved efficiency is already common practice with national and local support schemes.	Often there can be uncertainty about avoided baseline emissions, actual adoption rates for new equipment, and/or baseline usage patterns. Baselines are sometimes linked to estimates of "suppressed demand" for fossil fuels, which run the risk of overestimating baseline emissions.	Ownership/double counting: Energy efficiency measures will often lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Can lead to cost savings for end users, and meaningful public health improvements for communities and families in low income areas.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits / harms
PFC & SF_6 avoidance & reuse	PFC & SF_6 emission avoidance; SF_6 capture & re-use	Additionality depends on specific project activity and facilities involved. In some contexts, measures for reducing emissions may be cost-effective without carbon revenues. In addition, PFCs and SF_6 are increasingly being regulated by governments, and so some projects could be mandated in some jurisdictions. Some projects may be pursued in anticipation of these regulations, prior to them taking effect.			

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Renewable energy, small scale (under 15 MW)	Electricity generation from small-scale (run of river) hydropower plants	Can face greater investment hurdles than large hydro projects, but it is often not clear whether carbon revenues would materially affect investment decisions	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address this concern conservatively.	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project then another entity may functionally double count reduction.	Benefits: Reduced air pollution where fossil generation is displaced. Rural electrification. Harms: Displaced ecosystem services and communities that relied on previous river resources (this is less of a concern for smaller projects).
	Electricity generation from solar, wind, geothermal, other renewable power sources	For many of these projects, it is not clear that carbon revenues can decisively influence investment decisions.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively.	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project, then another entity may functionally double count reduction.	Benefits: Reduced air pollution where fossil generation is displaced. Rural electrification.
	Gasification and/or combustion of municipal solid waste	For many of these projects, it is not clear that carbon revenues can decisively influence investment decisions.	Potential uncertainties related to methane emissions avoided in baseline. Potential uncertainties related to displaced energy emissions (similar to other renewable energy projects)	Ownership/double counting: If grid-connected or otherwise displacing fossil fuel energy, these projects will result in indirect emission reductions; electricity generators could double count reductions. If RECs or GoOs are also sold from project then another entity may functionally double count reduction..	Benefits: Better local solid waste management. Harm: Air pollution, if advanced emission controls not part of project.

Table 5. Higher risk project types

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence	Co-benefits/ harms
Agriculture	Low-till/no-till soil carbon sequestration; use of biochar	Additionality is context-specific. In U.S., for example, low-till/ no-till is increasingly common practice. Frequently, for individual landowners, carbon revenues for these project types are too low to play a decisive role in changing practice. Programmatic approaches (where many landowners are aggregated together under a single project) are more likely to be additional.	Quantification of net GHG reductions in biological systems is inherently more uncertain than for many other project types; diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult. Leakage risk can be a significant issue for tillage projects (to the extent crop yields are affected).	Permanence: Risk of reversal (i.e., non-permanent reductions) is a concern for all carbon storage projects.	Benefits: Both biochar and tillage projects can enhance soil productivity and reduce erosion, increasing farmers' yields and reducing impact on aquatic ecosystems.
	Rice cultivation methane avoidance, improved fertilizer management, etc.	Improved fertilizer management can often pay for itself (without carbon revenue), although barriers may prevent efficient investments in some cases. Conversely, carbon revenues for these project types (rice methane, nutrient management) are often too low to play a decisive role in changing practice. Programmatic approaches (where many landowners are aggregated together under a single project) are more likely to be additional.	Quantification of net GHG reductions in biological systems is inherently more uncertain than for many other project types; diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult. Leakage risk can be a significant issue to the extent crop yields are affected (shifting production to lands where mitigation actions are not practiced).		Benefits: Improved fertilizer management can help reduce nutrient runoff. Harms: Effects of alternative rice cultivation methods may vary depending on context. (In California, for example, reduced flooding of fields may negatively impact waterfowl habitat.)

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Biomass energy	Industrial waste: Bagasse power, palm oil solid waste, black liquor, forest residues, sawmill waste, industrial waste, biodiesel from waste oil	Regulatory incentives frequently make biomass power competitive with fossil fuels, even without carbon revenues. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Some risk of exaggerated claims of avoided methane emissions associated with anaerobic decay of biomass.	Ownership/double counting: Often results in indirect emission reductions; other energy suppliers or electricity generators could double count reductions.	Benefits: Supports a beneficial use of waste from agricultural industries, diverting waste from landfills and providing revenue in return for environmental benefit. A source of renewable and environmentally-improved energy by generating electricity from waste. Accordingly, creates more sustainable patterns of production.
	Agricultural farm residue, forest residue, and dedicated energy crop	Regulatory incentives frequently make biomass power competitive with fossil fuels, even without carbon revenues. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Significant risks of over-crediting concern due to lack of assessment of land use, as well as direct and indirect land use change from collection of biomass feedstocks (leakage risk). Some protocols may better address these concerns than others.	Ownership/double counting: Often results in indirect emission reductions; other energy suppliers or electricity generators could double count reductions.	Benefits: Promotes renewable energy development. If land-use risks are properly dealt with, creates more sustainable patterns of production. Harms: Risks competing with other land-uses, primarily agriculture for food and reforestation/ afforestation.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Cement production	Use of blended cements, process and efficiency improvements	Choice of cement blends is often determined by institutional purchasing or regulatory requirements over which carbon revenues have little influence; higher-blend cements are also often cheaper than standard blends. Additionality for these projects may therefore hinge upon non-financial factors that are more difficult to prove.			
Energy efficiency, industrial demand side	Various forms of Industrial energy use efficiency	Many industrial efficiency projects pay for themselves and are common practice. Carbon revenues are often small relative to energy cost savings, so are seldom a decisive factor in pursuing a project.		Ownership/double counting: Energy efficiency measures will often lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Increasing industrial energy efficiency decreases the lifecycle emissions – and environmental impact – of products. These projects contribute to private sector participation in decarbonization.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Energy efficiency – supply side	Waste heat/ gas recovery; combined heat and power projects; improving energy conversion efficiency at boilers, power plants, etc.	Carbon revenues are often small relative to energy cost savings, so are seldom a decisive factor in pursuing a project. Projects are also common practice in many (though not all) countries and sectors. Some studies have questioned the application of barrier and investment analyses to assess the additionality of these projects.	Baseline determination can be complicated and site-specific. In existing facilities, it can be difficult to assess the actual use of waste heat in the baseline. In new projects, there are high uncertainties in modelling baseline waste heat production. Baselines under some protocols for supply-side efficiency projects have been set too high, resulting in over-crediting.	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Harms: Financially supporting energy efficiency improvements in fossil burning energy systems may slow the transition to low-carbon energy systems.
Forestry and land use	Afforestation & reforestation; avoided deforestation; improved forest management; agroforestry; avoided conversion of high-carbon soils	Frequent challenges in determining baseline activity, which may be highly site-specific. Since the baseline determines how much carbon storage is additional, this makes additionality uncertain. In addition, timber and land-use values often exceed carbon revenue value, making it difficult in some cases to determine whether carbon revenues were decisive in changing baseline activities.	There are frequently significant baseline uncertainties for these project types. In addition, diverse and uncontrolled implementation environments make measurement, monitoring, and verification more difficult for these projects. Significant leakage risk can occur from displacement of harvesting or land-use development (i.e., reduced harvest in one area can cause an increase elsewhere)	Permanence: Risk of reversal (i.e., non-permanent reductions) is a concern for all carbon storage projects.	Benefits: Forests provide a range of ecosystem services that forest sector offset projects can maintain and expand. These may include increased local livelihoods, maintaining ecosystems and biodiversity, local farm productivity (pollination and precipitation services), limiting runoff, and water filtration.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Forestry and land use (cont.)					Avoided conversion of grasslands can yield significant environmental benefits beyond carbon storage, such as preserving landscapes and biodiversity. Harms: Poorly-designed forestry projects that do not sufficiently engage local communities and indigenous peoples can have major negative impacts, including livelihood restrictions and even community displacement.
Fossil fuel switching	Switch from coal to natural gas in boilers or power generation; use of natural gas as a transportation fuel	Carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project. Studies have identified significant uncertainties in assessment of investment barriers to fuel switching, and point to new natural gas projects becoming increasingly common practice and non-additional.	Failure to account for upstream emissions from fossil fuel extraction & transport (e.g., methane leaks at well-head or in transmission & distribution) can lead to over-crediting.		Harms: Supporting adoption or continued use of fossil fuels may slow the transition to low-carbon energy systems. Widespread use of natural gas is incompatible with the temperature goals of the Paris Agreement.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Fugitive gases	Waste gas recovery from oil & gas production or other industrial operations; leak prevention in natural gas transmission & distribution systems; other fugitive gas prevention and recovery	Many fugitive emission reduction activities are cost-effective without carbon revenues; the financial value of preventing fugitive emissions (e.g., in terms of reduced fuel losses) often exceeds the carbon revenue value, so carbon revenues are seldom a decisive factor in pursuing a project.	Where waste gas quantities are directly measured, quantification concerns are low. Fugitive emissions, however, can be hard to detect and quantify, creating uncertainties about the effects of leak prevention activities.		Harms: Supporting adoption or continued use of fossil fuels may slow the transition to low-carbon energy systems. Widespread use of natural gas is incompatible with the temperature goals of the Paris Agreement.
Renewable energy, large scale	Geothermal; solar; mixed renewables; tidal energy; other	Unconventional renewables face greater financial hurdles than other technologies, and thus are more likely to be additional. However, carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively.	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Benefits: Reduced air pollution where fossil generation is displaced.

Project type	Sub-types included	Additionality	Quantification	Other (Ownership/ Double Counting, Permanence)	Co-benefits/ harms
Renewable energy, large scale (cont.)	Hydropower and wind projects	Common practice in many countries Carbon revenues are often a small component of total project revenues, so are seldom a decisive factor in pursuing a project. Studies have found documented concerns related to additionality assessment in large-scale hydro and wind projects.	May be some uncertainty about avoided baseline emissions; quantification protocols will generally (though not always) address conservatively. Some studies have identified issues with quantification methodologies for hydro projects, particularly when methane emissions (from plant material that is buried in the dam reservoir) are omitted, leading to over-crediting .	Ownership/double counting: Projects that displace emissions at other sources (e.g., on electricity grid) will lead to indirect emission reductions, meaning greater potential for double counting.	Harms: Some large-scale hydropower projects have well-documented negative social and environmental impacts. These projects can displace local communities and indigenous peoples, degrade forests, harm biodiversity and affect aquatic life and existing food sources for populations.
Low-carbon transportation measures	Public transportation improvements, mode shifting, vehicular fuel efficiency improvements, vehicle scrapping or retirement	In general, the mitigation cost of transportation projects ($/ tonne CO2 reduced) is well above current and historical prices for carbon offsets, calling into question whether carbon revenues can be a decisive factor in incentivizing these projects. For transport efficiency projects, fuel cost savings often (substantially) exceed carbon revenues from avoided emissions, raising similar questions about additionality.	High levels of uncertainty in quantifying avoided emissions from public transportation, mode shifting, and vehicle scrapping/ retirement projects. Reasonable quantification certainty for efficiency upgrades (notwithstanding baseline/additionality concerns).		Benefits: Transportation emissions reduction projects can improve air quality and the health of those living nearby as well as increase urban liveability.

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ENDNOTES

1 Under the Paris Agreement, the international community has established a goal of limiting global warming to "well below 2°C" by the 2100, and to pursue efforts to limit warming to 1.5°C. In a 2018 report, the IPCC summarized current modeling of what will be required to achieve the latter goal, noting that very substantial CO_2 reductions will be required by 2030. See: IPCC (2018).

2 CO_2 can be removed from the atmosphere through natural sequestration (e.g., in trees, soils, or the ocean) or through artificial means (e.g., using direct-air capture technologies, which are still in their infancy).

3 Such "programs" were pioneered under the Kyoto Protocol's Clean Development Mechanism; see here.

4 See, for example, Verra's framework for Jurisdictional and Nested REDD+ programs. (REDD stands for "reduced emissions from deforestation and forest degradation".)

5 The terms "standard" or "registry" are sometimes used when referring to offset programs. However, a comprehensive carbon offset program will consist of more than just a standard and a registry.

6 Although the CDM has functioned primarily as a regulatory program under the Kyoto Protocol, it now also caters to voluntary purchasers.

7 Like the CDM, "Joint Implementation" is a separate offset program established under the Kyoto Protocol; the CDM applies only to developing countries, while JI is used in developed countries.

8 In general, price discrepancies among programs arise only when one program serves a captive market with strong demand that other programs may not serve, such as the regulatory cap-and-trade market in California.

9 Similar terms, like "climate neutral" or "net zero" are largely synonymous.

10 See, for example, https://sciencebasedtargets.org/step-by-step-guide/

11 Scope 2 emissions for your corporate inventory should be estimated using grid average emission factors (e.g., kg CO2/kWh), also referred to as the location based method. Application of a zero emission factor, based on green power purchasing claims (i.e., the market based method), generally lacks environmental integrity and is inconsistent with good practice in environmental accounting. For further information see https://scope2openletter.wordpress.com/

12 This kind of "double-entry bookkeeping" is referred to in international negotiations as "corresponding adjustments." Detailed rules for how corresponding adjustments will be implemented are still being negotiated – see Schneider et al. (2019).

13 The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), established in 2016, is expected to demand anywhere from 1.6 to 3.7 billion offset credits between 2021 and 2035 – see Warnecke et al. (2019). On the subject of avoiding double counting, see Schneider, Broekhoff, et al. (2019).

14 See, for example, Kreibich and Obergassel (2019) as well as ICROA (2019) and Voluntary Carbon Market Working Group (2019).

15 See Wara and Victor (2008).

16 The primary concern is that a large number of offset credits come from energy sector projects that have significant sources of other revenue besides offset credits, suggesting that they would have happened anyway and do not represent additional mitigation. Other identified issues include concerns about over-estimation of emission reductions, e.g., for industrial gas destruction and other project types (Alexeew et al. 2010; Cames et al. 2016; Gillenwater and Seres 2011; Haya and Parekh 2011; Kollmuss et al. 2015; Kollmuss and Lazarus 2010; Lazarus et al. 2012; Ruthner et al. 2011; Schneider 2009; Schneider et al. 2010; Spalding-Fecher et al. 2012)

17 See, for example, Dufrasne (2018) as well as here.

18 See Spalding-Fecher et al. (2012).

19 Although most critical studies of carbon offsets have focused on the CDM and JI because of their high profile, many of the same issues are likely to arise in other programs as well. For some programs – like Verra (i.e., VCS) and the Gold Standard – this is because they incorporate CDM methodologies by reference, so there is substantial overlap in the kinds of projects they certify. In other cases, programs have used CDM methodologies as a starting point in developing their own standards. Although a number of programs have followed approaches that differ from the CDM, no program should be considered categorically free of all concerns about offset quality.

20 The CDM Executive Board, for example, adopted amendments and clarifications to its methodology for destruction of HFC-23 emissions to address demonstrated concerns about over-production of this gas purely for the purpose of producing more offset credits. Such projects are now disallowed. However, similar concerns for other project types – e.g., N_2O abatement at adipic acid plants – have not been fully addressed.

21 Verra and the Gold Standard, for example, have solicited public input on whether to exclude from eligibility clean energy projects in wealthy and middle-income countries, on the grounds that these projects have a low likelihood of being additional.

22 This condition applies to GHG emissions, as well as to other social and environmental impacts. If global GHG emissions would be no greater as a result of using a carbon offset credit instead of reducing your own emissions, then the credit is said to preserve "environmental integrity" (Schneider and La Hoz Theuer 2019). However, it is also important that offset projects do not cause significant social or (non-climate) environmental harms. Both are important for offset quality.

23 See Gillenwater (2012).

24 For an in depth discussion of these ideas, see Trexler (2019).

25 Again, see Trexler (2019).

26 Standardized additionality approaches can use "positive lists" (lists of defined technologies or practices that are deemed additional without further

evaluation) or a set of technical specifications and other criteria that a project must meet to be eligible (for example: landfill gas collection and destruction, occurring at a sanitary landfill that is below a certain size threshold, where gas collection is not required by law, etc.).

27 Again, a common misconception is that the baseline for a project represents what would have happened "in the absence of the project." However, it is essential to evaluate whether a proposed project is itself the baseline (i.e., is not additional), and therefore will generate no emission reductions.

28 Assuming that the project is additional and that the project itself does not affect the rate of methane generation at the landfill – for example, by creating a "bioreactor" landfill.

29 See, for example, Offset Quality Initiative (2008).

30 This process may include collecting and verifying data needed to estimate a project's baseline emissions.

31 Some of these sources and sinks may be treated as "leakage" effects and addressed in supplemental calculations.

32 Most quantification methods prescribe a combination of project-specific data collection, along with the use of conservative defaults or estimates where data collection is impractical.

33 Renewal under some programs may also involve an updated

34 Carbon offset programs can differ in their approach to validation and verification. Some programs, like CAR, combine validation with the first verification of a project, and do not make a formal distinction between the two functions. Others require validation and verification as separate steps (and some, like the CDM, require separate verifiers for each to avoid conflicts of interest – since a positive validation could lead to a more lucrative verification contract).

35 Technically, the individual molecules of CO_2 emitted may cycle back and forth between the atmosphere and terrestrial reservoirs multiple times, but atmospheric concentrations of CO_2 will remain elevated by an amount equal to about 25% of the original mass emitted after 1,000 years (Joos et al. 2013).

36 Technically, a "reversal" occurs if – at any point in the future – the rate of GHG emissions accelerates so that it is higher than would have occurred if the project had never happened. For example, protecting a parcel of forest from deforestation prevents 100 tonnes of carbon from being released to the atmosphere (reducing emissions by 100 tonnes). Fifty years later, however, the parcel is burned down, emitting all the carbon. The rate of emissions in year 50 is accelerated, because without the project, the 100 tonnes of carbon would not have been present to be burned. Net GHG reductions over 50 years are zero, because the additional emissions cancel out the prior reductions.

37 Unless a project involves carbon storage of some kind (e.g., sequestering carbon in trees), a reversal of emission reductions is highly unlikely. In theory, however, reversals can occur in other circumstances. A hypothetical example would be where a solar panel and battery storage system is used to provide electricity to a building, allowing it to operate off the grid (and avoiding grid-based electricity emissions); however, the solar panel fails and a backup diesel generator is brought in to provide power instead, causing more emissions than would have occurred without the project. Such circumstances will be rare, but for

some project types, it may be worth evaluating whether these types of risks exist.

38 The CDM is alone in issuing "temporary credits" for reversible GHG reductions. Under this approach, offset credits issued for these reductions expire after a predefined period (up to 30 years) and must be replaced with other emission reductions. This approach effectively guarantees permanence if it is enforced (whether the CDM's administrative structures will be maintained in the future is an open question). However, it has faced significant hurdles, not least because it puts the onus for ensuring permanence on offset credit buyers. As a result, buyers have been far less willing to pay for these credits, and the market for them has been largely non-existent.

39 See Murray et al. (2012).

40 See Schneider et al. (2015) for a fuller explanation of double counting issues with carbon offsets.

41 Procedures may include requiring project developers to sign legal attestations stipulating that they will not request issuance of offset credits for emission reductions from more than one program (unless they are effectively "transferring" credits from one program to another).

42 Some third-party programs, like Green-e Climate, provide checks on credit retirement steps for retail credit buyers. However, in most cases this adds little value beyond what carbon offset programs already make available to any buyer in terms of retirement certification.

43 While additionality is not usually a concern, some kinds of industrial gas projects do have issues with baseline estimation and overestimation of reductions.

44 Technically, "discounting" refers to issuing fewer credits to a project than the GHG reductions it achieved, but it is often used more broadly to refer to any approach that effectively uses more GHG reductions to offset fewer GHG emissions. It has also been proposed as an approach to be used in regulatory carbon markets; for example, see Warnecke et al. (2014).

Image (next page) courtesy of High Tide Foundation

Limits and Controls

Southwest's Gas Purchases & Transportation (GP&T) personnel (Administrator, Sr. Analyst, and Manager), as well as the Director/Gas Supply, are authorized to enter into specific gas supply transactions based upon the authority outlined in this document or the Gas Purchasing Authorization and Limits document. With regard to one month or less spot purchases, although each of the authorized personnel are assigned a specific service territory(ies) and generally only purchase gas supplies for the assigned service territory(ies), authorized personnel may complete purchases for any of the Company's service territories. Authorized personnel shall forward any questions concerning the authority to enter into a specific transaction to management or senior management prior to entering into such transaction to ensure authorized personnel do not exceed authority levels. Authorized personnel may not enter into unauthorized gas supply transactions without the approval of management or senior management.

Solicitation of Firm Term Bids

1. GP&T consults with Gas Resources Planning (GRP) to identify the input variables required by the computer model or other analyses GRP will use in the upcoming portfolio evaluation process.

2. In consideration of GRP modeling and other analytical needs, requisite non-modeled contractual details, and concerns for respondent understandability, GP&T fashions a solicitation designed to maximize the quantity, quality, and diversity of proposals received and Southwest's ability to evaluate such proposals effectively.

3. The firm term solicitation requests index-based supply pricing.

4. GRP attempts to evaluate all responsive term proposals received. The primary tool used for evaluating the proposals is a computer-based optimization modeling program. If GRP cannot model a proposal as submitted, GRP will use other available tools to evaluate such proposals. In cases where a supplier submits a proposal with attributes that GRP cannot enter into the model, a surrogate may be used that conforms to the parameters outlined in the bid solicitation guidelines, subject to any model design limitations.

5. If proposals that appear incomplete, unclear, internally inconsistent, or not within the scope of the solicitation, GP&T will seek supplier clarification. Southwest removes proposals that suppliers cannot sufficiently clarify for evaluation from further consideration. GRP and GP&T will maintain appropriate documentation as to the

reason(s) when a proposal is removed from evaluation.

Evaluation of Firm Term Supplies

1. Preparation for Evaluation

   a) Evaluation Engineers from GRP create a new model set-up for each rate jurisdiction that requires modeling. Space is set-aside in the model for existing and future fixed-price contract commitments procured through the VMP or APSP programs. The minimum daily quantities are dependent on each rate jurisdiction's needs. However, the minimum daily quantities are subject to revision at any time during the analysis to reflect changing market conditions and experienced management judgment.

   b) Southwest's interactive bid program creates a database that contains the electronic bid forms submitted by suppliers.

   c) Evaluation Engineers review bids for clarity and convert price statements into modeling equation coefficients. GRP returns any bids that appear incomplete, unclear, or internally inconsistent to GP&T for clarification, as noted above. Any proposal that GP&T cannot sufficiently clarify for evaluation will be removed from further consideration.

   d) All bids accepted for consideration will be sorted by rate jurisdiction, term, and type to facilitate modeling.

   e) Special cases will receive appropriate treatment.

2. At this point, GP&T and GRP presents all offers or surrogates for management and senior management review and an iterative selection and negotiation process begins to identify and secure the best cost portfolio considering price, reliability, and resource mix.

3. Modeling identifies the lowest cost portfolio components from the available bids, based upon portfolio requirements.

   a) GRP uses demand forecasts developed by the Demand Planning department in the modeling, with minor exceptions as deemed necessary to meet supply reliability goals.

b) GRP bases monthly price levels for modeling on forward market conditions with adjustments necessary for specific location or seasonal decision support.

4. The Vice President/Gas Resources is authorized to accept offers for inclusion in the portfolio based upon model results and qualitative considerations with and without negotiated improvement.

5. Southwest shall keep a list of attendees that are present during meetings where the Vice President/Gas Resources selects and approves Firm Term Supplies for inclusion in the portfolio.

6. GRP converts supplies already contracted and bids authorized during the evaluation process to "existing" status in its models. The iterative selection process then continues until Southwest contracts for sufficient gas supplies to meet requirements for each jurisdiction.

VMP and APSP Solicitation Overview

Apart from the Firm Term Supplies, Southwest may request fixed-price proposals for inclusion in the portfolio as part of the Nevada Volatility Mitigation Program (VMP), the California VMP, and Arizona Price Stability Program (APSP), collectively "Volatility Mitigation Purchases." Similar programs may be conducted for Southwest's other rate jurisdictions as management deems appropriate. Volatility Mitigation Purchases are programmatic hedges designed to mitigate the volatility in gas supply prices that Southwest's customers experience when Southwest passes prudently incurred gas costs along to its customers. In late 2013, Southwest suspended Nevada VMP purchases and reviews that decision quarterly. Should Southwest reinstate Nevada VMP purchases, it will utilize the processes and procedures outlined in this document in making those purchases.

Volatility Mitigation Purchases involve periodic solicitations and purchases for various future purchase periods. GP&T and GRP, with Senior Management input, jointly determine the dates for issuing the solicitations and the Volatility Mitigation Purchases plan outlines expected volumes for the next two portfolio years. The scope of the fixed-price Volatility Mitigation Purchase solicitations is limited when compared to the general firm term bid solicitation. Southwest narrowly tailored the structure of Volatility Mitigation Purchase solicitations to minimize evaluation and acceptance response times and permit respondent suppliers to minimize risk, therefore encouraging participation. Further, Southwest designs the Volatility Mitigation Purchase solicitations to allow direct competition between fixed-price physical gas supplies and financial fixed-for-floating index swaps that provide the same level of volatility

mitigation.

GP&T creates solicitations for fixed-price physical gas supplies, indexed-price physical gas supplies, and financial fixed-for-floating index swaps specific to each jurisdiction and delivery period, and distributes such to physical gas and financial product suppliers. These solicitations identify market areas, receipt locations, purchase periods, and applicable indexes for indexed-price physical gas supplies and financial fixed-for-floating index swaps, as well as setting forth the response date and time deadlines. Southwest shall keep a list of attendees that are present during the solicitation process meetings where the Vice President/Gas Resources selects and approves Volatility Mitigation supplies for inclusion in the portfolio. Upon receipt of offers, Southwest ranks those offers by price and contracts for the best-price supplies to meet the Volatility Mitigation Purchase requirements. The Vice President/Gas Resources is authorized to accept the best-priced supply option for inclusion in the portfolio.

Baseload Supply Program (BSP) Overview

The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. Southwest solicits BSP proposals for Northern and Southern Nevada and Arizona service territories. The Company typically schedules solicitations every three to six weeks throughout the year until the projected baseload requirements are met. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Should Southwest reinstate Nevada VMP purchases or Arizona APSP purchases, the level of BSP purchases will be adjusted to prevent a situation where base loaded gas supplies exceed minimum forecasted demands.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

Monthly/Daily Spot Purchases (One month or less)

1. GP&T determines monthly spot gas (baseload for no more than one month) purchase requirements for each service territory prior to the first of each month. The forecasted

minimum day for the month for which GP&T is purchasing monthly supplies is the starting point to determine the monthly spot gas purchase requirement for each service territory. GP&T subtracts the total available baseload supplies (Volatility Mitigation Purchases and Firm Term Portfolio Purchases) from the forecasted minimum day to determine the gross monthly spot purchase requirement. With the exception of the Southern California service territory, the gross monthly spot purchase requirement for each service territory will be zero for the winter months (November through March) because available baseload supplies should equal the forecasted minimum day. After considering economic, contractual, and operational considerations, GP&T then adjusts the gross monthly spot purchase requirement to determine the monthly spot purchase requirement. Authorized personnel may contract for supplies selected to meet the monthly spot purchase requirement for each service territory.

2. GP&T issues a solicitation outlining monthly spot purchase requirements to suppliers. This solicitation identifies the market areas, receipt locations, and purchase periods, as well as setting forth the response date and time deadlines. When GP&T receives the offers from suppliers, GP&T sorts those offers by jurisdiction and ranks the offers by price. GP&T compares the best prices to those prices available on internet trading platform(s). GP&T contracts for the best price supply available to meet the projected purchase requirements. GRP personnel act as an independent observer/participant for the monthly spot gas purchase process.

3. GP&T determines, on a daily basis, the daily spot gas purchase requirements for each jurisdiction based on economic, contractual, and operational considerations. GP&T then gathers market intelligence through communications with prospective suppliers, monitoring internet trading platform(s), and reviewing other industry pricing information to determine daily marketplace price parameters. GP&T continues to monitor market price fluctuations throughout the daily trading period and modifies offer acceptance threshold levels based on these market fluctuations. GP&T reviews available firm term contract supplies/prices and determines what, if any, opportunities are available to flex firm term contract volumes up or down based on prevailing spot market prices. GP&T reviews daily system demand forecast and monitors for upcoming anomalies in weather that could cause potential supply disruptions due to operational constraints. GP&T continues this iterative process until daily spot purchase requirements for each service territory are met. Authorized personnel may contract for

daily spot market supplies to meet the daily spot market requirement, as determined below through the Daily Purchase and Nomination Procedures.

Daily Purchase and Nomination Procedures

The following constitutes a general procedure for acquiring and nominating gas supplies for each nomination and scheduling cycle. GP&T follows these steps after the previously detailed Firm Term Supplies, firm fixed-price Volatility Mitigation Purchases, and monthly spot supplies have been contracted and are available for nomination.

1. Survey current spot market prices. Identify pricing anomalies beyond standard market timing issues and research why the anomalies are occurring. At that time, the GP&T team will determine the best approach to mitigate the cost of unexpected price fluctuations resulting from these anomalies. Modify offer acceptance threshold based on these market fluctuations.

2. Review daily system demand forecast from the GasDay forecasting service for the assigned service territory. The daily forecast is the starting point for determining an authorized personnel's authority to purchase daily supplies. The GasDay forecast is available on demand at: https://gasdayswgas.azurewebsites.net/login.html. Assess the daily system demand forecast for reasonability and adjust expected demand as deemed necessary based on recent performance.

3. Review the available firm term and baseload supplies Southwest currently has contracted for each service territory.

4. Monitor for upcoming critical weather events which could cause operational constraints leading to supply disruptions. When a critical weather event is identified, the GP&T team will determine the best strategy to adjust for the potential operational constraints. Make necessary daily system demand forecast adjustments to account for potential supply disruptions for critical weather events identified.

5. Review pipeline imbalance activity to determine if a deviation from Gas Control's daily system demand forecast is necessary or desired to counteract any imbalance trends.

6. Determine if any further deviation from Gas Control's daily system demand forecast is necessary to accommodate any requests or demands for action communicated from upstream pipelines or to comply with pipeline balancing tariffs.

7. Review available upstream pipeline capacity availability for the flow day for which supplies are being purchased.

8. Review past nomination activity and results.

   a) Review most recent pipeline scheduling reports to identify any instances of nonperformance on nominated supplies.

   b) In cases of nonperformance, identify the cause of the nonperformance.

   c) Determine if it is necessary or desirable to have the involved supplier re-nominate the shortfall.

   d) If re-nomination is desirable, contact supplier to make re-nomination arrangements.

   e) Enter re-nominations into internal nomination systems.

   f) Review pipeline reports for results of any prior re-nomination attempts.

   g) If re-nomination efforts were partially unsuccessful, repeat Steps 6(c) through 6(f), as appropriate.

9. Determine estimated daily spot gas requirements in light of the preceding steps. Authorized personnel may contract for daily spot market supplies to meet the requirements so determined for each assigned service territory.

10. Gather market intelligence by receiving calls from and making calls to prospective suppliers and monitoring electronic messaging, internet trading platform(s), and other industry pricing information to determine daily price parameters available in the marketplace.

11. Monitor market price fluctuations throughout the daily trading period and modify offer acceptance threshold based on these market fluctuations.

12. Review available firm term contract supplies/prices and determine what, if any, nomination changes from prior day should be made in consideration of opportunities to

flex firm term contract volumes up or down based on prevailing spot market prices. authorized personnel are authorized to activate firm term supplies, up to the maximum available contract quantity, to meet the daily requirements of each service territory that is in excess of the baseload supplies.

13. Modify daily spot purchase requirement arrived at in Step 7 based on price observations made in Steps 8, 9, 10, and 11.

14. Enter daily nomination information in internal systems. Generate interstate nomination upload files, upload nomination files to each upstream interstate pipeline, and verify the nominations in the upstream interstate pipelines' scheduling systems. For upstream intrastate nominations, advise Gas Scheduling of the availability of the nomination information for further processing.

15. Print required transaction confirmations, review for accuracy, and sign.

16. Provide signed transaction confirmations to Analyst for further processing.

17. Review any transaction confirmation letters independently sent by supply representatives for accuracy, and follow up with supplier on errors.

18. Repeat all steps, as required, for each gas day's successive nomination and scheduling cycles.

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Volatility Mitigation Purchases involve periodic solicitations and purchases for various future purchase periods. GP&T and GRP, with Senior Management input, jointly determine the dates for issuing the solicitations and the Volatility Mitigation Purchases plan outlines expected volumes for the next two portfolio years. The scope of the fixed-price Volatility Mitigation Purchase solicitations is limited when compared to the general firm term bid solicitation. Southwest narrowly tailored the structure of Volatility Mitigation Purchase solicitations to minimize evaluation and acceptance response times and permit respondent suppliers to

minimize risk, therefore encouraging participation. Further, Southwest designs the Volatility Mitigation Purchase solicitations to allow direct competition between fixed-price physical gas supplies and financial fixed-for-floating index swaps that provide the same level of volatility mitigation.

GP&T creates solicitations for fixed-price physical gas supplies, indexed-price physical gas supplies, and financial fixed-for-floating index swaps specific to each jurisdiction and delivery period, and distributes such to physical gas and financial product suppliers. These solicitations identify market areas, receipt locations, purchase periods, and applicable indexes for indexed-price physical gas supplies and financial fixed-for-floating index swaps, as well as setting forth the response date and time deadlines. Southwest shall keep a list of attendees that are present during the solicitation process meetings where the Vice President/Gas Resources selects and approves Volatility Mitigation supplies for inclusion in the portfolio. Upon receipt of offers, Southwest ranks those offers by price and contracts for the best-price supplies to meet the Volatility Mitigation Purchase requirements. The Vice President/Gas Resources is authorized to accept the best-priced supply option for inclusion in the portfolio.

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The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. Southwest solicits BSP proposals for Northern and Southern Nevada and Arizona service territories. The Company typically schedules solicitations every three to six weeks throughout the year until the projected baseload requirements are met. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Should Southwest reinstate Nevada VMP purchases or Arizona APSP purchases, the level of BSP purchases will be adjusted to prevent a situation where base loaded gas supplies exceed minimum forecasted demands.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

Monthly/Daily Spot Purchases (One month or less)

1. GP&T determines monthly spot gas (baseload for no more than one month) purchase requirements for each service territory prior to the first of each month. The forecasted minimum day for the month for which GP&T is purchasing monthly supplies is the starting point to determine the monthly spot gas purchase requirement for each service territory. GP&T subtracts the total available baseload supplies (Volatility Mitigation Purchases and Firm Term Portfolio Purchases) from the forecasted minimum day to determine the gross monthly spot purchase requirement. With the exception of the Southern California service territory, the gross monthly spot purchase requirement for each service territory will be zero for the winter months (November through March) because available baseload supplies should equal the forecasted minimum day. After considering economic, contractual, and operational considerations, GP&T then adjusts the gross monthly spot purchase requirement to determine the monthly spot purchase requirement. Authorized personnel may contract for supplies selected to meet the monthly spot purchase requirement for each service territory.

2. GP&T issues a solicitation outlining monthly spot purchase requirements to suppliers. This solicitation identifies the market areas, receipt locations, and purchase periods, as well as setting forth the response date and time deadlines. When GP&T receives the offers from suppliers, GP&T sorts those offers by jurisdiction and ranks the offers by price. GP&T compares the best prices to those prices available on internet trading platform(s). GP&T contracts for the best price supply available to meet the projected purchase requirements. GRP personnel act as an independent observer/participant for the monthly spot gas purchase process.

3. GP&T determines, on a daily basis, the daily spot gas purchase requirements for each jurisdiction based on economic, contractual, and operational considerations. GP&T then gathers market intelligence through communications with prospective suppliers, monitoring internet trading platform(s), and reviewing other industry pricing information to determine daily marketplace price parameters. GP&T continues to monitor market price fluctuations throughout the daily trading period and modifies offer acceptance threshold levels based on these market fluctuations. GP&T reviews available firm term contract supplies/prices and determines what, if any, opportunities are available to flex firm term contract volumes up or down based on prevailing spot market prices. GP&T reviews daily system demand forecast and monitors for upcoming anomalies in weather that could cause potential supply disruptions due to operational constraints. GP&T continues this iterative process until daily spot purchase requirements

for each service territory are met. Authorized personnel may contract for

daily spot market supplies to meet the daily spot market requirement, as determined below through the Daily Purchase and Nomination Procedures.

Daily Purchase and Nomination Procedures

The following constitutes a general procedure for acquiring and nominating gas supplies for each nomination and scheduling cycle. GP&T follows these steps after the previously detailed Firm Term Supplies, firm fixed-price Volatility Mitigation Purchases, and monthly spot supplies have been contracted and are available for nomination.

1. Survey current spot market prices. Identify pricing anomalies beyond standard market timing issues and research why the anomalies are occurring. At that time, the GP&T team will determine the best approach to mitigate the cost of unexpected price fluctuations resulting from these anomalies. Modify offer acceptance threshold based on these market fluctuations.

2. Review daily system demand forecast from the GasDay forecasting service for the assigned service territory. The daily forecast is the starting point for determining an authorized personnel's authority to purchase daily supplies. The GasDay forecast is available on demand at: https://gasdayswgas.azurewebsites.net/login.html. Assess the daily system demand forecast for reasonability and adjust expected demand as deemed necessary based on recent performance.

3. Review the available firm term and baseload supplies Southwest currently has contracted for each service territory.

4. Monitor for upcoming critical weather events which could cause operational constraints leading to supply disruptions. When a critical weather event is identified, the GP&T team will determine the best strategy to adjust for the potential operational constraints. Make necessary daily system demand forecast adjustments to account for potential supply disruptions for critical weather events identified.

~~4.~~5. Review pipeline imbalance activity to determine if a deviation from Gas Control's daily system demand forecast is necessary or desired to counteract any imbalance trends.

~~5.~~6. Determine if any further deviation from Gas Control's daily system demand forecast is necessary to accommodate any requests or demands for action communicated from

upstream pipelines or to comply with pipeline balancing tariffs.

~~6.~~7. Review available upstream pipeline capacity availability for the flow day for which supplies are being purchased.

~~7.~~8. Review past nomination activity and results.

a) Review most recent pipeline scheduling reports to identify any instances of nonperformance on nominated supplies.

b) In cases of nonperformance, identify the cause of the nonperformance.

c) Determine if it is necessary or desirable to have the involved supplier re-nominate the shortfall.

d) If re-nomination is desirable, contact supplier to make re-nomination arrangements.

e) Enter re-nominations into internal nomination systems.

f) Review pipeline reports for results of any prior re-nomination attempts.

g) If re-nomination efforts were partially unsuccessful, repeat Steps 6(c) through 6(f), as appropriate.

~~8.~~9. Determine estimated daily spot gas requirements in light of the preceding steps. Authorized personnel may contract for daily spot market supplies to meet the requirements so determined for each assigned service territory.

~~9.~~10. Gather market intelligence by receiving calls from and making calls to prospective suppliers and monitoring electronic messaging, internet trading platform(s), and other industry pricing information to determine daily price parameters available in the marketplace.

~~10.~~11. Monitor market price fluctuations throughout the daily trading period and modify offer acceptance threshold based on these market fluctuations.

~~11.~~12. Review available firm term contract supplies/prices and determine what, if any, nomination changes from prior day should be made in consideration of opportunities to flex firm term contract volumes up or down based on prevailing spot market prices. authorized personnel are authorized to activate firm term supplies, up to the maximum available contract quantity, to meet the daily requirements of each service territory that is in excess of the baseload supplies.

~~12.~~13. Modify daily spot purchase requirement arrived at in Step 7 based on price observations made in Steps 8, 9, 10, and ~~10~~11.

~~13.~~14. Enter daily nomination information in internal systems. Generate interstate nomination upload files, upload nomination files to each upstream interstate pipeline, and verify the nominations in the upstream interstate pipelines' scheduling systems. For upstream intrastate nominations, advise Gas Scheduling of the availability of the nomination information for further processing.

~~14.~~15. Print required transaction confirmations, review for accuracy, and sign.

~~15.~~16. Provide signed transaction confirmations to Analyst for further processing.

~~16.~~17. Review any transaction confirmation letters independently sent by supply representatives for accuracy, and follow up with supplier on errors.

~~17.~~18. Repeat all steps, as required, for each gas day's successive nomination and scheduling cycles.

MEMORANDUM

To: File

From: Randy Gabe

Date: November 1, 2020

Subject: **Arizona Gas Supply Policy Statement**

This memorandum memorializes Southwest Gas Corporation's (Southwest Gas or Company) Arizona Gas Supply Policy. The scope of this policy includes gas supply acquisition and the utilization of storage resources.

Southwest Gas endeavors to acquire the best-cost portfolio considering price, reliability, flexibility, and protection from short-term market volatility, while still providing and securing supply to meet sales customer demands. Balancing these factors against the costs of competing resource alternatives determines the ever-changing "mix" (flexible and non-flexible, index and fixed-price supplies, with and without interstate capacity, short-term, mid-term, and long-term) of the supply portfolio. The Company's portfolio includes spot market purchases (one month or less) term (firm, terms greater than one month but usually one year or less, including Baseload Supply Program (BSP) purchases), and possible firm Arizona Price Stability Program (APSP) purchases. While most term contracts are annual or seasonal, Southwest Gas may also consider longer-term alternatives.

Background:

As a result of Decision No. 61225 dated October 30, 1998 issued by the Arizona Corporation Commission (ACC) in Docket No. G-00000C-98-0568 Southwest Gas began soliciting and acquiring APSP supplies starting 1999/2000 gas portfolio year. In late 2019, Southwest Gas suspended APSP purchases and replaced the APSP with the BSP. On a quarterly basis, the Company evaluates reinstating APSP purchases.

On January 27, 2014, Southwest Gas filed an application with the ACC in Docket No. G-01551A-14-0024 seeking pre-approval of the cost recovery associated with the construction, operation and maintenance of an LNG storage facility, located in Tucson, AZ. On December 23, 2014, the ACC issued Decision No. 74875 approving the LNG storage facility. The LNG facility was built to enhance system reliability and was placed in service in 2019. Because the LNG facility has no liquefaction equipment, LNG is supplied via tanker trucks.

Arizona Policy:

1. Southwest Gas purchases a portion of its Arizona requirements through the BSP. BSP purchases are priced at First of the Month (FOM) index prices. Solicitations for BSP purchases take place periodically up to one year in

advance of flow.

2. Prior to each gas year (a gas year starts November 1st), Southwest Gas solicits for term index priced gas supply contracts (term portfolio solicitation). Through the term portfolio solicitation, the Company purchases peaking gas supplies needed to meet extreme peak day demands from November through March. The Company may also purchase other term gas supplies (e.g. baseload) during the term portfolio solicitation. Southwest Gas utilizes a portfolio optimization model when analyzing gas supply offers to endeavor to minimize costs. Typically, prices for peaking supply contracts purchased through the term solicitation will be based on daily indices.

3. Southwest Gas may also purchase other term supplies (i.e. purchases greater than one month). Additional term supply purchases may be baseload or peaking purchases, depending upon forecasted requirements, and are generally completed through solicitation processes to help ensure those purchases are made at then-current market prices.

4. Required gas supplies not purchased in the BSP, term portfolio, or other term solicitation will be purchased on the spot market. These spot purchases may occur during any month. To the extent possible, monthly baseload spot supplies will be purchased at FOM index prices and any spot purchases of less than one month in duration will be purchased at daily index prices.

5. Southwest Gas manages the use of its LNG storage subject to the following guidelines:

    a. Southwest Gas will coordinate with division operations and attempt to fill the LNG storage to capacity prior to November 1st of each year. Normal LNG boil off, operational constraints, or other factors outside of the Company's control may result in lower inventories on November 1st.

    b. LNG may be vaporized at any time to avoid service interruptions. LNG vaporization is limited to this use, maintenance and testing activities, and normal boil off. Due to the high variable cost of cycling LNG and the need to reserve inventories for reliability, Southwest Gas will not attempt to realize economic gain from seasonal price differentials or other factors.

Cc: John Olenick
Eric Rost
Steve Williams
Laura Spurlock

SOUTHWEST GAS CORPORATION

ARIZONA SYSTEM SUPPLY GAS ACQUISITION

01292020

1. System Supply Gas Acquisition Policy Statement

Southwest endeavors to acquire the best-cost portfolio of natural gas supplies considering price, reliability, flexibility, and protection from short-term market volatility while still providing security of supply to meet sales customer demands. Balancing these factors against costs of competing gas resource alternatives determines the ever-changing "mix" (flexible and non-flexible, indexed and fixed-price, with and without interstate capacity short-term, mid-term, and long-term) of Southwest's supply portfolio. Southwest's portfolio has evolved with the industry to include spot market purchases (one month or less, may be firm or interruptible), term (firm, indexed-price, generally one year or less), and firm price stability purchases. While most of the term contractual arrangements are annual or seasonal, Southwest also considers longer-term supply alternatives.

2. Limits and Controls

Southwest's Gas Purchases & Transportation (GP&T) personnel (Administrator, Sr. Analyst, and Manager), as well as the Director/Gas Supply are authorized to enter specific gas supply transactions based upon the authority outlined in this document the Portfolio Selection Procedure document, or the Gas Purchasing Limits document. Regarding one month or less spot purchases, although each of the authorized personnel are assigned specific service territory(ies) and generally only purchase gas supplies for the assigned service territory(ies), each authorized personnel may complete purchases for any of the Company's service territories. Authorized personnel shall forward any questions concerning the authority to enter a specific transaction to management or senior management prior to entering such transaction to ensure authorized personnel do not exceed authority levels. Authorized personnel are not authorized to enter gas supply transactions that are not authorized by this document, the Portfolio Selection Procedure document, or the Gas Purchasing Limits document without the approval of management or senior management.

3. System Supply Gas Acquisition Procedures

For Arizona, Southwest identifies and selects, pursuant to three programs, a portfolio of gas supplies. These three programs are:

SOUTHWEST GAS CORPORATION

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"Arizona Price Stability Purchases" or "APSP" – Fixed-price firm gas supplies and fixed-for-floating index swaps. These supplies provide diversity in supply pricing mechanisms and supply reliability and can mitigate short-term market price volatility. While the fixed-price contracts provide physical gas, the fixed-for-floating index swaps are financial instruments that mitigate the price volatility associated with term first of the month indexed-price purchases. Southwest conducts APSP solicitations periodically throughout the year. For periods through the 2019/2020 Portfolio Period, Southwest hedges approximately a varying percent of the annual average forecasted portfolio quantity through APSP and limits the percent to not exceed twenty-five percent of the annual average forecasted portfolio quantity. Should the Company decide to make APSP above the twenty-five percent limit, it must first notify Arizona Corporation Commission Staff via letter of its intent to exceed the twenty-five percent limit. For periods beginning with the 2020/2021 Portfolio Period, APSP purchases have been suspended.

"Baseload Supply Program" – (BSP) – Firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums "blowing out" by making purchases periodically during the year preceding the start of a particular Portfolio Period. A "Portfolio Period" is the period that starts on any particular November 1st and concludes on the following October 31st.

"Term Purchases" – Traditional firm contract supplies that are selected during an annual solicitation. Proposals, or bids, for Term Purchases are evaluated using a cost optimization model. This portion of the portfolio provides the flexible firm peaking supplies that Southwest must have available for reliable service to its sales customers. Term Purchases generally have prices based on a market index.

"Spot Purchases" – The short-term supplies (one month or less, may be firm or interruptible), selected monthly and intra-monthly, that are integral to the "least cost dispatch" efforts. Southwest makes Spot Purchases to fill daily requirements or in lieu of higher cost Term Purchases. Spot Purchases may have either fixed or indexed pricing.

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A. Arizona Price Stability Purchases or APSP

The purpose of APSP is to identify and secure contracts that provide diversity in supply pricing mechanisms and supply reliability, and that can contribute to the mitigation of short-term market price volatility. The APSP is a programmatic hedge. The Vice President/Gas Resources is authorized to approve APSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. Southwest solicits volatility mitigation proposals for all of its Arizona service areas. Southwest typically schedules solicitations every three to six weeks throughout the year (excluding the months of September and October).

Southwest's Portfolio Period runs from November of the current year through October of the following year. Southwest solicits APSP bids for the upcoming portfolio year and up to one portfolio year beyond that portfolio year. Individual solicitations may include bid requests for one or both of the upcoming portfolio years.

Beginning in February 2008, Southwest incorporated fixed-for-floating index swaps into the APSP. Swaps have been solicited for all portfolio years since the 2008/2009 gas year. These financial transactions compete directly with, and are an alternative to, firm fixed-price physical transactions. The combination of a financial fixed-for-floating index swap and a purchase of a firm first of month index-priced physical gas supply achieves the same price volatility mitigation Southwest previously achieved purchasing firm fixed-price physical gas supplies.

Southwest receives the physical fixed-price, physical indexed-price, and fixed-for-floating index swap offers via Instant Messaging (IM) and requests that suppliers hold their offer open for five minutes. This period is required to allow the supplier the capability of offering the lowest possible price (i.e., minimum premium for the risk taken on by the seller between the time the supplier makes the offer and an accepted offer is hedged) and provides Southwest sufficient time to determine the most attractive offer.

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Once Southwest receives all of the offers for physical and financial supply alternatives, the five minute window begins and the most attractive offer is identified. In comparing financial and physical offers, Southwest uses any premium or discount to the index identified by the physical indexed-price offer to adjust the fixed-for-floating index swap offer, making a direct comparison with the physical fixed-price offer possible.

Upon review and consideration of current market data, Southwest determines if the most attractive offer is desirable. If Southwest selects an offer, a gas buyer contacts the supplier via a recorded phone line and verbally confirms each purchase. Southwest solicits offers from suppliers with sufficient time before the close of the futures trading to provide suppliers time to hedge their sales before the end of the trading period for that day.

This procedure permits the direct competition of firm fixed-price physical gas supply offers with fixed-for-floating index swap offers. This procedure ensures that Southwest continues to procure the "best-cost" supply alternative currently available at the time of purchase to construct the supply "portfolio."

As previously stated, for periods beginning with the 2020/2021 Portfolio Year, APSP purchases have been suspended.

B. Baseload Supply Program (BSP)

The purpose of the BSP is to identify and secure firm first of month indexed-price baseload contracts that increase supply reliability and supplier diversity and reduce the risk of index premiums “blowing out” by making purchases periodically during the year preceding the start of a particular Portfolio Period. BSP purchases effectively replaced the Arizona APSP purchases for the 2020/2021 Portfolio Period and beyond. Should Southwest reinstate APSP purchases, it will reduce BSP purchases to ensure that it does not purchase base load supplies in excess of its needs.

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The Company typically schedules solicitations every three to six weeks throughout the year until meeting the projected baseload requirements. The Vice President/Gas Resources is authorized to approve BSP purchases up to limits set forth in the Gas Purchasing Authorization and Limits document.

During a BSP solicitation, Southwest receives physical indexed-price offers via instant messaging (IM) and requests that suppliers hold their offer open for five minutes. Once Southwest receives all of the offers, the five-minute window begins and the most attractive offer is identified. When Southwest selects an offer, the Gas Buyer contacts the supplier via a recorded phone line and verbally confirms each purchase.

C. Term Purchases

Southwest solicits proposals from potential suppliers through an annual process held each spring. The Vice President/Gas Resources is authorized to approve Term Purchases up to limits set forth in the Gas Purchasing Authorization and Limits document. The solicitation outlines Southwest's supply needs for a 12-month period beginning the following November 1, which marks the beginning of Southwest's traditional portfolio year. Southwest will also consider longer term proposals, which may span multiple portfolio years. Southwest considers all bona fide proposals that can be practically implemented. Southwest selects the most economically favorable proposals, which are added to the existing supply portfolio, creating the supply "mix." In addition, during this term purchase process, Southwest will also purchase firm first of month indexed-price gas supplies required to match with any fixed-for-floating index swap transactions that were entered into through APSP. Before firm indexed-price supply proposals are evaluated, the existing purchase obligations (primarily from APSP) are confirmed. All offers responsive to the Company's requirements are included among the supply alternatives. Southwest estimates the forward market conditions, including spot market reference prices, for use in evaluating the supply alternatives. This menu of supply alternatives, which includes spot purchases as well as the firm supply proposals, forms the base from which Southwest determines the best-cost mix of gas supplies.

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In addition, transportation costs relevant to the various supply proposals are verified and modeled. Any changes in the logistics of transporting the supply alternatives to market must also be determined, considered, and modeled. Further, the parameters for the distribution system operations must be examined to ensure the supply portfolio is consistent with system operational requirements.

Gas Resources Planning uses a computer model to optimize the supply alternatives. The fluctuating daily forecast demands, which are model inputs, define the flexibility required in the portfolio. Contract term, commodity price, demand charges, peaking and swing capabilities, charges for not taking gas (gas inventory charges, or GIC), and transportation costs are among the cost factors that are optimized by the model. Outside of the model and prior to selecting specific offers, the selection committee considers the following qualitative factors: reliability; geographic and supplier diversity; authorizations to negotiate/accept; and revisions to offers; and opportunities to monetize unused capacity. Model parameters are modified accordingly, given information available at the time, to best represent conditions expected during the upcoming portfolio period.

Supply sources selected as part of the optimized best-cost mix, but not already authorized or under contract, are identified. Once authorized, Southwest negotiates specific contract terms with suppliers. Diversity and reliability of selected potential suppliers are reviewed in conjunction with start-up of negotiations. If negotiated terms or conditions deviate materially from the modeled offer, Southwest re-analyzes the potential supply offer to determine whether it should remain part of the gas supply mix. Additional model runs continue whenever contract terms are finalized, until the portfolio serves all forecasted demands. This iterative process is necessary for evaluating the impact of completed contracts on the remaining supply alternatives.

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D. Spot Purchases

(i) Monthly

Subject to review of anticipated demands and available Term Purchases and APSP, Southwest may acquire monthly baseload supplies from the spot market. Such supplies can be purchased either at a fixed or index-related price. Southwest may solicit offers or may purchase supplies via the Intercontinental Exchange ("ICE") internet-based trading platform. Solicitations, when deemed necessary, are made via e-mail to an extensive list of prospective suppliers, typically during the week before the first of each month. Suppliers send responses via Instant Messaging ("IM"); Southwest's gas buyers, in conjunction with a Gas Resources Planning department observer/participant, review and compare such responses with those available on ICE. Southwest completes purchase arrangements, if any, early enough to make nominations to the respective pipeline(s) for first of the month delivery. Purchase details are confirmed with suppliers via recorded phone line and facsimile. Authorized personnel may approve Spot Purchases of one-month or less in duration up to limits set forth in the Gas Purchasing Authorization and Limits document.

(ii) Daily

Southwest utilizes several methods and sources to monitor daily spot market prices. If daily spot market supplies are required or desired, Southwest strives to obtain the best price(s) available by canvassing the marketplace. Gas buyers maintain direct contact with spot market suppliers, using a process that includes telephone calls and Instant Messaging ("IM") originating from both Southwest's gas buyers and supplier marketing representatives. In addition to the traditional direct contact process, the Southwest's gas buyers also employ the ICE internet –based trading platform. This platform provides real-time next day and same day prices for points on the pipeline grid where Southwest is active in acquiring spot supplies. The direct contact with suppliers and monitoring of ICE is required to stay abreast of price fluctuations in the

market, potential loss of spot supplies and other factors that may either impair or facilitate acquisition of daily supplies. This process is, in large part, conducted and completed daily between 5:00 a.m. and 7:00 a.m. Pacific time.

Pipeline nominating procedures permit additional spot market purchase activities at subsequent intervals during the day, but the morning market remains the primary purchasing period. Because of the very short time in which these purchases must be made and nominations completed, Southwest analyzes market pricing information, volumes required or desired, and completes purchase arrangements with supplier representatives in real-time. Daily spot market purchases are usually for one day only, but may be purchased for multi-day periods up to one-month in duration. Purchase details are confirmed with suppliers via recorded phone line and hard-copy transaction confirmations. Authorized personnel may approve Daily Spot Purchases up to limits set forth in the Gas Purchasing Authorization and Limits document.

E. Use of Financial Instruments

As discussed in Section A, above, Southwest includes fixed-for-floating index swaps in the APSP. The Vice President/Gas Resources is authorized to approve fixed-for-floating index swaps up to limits set forth in the Gas Purchasing Authorization and Limits document. Under a fixed-for-floating index swap, if the index is above the agreed upon swap price, the seller pays the buyer (Southwest) the difference between the actual value of the index and the agreed upon swap price. If the index is below the agreed upon swap price, the buyer (Southwest) pays the seller the difference between the swap price and the actual value of the index.

When Southwest combines a fixed-for-floating index swap with a contract for firm physical baseload gas priced based on the same index as the swap, the combination of the swap and the physical purchase are equivalent to a fixed-price physical contract. Thus, this financial instrument provides Southwest

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with the same level of price mitigation that was previously only available using firm fixed-price physical gas supplies.

In order to manage the use of financial derivatives, Southwest acquired Entegrate software from Sungard. This software allows Southwest to manage and monitor financial and physical deals used to stabilize prices. The system is known at Southwest as the Hedge Capture and Control System (HCCS).

Beginning in 2006, Southwest identified potential suppliers of financial hedging products. Southwest worked with these providers to negotiate contracts conforming to International Swaps and Derivatives Association (ISDA) standards. That process was completed with three financial counter-parties in January 2008. In October 2008, Southwest completed an ISDA contract with a fourth financial counter-party. Southwest continues to work with other potential suppliers of financial hedging products and may complete ISDA agreements with additional counter-parties during calendar 2009.

Fixed-for-floating index swaps (combined with index-priced physical gas) will be substituted for some of the hedges previously completed with fixed-price contracts through the competitive process described previously. Because the two types of hedges behave the same and are in direct competition with each other, the impact on the price volatility mitigation portion of the portfolio is virtually identical. However, through the use of swaps, additional counter-parties have been added into Southwest's potential supplier mix. This reduces Southwest's counter-party credit risk by spreading the agreements among more counter-parties, and also ensures that potential counter-party concerns about credit risk with Southwest would not limit the number of participating suppliers.

Southwest may consider incorporating other derivatives into the portfolio mix, but will consult with ACC Staff prior to implementing any changes to APSP that will integrate other types of derivatives. However, given that the APSP has been suspended for periods beginning with the 2020/2021 Portfolio Period, all gas related derivative transactions have also been suspended for periods beginning with the 2020/2021 Portfolio Period.

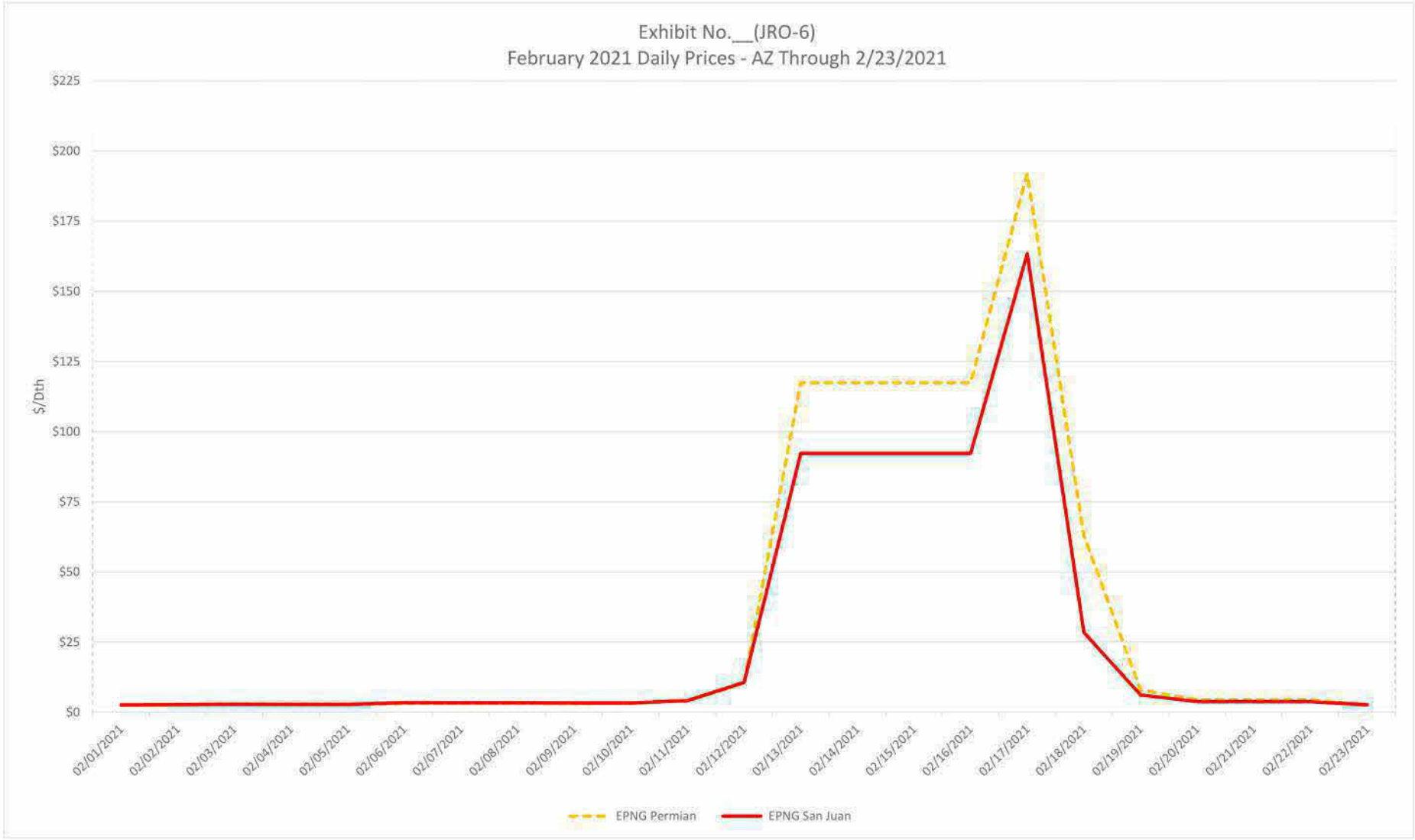
Exhibit No.__(JRO-6)
February 2021 Daily Prices - AZ Through 2/23/2021
$/Dth
$225
$200
$175
$150
$125
$100
$75
$50
$25
$0
02/01/2021
02/02/2021
02/03/2021
02/04/2021
02/05/2021
02/06/2021
02/07/2021
02/08/2021
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02/23/2021
EPNG Permian
EPNG San Juan

SOUTHWEST GAS

Winter 2021 Arizona Conservation Communications Efforts

Social Media

- Post on Feb. 17, 2021 on Facebook, Instagram and Twitter
- Results:
  - Facebook- 7,697 people reached, 524 engagements
  - Twitter- 1,049 impressions, 419 engagements
  - Instagram- 576 impressions, 48 engagements

SWGas.com Website

- Homepage web banner and announcement activated February 17, 2021

Media Coverage

- Press release issued to AZ media via PR Newswire and targeted media pitching- February 17, 2021
    - 108 mentions via social media, radio, web and television outlets
    - Total reach: 128,461,106
    - Total ad equivalency: $141,33.51
- Sample media hits are below *(for the full list of media coverage see included spreadsheet)*

Southwest Gas asks customers in Arizona to conserve due to weather in Texas

https://www.azfamily.com/news/southwest-gas-asks-customers-to-conserve-as-other-states-are-blasted-by-winter-storm/article_0aee7d66-7151-11eb-a5ae-eb1d2894d429.html?block_id=997197

https://www.kgun9.com/news/local-news/southwest-gas-asks-customers-to-conserve

https://kvoa.com/news/top-stories/2021/02/17/southwest-gas-asks-customers-to-conserve-gas-as-severe-storms-prompt-drastic-rise-in-prices/

https://www.azcentral.com/story/money/business/energy/2021/02/18/arizona-gas-utilities-ask-customers-conserve-amid-texas-energy-crisis/4495617001/?cid=twitter_azcentral

News Release

SOUTHWEST GAS

Immediate Release
February 16, 2021

Southwest Gas Advises Customers to Conserve as States Grapple with Cold Weather

PHOENIX- As many states continue to experience harsh unseasonably cold weather, Southwest Gas is advising customers to conserve. The weather crisis, specifically in Texas, has caused natural gas supplies to become constrained. As with any resource in high demand and constrained supply, natural gas prices have dramatically increased over the past several days.

As a service, Southwest Gas is advising customers to conserve natural gas to help minimize price impacts to their future gas bills. While Southwest Gas does not currently anticipate any supply shortages in Arizona, conservation of natural gas will help support the interstate pipeline system so states where the weather is bitterly cold can meet their demands.

Where possible, we urge customers to curb the use of non-essential natural gas features like:

- Indoor and outdoor fireplaces
- Fire pits
- Pool and spa heaters
- Tiki torches
- Any other decorative fire features

In addition, customers can conserve natural gas by:

- Using cold water whenever possible
- Taking shorter showers
- Setting the thermostat to 65-68 degrees, health permitting
- Dress warmly while inside your home

The price of gas fluctuates based on supply and demand and Southwest Gas does not profit from the cost of natural gas. Natural gas costs are passed straight through to customers. While we cannot predict when costs will return to normal, Southwest Gas recommends customers conserve through the weekend.

Visit SWGas.com and/or follow Southwest Gas on social media for updates as they come available. Southwest Gas Corporation provides safe and reliable natural gas service to over two million customers in Arizona, California, and Nevada.

###

For more information:
Amy Washburn- 602-763-3289

SOUTHWEST GAS CORPORATION

Notice Type:	Warning of a Possible Strained Operating Condition (SOC)
Posting Date:	02/11/2021
Notice Effective Date:	02/11/2021
Notice Effective Time:	8:00 AM, PCT
Duration of Notice:	Until Further Notice
Line Pack Condition:	Within acceptable limits
Extent of the Notice:	Arizona T-1 Customers
Reason for the Notice:	El Paso Warning
Requested Action:	No Drafting- Match projected usage with nominations.

Notice Text:

El Paso Natural Gas (EPNG) has issued a warning regarding a possible Strained Operating Condition (SOC) for concerns of drafting due to winter weather forecast. Southwest Gas Corporation (Southwest) requires transportation customers to match projected usage with nominations.

Southwest requires that transportation customers in Arizona closely monitor their nominations and scheduled quantities versus usage. If conditions do not improve an actual SOC may be declared by EPNG resulting in potential upstream pipeline charges and a reduced imbalance tolerance for all transportation customers who transport natural gas supplies on EPNG.

If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

Notice Type:	Critical Operating Condition (COC)
Posting Date:	02/15/2021
Notice Effective Date:	02/15/2021
Notice Effective Time:	7:00 AM, PCT
Duration of Notice:	Until Further Notice
Line Pack Condition:	Low Line Pack
Extent of the Notice:	Arizona T-1 Customers
Reason for the Notice:	El Paso COC
Requested Action:	No Drafting- Match or nominate more gas than projected usage

Notice Text:

El Paso Natural Gas (EPNG) has declared a **Critical Operating Condition (COC)** due to significant underperformance in the supply basins and extreme winter weather.

EPNG has reduced the daily negative imbalance tolerance to 3% of scheduled quantities. Southwest Gas Corporation requires that transportation customers in Arizona closely monitor their nominations and scheduled quantities and match or nominate more gas than projected usage.

The tolerance stated above may be adjusted by EPNG if pipeline conditions change. Customers who create an imbalance in excess of the specified imbalance tolerance stated above may be subject to a pro rata share of any upstream pipeline charges and/or other charges that were incurred for such excess quantities.

If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

Southwest Gas Cold Weather Advisory

As a reminder there is a nationwide cold weather event that is affecting natural gas supplies that are supporting Arizona. Southwest Gas ("Southwest") is advising customers to conserve. Natural gas prices have dramatically increased over the past several days, which are affecting Southwest gas customers in Arizona. While Southwest Gas does not currently anticipate any supply shortages in Arizona, conservation of natural gas will help support the interstate pipeline system so states where the weather is bitterly cold can meet their demands.

Southwest would like to remind its customers that El Paso Pipeline ("EPNG") issued a Critical Operating Condition which has reduced the negative imbalance tolerance to 3% of scheduled quantities. The tolerance may be adjusted by EPNG if pipeline conditions change. Customers who create an imbalance in excess of the specified imbalance tolerance stated above may be subject to a pro rata share of any upstream pipeline charges.

While we cannot predict when costs will return to normal, Southwest Gas recommends customers conserve through the weekend. If you have any questions concerning this information, please contact your gas scheduling representative or your Industrial Gas Engineer.

SOUTHWEST GAS SCHEDULING

800-762-7626

SOUTHWEST GAS CORPORATION

GAS DAY *February 17, 2021*

NOTICE TO YUMA COGENERATION ASSOCIATES

Customer Curtailment

Southwest Gas Corporation ("Southwest") will be curtailing the natural gas supplies for Yuma Cogeneration Associates ("Yuma") effective gas day February 17, 2021. Southwest is required to apportion the available gas supply in accordance with Rule 7, Section G of the Arizona Tariff, and Article VI section B of the Special Procurement Agreement.

Southwest, has notified Yuma by phone of the curtailment of natural gas supplies for gas day February 17, 2021. Southwest is requesting Yuma to not utilize their power generation equipment during this curtailment period. Yuma may continue normal operation of non-power generation equipment during this curtailment period. Yuma will be notified by Southwest as to when it may resume normal power generation operations.

Thank you for your prompt cooperation.

Southwest Gas Scheduling

1-800-762-7626

Tab F

Direct Testimony
of
Nick Liu

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
NICK Y. LIU

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Nick Y. Liu

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II. POST TEST YEAR PLANT ADJUSTMENT	2
III.GRAHAM COUNTY UTILITIES ADJUSTMENTS	7

Appendix A – Summary of Qualifications of Nick Y. Liu

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Nick Y. Liu

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Nick Y. Liu. My business address is 1600 East Northern Avenue, Phoenix, Arizona 85020.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation & Energy Efficiency department. My title is Supervisor.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission) and the Public Utilities Commission of Nevada.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My prepared direct testimony supports the Company's proposed Post Test Year Plant (PTYP) adjustment from a ratemaking perspective. I also address the Company's proposed amortization of the acquisition premium and other ratemaking adjustments associated with the purchase of the natural gas service-related assets of Graham County Utilities, Inc. (GCU).

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- The computation of the Company's PTYP adjustment to determine the appropriate level of cost of service; and
- The development of the Company's proposed amortization of the GCU acquisition premium and adjustments to the revenue requirement from GCU rate base and operating expense.

II. POST TEST YEAR PLANT ADJUSTMENT

Q. 7 Please describe and explain the Company's proposed PTYP adjustment.

A. 7 The Company is proposing a PTYP adjustment (Adjustment No. 19) to the recorded rate base amounts at August 31, 2021. There are two components to the PTYP adjustment. The first includes non-revenue producing projects expected to be closed through August 31, 2022 that are used and useful and will be serving customers during the rate effective period. The Company's twelve-month PTYP adjustment for non-revenue producing plant is consistent with the Commission-approved practice in prior General Rate Cases (GRC) for other Arizona utilities. Non-revenue producing plant represents plant that is constructed to continue to provide service or enhance reliability and safety for existing customers.[1] The Company will not realize any incremental operating revenues from the construction and addition of this plant at the time it is placed into service; in other words, these capital additions are non-revenue producing. The second component of this adjustment addresses System Allocable Miscellaneous Intangible Plant Account 303. To match the portion of Adjustment

[1] In contrast, revenue-producing plant is constructed to serve new customers and is not included in the PTYP adjustment.

No. 13[2] which removed the items with amortizations expiring on or before August 31, 2022, this adjustment addresses the additions that are expected to occur during this same timeframe. These adjustments are consistent with prior GRCs.

Q. 8 What is the purpose of the Company's PTYP adjustment?

A. 8 The purpose of the PTYP adjustment is to more accurately reflect the level of costs Southwest Gas will incur to serve its end of test year customer base during the rate effective period. It is important to note that while the Company's PTYP adjustment reduces regulatory lag, it does not eliminate regulatory lag. By the time rates from this proceeding go into effect, the PTYP investments will range from several months to over one year old. Examples of PTYP in this adjustment include but are not limited to: pipe replacements including replacements under the Company's integrity management programs, franchise-related replacements, pressure reinforcements, measuring and regulating station equipment, intangible and general plant.[3]

Q. 9 What is the total impact of the PTYP adjustment on rate base?

A. 9 This adjustment increases rate base by $197,099,912, which consists of PTYP in the following categories:

- Pipe Replacement: $137,987,736
- Regulation Station / Tap / City Gate / Rectifier: $2,963,720
- Facilities: $17,629,294
- Equipment (Tools / Vehicles): $14,486,415

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[2] As described in the Prepared Direct Testimony of Company witness Randi L. Cunningham's.

[3] The PTYP adjustment only includes plant additions related to the Company's Customer-Owned Yard Line (COYL) Program from September 1, 2021 to December 31, 2021. The Company is proposing that COYL plant additions after December 31, 2021 be recovered through the COYL Cost Recovery Mechanism (CCRM).

- Liquefied Natural Gas (LNG): $1,548,342
- COYL: $7,129,557
- Trailing charges for plant in service by the end of the test year: $2,687,675
- Software: 12,667,173

In addition, the Company proposes to include one half year of the annual depreciation expense calculated for the PTYP using half-year convention, $3,334,953 to the accumulated depreciation, which reduces the rate base by $3,334,953.

Q. 10 Can you explain how PTYP adjustments promote public interest?

A. 10 Regulatory tools, like PTYP adjustments, work to keep utilities financially healthy, while balancing cost impacts on customers, and help to mitigate regulatory lag. Regulatory lag is the difference in time between when a utility spends money and when it recovers those dollars from customers. The use of PTYP adjustments helps avoid the time, cost and resources (on the part of both utilities and the Commission) associated with frequent rate case proceedings needed to adjust rates, mitigates rate shock, promotes gradualism in rates, and helps limit the long-run average capital costs embedded in rates. As a result, it promotes the public interest by ensuring just and reasonable rates, and by allowing utilities to timely recover the costs of providing safe and reliable services to customers.

Q. 11 Can you explain how PTYP adjustments mitigate regulatory lag?

A. 11 The timeframe to prepare and adjudicate a GRC in Arizona and implement new rates can be as great as 2 years. PTYP adjustments help mitigate regulatory lag by decreasing the amount of time between when investments are made and

when the Company can recover the investments in rates. The use of PTYP adjustments provides a better matching of rates with the investment costs utilized to provide service at the time those rates will go into effect. This benefits customers as changes in capital investment costs are included in rates sooner, allowing customers to receive better pricing signals and lessening differences between current customers and future customers, as rates more accurately reflect a utility's true cost of providing service.

Q. 12 What is the current Commission policy on PTYP in rate case proceedings?

A. 12 There is no written policy issued by the Commission regarding the inclusion of PTYP or specifying the associated time periods for eligible PTYP. The Commission currently has a generic investigation docket (Docket No. AU-00000A-19-0080) to evaluate Commission policy on PTYP (PTYP Docket). According to the Commission Utilities Division's (Staff) filed Memorandum[4] in the PTYP Docket, Staff believes that current practice of allowing PTYP to be included in rate base came from prior Commission decisions and the Commission has approved the inclusion of PTYP for periods ranging from 2 to 18 months. Based on Staff's data points provided in the memorandum, out of 22 rate case proceedings since 2014, 6 or more months of PTYP was allowed in 19 cases and 12 months of PTYP was allowed in 11 cases.[5] The Company's twelve-month PTYP adjustment is consistent with these data points.

[4] Dated October 4, 2019.
[5] October 4, 2019 Staff Memorandum, page 2.

Q. 13 What are the authorized time periods for eligible PTYP in the Commission's recent class A GRCs?

A. 13 The Commission has authorized inclusion of PTYP for periods ranging from 6 to 12 months in the recent class A rate cases, most recently authorizing 12 months for Arizona Public Service Company, in Decision No. 78317.

Q. 14 What is Staff's position on the PTYP adjustment?

A. 14 Staff stated in a memorandum[6] filed in the PTYP Docket that, "Staff utilizes prior Commission decisions in formulating its recommendations. At this time. Staff continues to recommend the inclusion of up to 12 months of PTYP beyond the end of the historic test year. Further, Staff recommends a companion adjustment to accumulated depreciation to include one half year of the annual depreciation expense calculated for the PTYP to update the accumulated depreciation to reflect the half-year convention methodology for depreciation."

Q. 15 Is the Company's proposed PTYP adjustment consistent with Staff's stated positions?

A. 15 Yes. The table below provides a summary of Staff and the Company's positions on PTYP:

Staff Positions Based on Staff's Memorandum in Docket 19-0080	Southwest Gas Proposed PTYP Adjustment
Inclusion of up to 12 months of PTYP.	Inclusion of 12-month non-COYL PTYP expected to be closed through August 31, 2022 that are used and useful and 4-month COYL PTYP.
PTYP inclusion is not being made to generate or support system growth or new customers.	The Company's proposed PTYP includes only non-revenue producing plant that is constructed to improve service or enhance reliability and safety for existing customers.
Inclusion of accumulated depreciation of the proposed PTYP using the half-year convention to the recorded test year end accumulated depreciation.	Included.

[6] Dated June 4, 2021.

III. GRAHAM COUNTY UTILITIES ADJUSTMENTS

Q. 16 Please briefly describe the GCU acquisition.

A. 16 On February 22, 2021, GCU and Southwest Gas entered into an Asset Purchase Agreement that provides the terms and conditions for Southwest Gas to purchase the natural gas service-related assets of GCU. On April 23, 2021, Southwest Gas and GCU submitted a joint application to the Commission (Docket Nos.G-01551A-21-0092 and G-02527A-21-0092) requesting approval to transfer the natural gas utility assets of GCU to Southwest Gas, and to extend the Certificate of Convenience and Necessity of Southwest Gas.

Q. 17 Did the Company adjust the revenue requirement in this case to account for GCU rate base and expenses?

A. 17 Yes. The Company made two adjustments in Adjustment No. 20 to the revenue requirement to reflect (1) the inclusion of the GCU rate base that the Company is purchasing in the asset purchase agreement; and (2) expected O&M expenses for the GCU service territory. Adjustment B-2 GCU RB includes the assets purchased in the asset purchase agreement in Company's rate base. This adjustment reflects an increase in rate base of approximately $2.5 million. Adjustment C-2 GCU Expense includes the expected ongoing O&M costs for operating the GCU service territory. This adjustment reflects an increase in O&M expense of approximately $914,000.

Q. 18 Please describe and explain the acquisition premium associated with the purchase of the natural gas service-related assets of GCU.

A. 18 The purchase price for the GCU natural gas system assets is $3.5 million. The GCU Gas Division rate base authorized by the Commission in 2018 for the test year ended December 31, 2016, was approximately $2.3 million. As of

September 30, 2021, the GCU Gas Division's total net utility plant is approximately $2.5 million, which is the amount included in the rate base (Adjustment No. 20) in this proceeding. The acquisition premium of $956,256, or the difference between the $3.5 million purchase price and this original cost of the assets being purchased (net of accumulated depreciation), is what Southwest Gas seeks authority to recover in this GRC.

Q. 19 What is the Company's proposal to recover the acquisition premium?

A. 19 The Company is proposing to amortize the acquisition premium of $956,256 over a three-year period, consistent with Commission-approved amortizations in Southwest Gas' last GRC. The annual amortization expense is approximately $318,752 (Adjustment No. 16), which would result in an overall minimal bill impact.

Q. 20 Are the purchase price and the acquisition premium reasonable?

A. 20 Yes. The purchase price for the GCU natural gas system assets is $3.5 million. The fair market value of GCU's natural gas assets can be estimated by using a Reconstruction Cost New Less Depreciation (RCND) analysis. The RCND is computed by using the Handy-Whitman utility construction indices to trend original cost utility plant and certain other rate base items to obtain the current reconstruction cost new, by vintage year of construction. To apply this methodology to GCU gas facilities, sufficient records would need to be available to perform the calculations, and those records are not available for GCU. In the absence of these records, the ratio of Southwest Gas' RCND rate base to original cost rate base (OCRB) authorized in Southwest Gas' recent general rate case is an appropriate proxy to estimate an RCND value for GCU corresponding to its OCRB. GCU's authorized ORCB as of December 31, 2016, is

approximately $2.3 million. In Decision No. 77850, Southwest Gas' authorized RCND has a ratio of 1.64 over the authorized ORCB.[7] By applying this ratio to the GCU Gas Division's OCRB, GCU's RCND can be estimated as approximately $3.9 million, which is more than the $3.5 million purchase price. Further, GCU informs the Company that the current book value of its Gas Division's rate base is approximately $2.5 million as of September 30, 2021, thereby reducing the amount attributable to the proposed acquisition premium. As such, the purchase price and approval of the acquisition premium are reasonable.

Q. 21 Does this conclude your prepared direct testimony?

A. 21 Yes.

[7] Southwest Gas was authorized a RCND of $3,173,182,227 and an ORCB of $1,930,611,851 in Decision No.77850.

SUMMARY OF QUALIFICATIONS
NICK Y. LIU

I am a graduate of the University of Minnesota, Twin Cities having received a Bachelor of Arts in Economics, Mathematics and Statistics in 2013. In 2015, I earned a Master's in Statistics from the University of California, Berkeley.

In 2015, I joined the Arizona Corporation Commission as a Public Utilities Analyst in the Utilities Division. In June 2019, I joined Southwest Gas Corporation as a Senior Analyst in the Regulation and Energy Efficiency department and was promoted to Supervisor in May 2021. I am responsible for preparing and reviewing regulatory rate filings and revenue requirement analyses for Southwest Gas' Arizona, California and Nevada jurisdictions.

I have been a Certified Rate of Return Analyst (CRRA) by the Society of Utility and Regulatory Financial Analysts (SURFA) since 2018.

Tab G

Direct Testimony
of
Randi L. Cunningham

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
RANDI L. CUNNINGHAM

ON BEHALF OF
SOUTHWEST GAS CORPORATION

December 3, 2021

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Prepared Direct Testimony
of
Randi L. Cunningham

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Appendix A – Summary of Qualifications of Randi L. Cunningham

Southwest Gas Corporation
Docket No. G-01551A-21-0368

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Randi L. Cunningham

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Randi L. Cunningham. My business address is 8360 S. Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company) in the Regulation and Energy Efficiency department. My title is Senior Regulatory Professional.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the Arizona Corporation Commission (Commission), the California Public Utilities Commission (CPUC), the Public Utilities Commission of Nevada (PUCN) and the Federal Energy Regulatory Commission (FERC).

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 I sponsor the Company's overall revenue requirement and provide a summary of the test year results of operations and the primary factors contributing to the

Company's deficiency. I provide an overview of Southwest Gas' operations and cost allocation methods. I also sponsor the financial statements and statistical schedules in Schedule E, from Schedule E-1 to E-6 and E-8 and E-9, and the projections and forecasts in Schedule F.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- A summary of the results of operations for the Company's Arizona rate jurisdiction, including test year results, and the revenue deficiency as shown on Schedule A-1;
- The primary factors contributing to the revenue deficiency in this application;
- An overview of Southwest Gas' natural gas utility operations, including a description of the Company's state and federal ratemaking jurisdictions;
- The methodologies employed by Southwest Gas for cost responsibility and allocations (excluding the Company's class cost of service study) contained in Schedule C-1;
- Southwest Gas' adjusted test year income statements included in Schedule C-1, with the exception of Sheet 2, and the majority of the Company's pro forma adjustments included in Schedule C-2;
- The computation of the gross revenue conversion factor and state and federal income tax rates as shown on Schedule C-3; and
- The computation of the Company's rate base, as presented in Schedule B, and the ratemaking adjustments to rate base (with the exception of the Post Test Year (PTY) Plant and Graham County Utilities (GCU) adjustments) needed to determine the appropriate level of cost of service.

II. SUMMARY OF RESULTS OF OPERATIONS

Q. 7 What is the test year in this application?

A. 7 The recorded test year results were adjusted to annualize and normalize the effects of known and measurable changes that occurred through August 31, 2021, and to include certain post-test year costs that were effective after the end of the test year as discussed further below.

Q. 8 How does the Company determine if a revenue deficiency exists?

A. 8 A revenue deficiency is determined to exist when the Company's annualized and normalized revenue at its present rates is less than the Company's adjusted cost of service at its proposed weighted average cost of capital.

Q. 9 What does the term "revenue" mean in the context of the Company's revenue deficiency?

A. 9 The term "revenue" in this instance refers to the non-gas and non-surcharge revenues that Southwest Gas receives through base rates. Because there is a separate purchased gas cost mechanism to ensure that the Company's customers only pay the actual cost incurred by the Company to purchase natural gas (i.e., Southwest Gas earns no profit on the natural gas commodity), these revenues are excluded from the General Rate Case (GRC). Similarly, because Southwest Gas has separate regulatory mechanisms to recover certain other costs outside of base rates, these revenues are also excluded from the GRC. Another term that is used interchangeably with "revenue" in this context is "margin".

Q. 10 What is the Company's revenue deficiency in its Arizona operations, and how was it determined?

A. 10 The Company's revenue deficiency is approximately $90.7 million. Schedule A-1, Sheet 2, Column (e) shows that annualized margin at present rates needs to be adjusted upward to approximately $579.2 million; this yields a rate of return (ROR) of 4.51 percent on rate base of $2,642,067,938. The Company is requesting a fair value rate of return (FVROR) of 5.48 percent on fair value rate base (FVRB) of $3,414,416,189. Accordingly, to produce a 5.48 percent FVROR, a revenue increase of approximately $90.7 million is required. Please refer to the Prepared Direct Testimony of Company witness Ann Bulkley for the Company's requested cost of capital (Schedule No. D-1).

III. FACTORS CONTRIBUTING TO THE DEFICIENCY

Q. 11 What are the primary factors contributing to the Company's revenue deficiency?

A. 11 There was one major change to the Company's cost of service since the last GRC, which was filed with a test year ended January 31, 2019. The Company made a significant amount of capital investments required to serve new customers and to operate and maintain a safe and reliable natural gas distribution system. Rate base increased by approximately $711 million from the rate base authorized in Decision No. (D.) 77850.

The increase in plant is primarily related to various distribution system replacement projects, including those identified under the Company's transmission and distribution integrity management programs, franchise requirements, pressure reinforcements, and cathodic protection. Since January 2019, or the following the end of the Test Year in the Company's last Arizona GRC, the Company invested approximately $178 million in mains and services to serve over 61,000 new customers. The Company also invested

approximately $50 million in meters, a portion of which serve new customers and a portion of which were necessary replacements. Approximately $64.5 million of the increase in rate base is related to the Arizona-allocable portion of the capital expenditure for the Company's new customer billing system, which was placed in service in May 2021. To mitigate regulatory lag, the Company is requesting the timely recovery of approximately $197 million in capital investments in non-revenue producing PTY plant required to operate and maintain a safe and reliable system that will be used and useful prior to the date rates from this proceeding become effective. The proposed PTY plant adjustments are described in the Prepared Direct Testimony of Company witness Nick Y. Liu.

The impact to the cost of service resulting from increased capital investments and related depreciation, amortization and property tax expenses is approximately $87 million.

In addition to updating rates to reflect these reasonable and prudent investments to serve customers, authorized revenues need to be updated to reflect customer growth and the overall changes in the level of operating expenses currently experienced by the Company.

Q. 12 What is the Company's proposed annual percentage increase over revenue at present rates?

A. 12 The proposed annual percentage increase is 11.5 percent, which is calculated by dividing the $90.5[1] million proposed rate increase over revenue at present

[1] This is the portion of the requested increase attributable to test year customers. A small portion of the requested rate increase is attributable to rolling acquired GCU customers into Southwest Gas' base rates.

rates of approximately $789.0 million. Please refer to the Prepared Direct Testimony of Company witness Timothy S. Lyons for the related bill impacts.

Q. 13 Please describe the PTY adjustments the Company included as part of its cost of service in this application.

A. 13 Consistent with prior GRCs, Southwest Gas included select PTY adjustments, primarily consisting of the following: 1) the 2022 wage increase and twelve months of PTY within-grade movement; 2) updating the property tax assessment ratio to incorporate the known and measurable ratio for 2022 for its property tax annualization adjustment; and 3) software projects and non-revenue producing plant additions anticipated through August 31, 2022. The PTY plant adjustment is discussed in the Prepared Direct Testimony of Company witness Nick Y. Liu.

Q. 14 Why has Southwest Gas included these PTY items in its application?

A. 14 In the Company's prior Arizona GRCs, the Commission has allowed adjustments similar to those the Company has proposed in this proceeding if the events are known or reasonably certain to occur and are measurable prior to hearing. By including these PTY adjustments, the proposed cost of service will more accurately reflect the level of costs Southwest Gas will incur to serve its end of test year customer base when the rates approved in this proceeding will be effective.

Q. 15 Do the Company's PTY adjustments adhere to the matching principle?

A. 15 Yes. The Company only includes non-revenue producing plant in its PTY plant adjustment. The Company's customers at the end of the test year are the primary beneficiaries of these capital expenditures and will continue to be the primary beneficiaries during the rate effective period. Consequently, the

inclusion of PTY plant in rate base more accurately matches the Company's investment needed to serve the customers on its system at the end of the test year and results in just and reasonable rates. Please refer to the Prepared Direct Testimony of Company witness Nick Y. Liu for more information on the Company's PTY plant adjustment.

The 2022 property tax assessment ratio was applied to calculate annualized property taxes. This rate is known and measurable and reflects the assessment ratio that will be used during the year rates from this proceeding become effective.

Finally, the PTY wage increases are applied only to employees on the Company's payroll at the end of the test year to update their wages to the level that more closely reflects the wages for these employees when rates from this proceeding are effective.

Based on the foregoing and as discussed more fully below, the Company's PTY adjustments adhere to the matching principle, are consistent with PTY adjustments proposed by the Company in prior GRCs and should be accepted by the Commission.

IV. OVERVIEW OF NATURAL GAS OPERATIONS

Q. 16 Please provide a brief overview of Southwest Gas' natural gas operations.

A. 16 Southwest Gas is a natural gas local distribution company, providing service to over 2.1 million customers in three states. At the end of the test year, Southwest Gas served over 1.1 million customers in Arizona, comprising approximately 53.3 percent of its total customer base. Southwest Gas also has a wholly owned subsidiary, Great Basin Gas Transmission Company (Great Basin), formerly known as Paiute Pipeline Company (Paiute), that operates as an intrastate

pipeline and is regulated by the FERC.

Southwest Gas' operations are divided geographically into five operating divisions: Central Arizona, Southern Arizona, Southern California, Northern Nevada, and Southern Nevada. Each division operates independently of the others and may include portions of multiple ratemaking jurisdictions. All divisions are supported by staff located at the Company's corporate headquarters.

At the state level, Southwest Gas' retail gas utility operations currently consist of six rate jurisdictions: Arizona, subject to the regulation of the Commission; Southern Nevada and Northern Nevada, subject to regulation by the PUCN; and Southern California, Northern California, and South Lake Tahoe, California, subject to regulation by the CPUC. Southwest Gas' remaining two rate jurisdictions, Great Basin and Southwest Gas Transmission Company (SGTC), are both regulated by the FERC.

V. JURISDICTIONAL COST RESPONSIBILITY AND ALLOCATIONS

Q. 17 Briefly describe how costs associated with Southwest Gas' natural gas operations are treated in this application.

A. 17 Both operating and capital costs are incurred at the Arizona district level and at the corporate level. Operating costs are also incurred at the Southwest Gas Holdings Inc. (Holding Company) level. Costs incurred at the district level are charged directly to the appropriate rate jurisdiction. Costs incurred at the corporate level may be charged directly to one or more rate jurisdictions if the cost/activity was incurred on its behalf (i.e., "corporate direct" costs). In instances where corporate costs are beneficial to all the Company's rate jurisdictions, or where the effort of tracking the jurisdictional allocation of the costs is not practical, such costs are allocated to all rate jurisdictions (i.e.,

"common" or "system allocable" costs). Costs that are not retained at the Holding Company level are allocated to Southwest Gas and Centuri Group (Centuri)[2] based on the relative equity of each. The Holding Company costs that are allocated to Southwest Gas are system allocable costs since they benefit all the Company's rate jurisdictions. The Holding Company costs allocated to Southwest Gas include costs related to the Board of Directors, investor and shareholder relations, and financing costs to the extent that Southwest Gas uses the proceeds.

Q. 18 What are system allocable costs?

A. 18 System allocable costs consist primarily of Administrative and General (A&G) expenses, the costs associated with intangible plant (mainly software) and general plant used to support the corporate administrative staff.

Q. 19 How does the Company allocate system allocable costs to Great Basin and SGTC?

A. 19 System allocable A&G expenses (except Account 924, Property Insurance) are first allocated to Great Basin and SGTC using the Modified Massachusetts Formula (MMF), a FERC-authorized methodology that is calculated on Schedule C-1, Sheet 18. Property insurance is allocated using an insurable property factor (WP Schedule C-2, Adjustment No. 11, Sheets 3-4). Great Basin is also charged a rental fee for its use of certain system allocable intangible and general plant.

System allocable costs that are allocated and charged to Great Basin are transferred to and recorded on Great Basin's books monthly, and to SGTC's

[2] Centuri is a non-regulated infrastructure services provider and a wholly owned subsidiary of the Holding Company.

books annually. Consequently, system allocable A&G expenses recorded on Southwest Gas' books are net of the allocations to Great Basin and SGTC.

For this application, the MMF, the insurable property factor, and the Great Basin rental charge were recalculated using end of test year data. The resulting pro forma adjustment is presented in Adjustment No. 11, which is discussed in further detail later in my testimony.

Q. 20 After system allocable costs are allocated to Great Basin and SGTC, how are the remaining costs allocated to Southwest Gas' retail rate jurisdictions?

A. 20 Property insurance costs are allocated to each retail rate jurisdiction using Factor II, average gross plant, and the remaining system allocable costs are allocated using the 4-Factor Allocation Methodology (4-Factor) described below.

Q. 21 Please describe the 4-Factor.

A. 21 The 4-Factor is based on the average of four equally weighted components: (a) direct operating expense; (b) average gross plant; (c) direct operating labor; and (d) average number of customers. The 4-Factor has been used for ratemaking purposes by Southwest Gas since the 1950s and has been accepted and approved by each of the Company's state regulatory commissions. Schedule C-1, Sheet 17 provides the development of the 4-Factor allocation percentages for the test year.

VI. OPERATING EXPENSES

Q. 22 Please describe and explain Southwest Gas' Schedule C-1.

A. 22 Schedule C-1 begins with the Company's adjusted income statement on Sheet 1, and the subsequent sheets summarize recorded and adjusted O&M expenses, A&G expenses, depreciation and amortization expenses, other taxes,

and income taxes. Schedule C-1 is rounded out by the calculations supporting the 4-Factor and MMF allocations discussed above.

Q. 23 Please describe and explain Southwest Gas' Schedule C-2.

A. 23 Schedule C-2 provides a summary, by function, of all the pro forma adjustments proposed in this proceeding. The remaining C-2 schedules provide support for each pro forma adjustment to operating expenses.

Q. 24 Please describe and explain Southwest Gas' Schedule C-3.

A. 24 Schedule C-3 shows the calculation of the gross revenue conversion factor, and the income tax rates used in this application.

Adjustment No. 3 – Labor and Labor Loading Annualization

Q. 25 Please describe and explain Adjustment No. 3 - Labor and Labor Loading Annualization.

A. 25 Adjustment No. 3 annualizes the labor and related labor loadings of Arizona and Corporate employees employed by the Company at the end of the test period – August 31, 2021. This adjustment reduces operating expenses by $77,856.

The labor and labor loading annualization adjustment includes three components. First, a salary annualization is made for all Arizona and corporate employees with salaries in effect at the end of the last pay period beginning prior to August 31, 2021. Second, labor loadings are annualized or normalized at the end of the test year and those costs are applied to the employees on Southwest Gas' payroll at the end of the test year. Finally, the labor adjustment reflects an estimated overall 2.80 percent general wage increase to be effective in June 2022, along with additional wage increases because of within-grade movement during the twelve months subsequent to the end of the test year (i.e., through August 2022).

Q. 26 Were any other adjustments made to annualized labor?

A. 26 Yes. First, the Company did not include vehicle stipends in its annualized labor amounts. Second, the Company is proposing to recover $1,723,707 of test year severance payments made in conjunction with its Voluntary Retirement Incentive Program (VRIP) over three years. The VRIP is further discussed in the Prepared Direct Testimony of Company Witness Frederica Harvey.

Q. 27 Is the Company requesting recovery of the base salaries of former employees that accepted the VRIP payments?

A. 27 No. Since these employees were not on the Company's payroll at the end of August 2021, their salaries were not included in annualized labor.

Q. 28 Why is it appropriate to adjust labor expense for the 2022 general wage increase and twelve months of within-grade movement?

A. 28 Under current Commission guidelines for processing major rate applications, it is not expected that the hearing in this proceeding will be conducted before September 2022. Historically, the Company has generally granted general wage increases effective each June, after being approved by the Company's Board of Directors in May. Therefore, the 2022 general wage increase and PTY within-grade wage increases will be known and measurable prior to the hearing in this proceeding. As such, Staff and other intervenors will have an opportunity to verify and quantify the 2022 general wage increase and PTY within-grade wage movement prior to the hearing on this application.

Q. 29 Does this PTY adjustment adhere to the matching principle?

A. 29 Yes. This adjustment only applies to employees on the Company's payroll as of August 31, 2021, the end of the test year. It does not apply to any employees hired after August 31, 2021. Therefore, the number of employees at the end of

the test year is synchronized with test year customers that those employees serve. Indeed, this adjustment preserves the matching principle by ensuring rates approved in this proceeding better reflect the costs that will be incurred by the Company during the period rates will be effective. This adjustment simply recognizes that by the time rates become effective, test year customers will be served by test year employees who, on average, will be paid more than the wages that were in effect at the end of the test year.

Q. 30 Have previous Commission rulings in the Company's rate applications addressed this adjustment?

A. 30 Yes. The Commission has consistently approved Southwest Gas' PTY wage increases. In Decision No. 70665, the Commission concluded that Southwest Gas' PTY wage increase ". . . should be allowed because it is a known and measurable expense that is being incurred by the Company on a going-forward basis. Because the post-test year wage increase has been applied only to employees who were employed during the test year, there is no resulting mismatch of revenue and expenses." PTY wage increases were not contested in the Company's most recent GRC and were included in the authorized cost of service.

Q. 31 Please describe the labor loading process.

A. 31 Benefits, payroll taxes and the current service cost related to the Company's retirement plans are accumulated at the corporate level. These costs are then distributed among the various rate jurisdictions through a labor loading process. The labor loading rate is adjusted at the beginning of each year, based on budgeted pensions, benefits, paid time off, payroll taxes, and expected employee levels. The labor loading process applies the labor loading rate to

each labor dollar, assigning an appropriate amount of pensions, benefits, paid time off, and payroll taxes to each account to which labor has been charged.

Q. 32 How were labor loadings for Arizona and corporate employees annualized or normalized in this application?

A. 32 Southwest Gas normalized the portion of retirement benefits subject to the labor loading process, which consists of the current service costs for the Pension Plan, post-retirement benefits other than pension (PBOP), and the restorative portion of the SERP, based on a three-year average. The Company used the amounts from the three most recent actuarial studies, which are also used by the Company to accrue related expenses, as the basis for the normalization. Non-service retirement costs are not subject to the labor loading process and are included in A&G expense.

In contrast with prior GRC requests, in this application the Company is only requesting recovery for the portion of SERP benefits that restore the retirement benefits for certain employees to the level of retirement benefits on par with the rest of its employees through the Company's Pension Plan (i.e., the "restorative amount"). Any benefits that the SERP provides in excess of the restorative amount are not requested for recovery in this proceeding.

Consistent with prior Commission decisions, the Company performed an analysis of charges and removed certain items recorded in Account 926 from the cost of service in this proceeding. For example, the Company is not requesting recovery from customers for costs related to service awards, retirement gifts and parties, employee appreciation and employee recognition. The Company also made adjustments to remove out of period charges from the test year, to bring in test year charges that were recorded out of period and to

properly reclassify any costs identified that were recorded incorrectly.

In addition, payroll taxes, employer matching of employee retirement contributions, and indirect time were adjusted for the impact of annualizing payroll and overtime. For the remaining costs in Account 926, recorded test year costs were used as the basis for the annualization. These adjustments are consistent with prior Commission decisions.

Q. 33 How are labor loading costs allocated to Arizona?

A. 33 There were two methods used to allocate labor loading costs to Arizona. First, the requested current service cost of the Pension Plan, PBOP, and the restorative amount of SERP, along with the requested total cost of the executive deferred compensation plan, and employee investment plan (401k) was allocated based on each rate jurisdiction's labor cost as a percentage of total Company labor. Second, for the remaining benefits, a cost per employee was calculated based on the adjusted costs divided by the total number of Company employees at the end of the test year. The cost per employee was multiplied by the number of Arizona jurisdictional employees at the end of the test year to determine the amount allocated to Arizona for ratemaking purposes.

Q. 34 Once the annualized labor and labor loadings were calculated, how was the adjustment determined?

A. 34 The annualized labor and labor loadings were assigned to each account based on the historical test year relationships. For example, during the test year, approximately 66 percent of Arizona direct labor and loadings were charged to O&M accounts. Therefore, 66 percent of the annualized Arizona direct labor and loadings were assigned to O&M accounts. The difference between the annualized labor and loadings assigned to the O&M accounts and the recorded

labor and loadings is the adjustment for that account. Since 66 percent of the annualized Arizona direct labor and loadings were assigned to O&M, the remaining 34 percent were assigned to capital and other non-O&M accounts, and do not impact the revenue requirement requested in this application. A similar assignment was performed for corporate staff annualized labor and loadings to determine the adjustment required. The adjustment described above for non-service retirement benefit costs is included in the total for this adjustment.

Adjustment No. 4 – Call Center and Customer Support Allocation and Annualization

Q. 35 Please explain Adjustment No. 4 - Call Center and Customer Support Allocation and Annualization.

A. 35 This adjustment allocates the proper percentage of this function to Arizona customers. This adjustment reduces operating expenses by $131,769.

Q. 36 Please describe the Company's call center and customer support function.

A. 36 There are presently three customer assistance call centers in Southwest Gas' service territory: Phoenix, Tucson, and Las Vegas, Nevada. The Company also uses contracted remote agents. Customers call a toll-free telephone number, and the call is routed to the next available agent, no matter where that agent is located. The agents are trained to respond to customer inquiries regardless of where the customer is located. There are also Company employees and contract workers who provide back-office customer support. All call centers and customer support locations handle customer inquiries and reporting for the entire Company.

Q. 37 Why is an adjustment necessary to properly allocate these costs to Arizona?

A. 37 Certain call center and customer support function costs may be charged directly to an operating division, while these functions support the entire Company. As such, the test year costs are aggregated on a total company basis, and then reallocated to Arizona based on number of customers, which is the Factor IV component of the 4-Factor discussed earlier in my testimony. The adjustment reflects the difference between the amount recorded on Southwest Gas' books and the reallocated amount.

Adjustment No. 5 – Cost of Service Analysis

Q. 38 Please explain Adjustment No. 5 - Cost of Service Analysis.

A. 38 Southwest Gas conducted an analysis of its operating expenses to: 1) determine if there were costs recorded during the test year for which Southwest Gas is not requesting recovery in this proceeding; 2) adjust recorded expenses so a full year's worth of expense is reflected - no more and no less; 3) annualize items with significant cost changes, including incremental O&M for vendor support and timely software and cyber security updates that will occur after the Radio System Upgrade project is complete; and 4) determine whether the test year contains material, non-recurring costs or costs charged incorrectly and requiring removal or reclassification. Adjustment No. 5 reflects the results of this analysis. The amounts removed from and added to the cost of service are summarized by account in Schedule C-2, Adjustment No. 5, and the supporting workpapers categorize all transactions by the type of cost. Note that any items recorded to Account 926 are addressed in Adjustment No. 3. This adjustment reduces operating expenses by $293,266.

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Adjustment No. 6 – Company-Owned Vehicles

Q. 39 Please explain Adjustment No. 6 - Company-Owned Vehicles.

A. 39 Adjustment No. 6 removes all vehicles assigned to employees at the Director level or above from rate base along with the O&M costs related to these vehicles. This adjustment reduces operating expenses by $1,854 and reduces net plant by $459,746. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Q. 40 Is the Company requesting recovery for the vehicle stipend that it offers employees at a level of Director or above?

A. 40 No. Vehicle stipends were not included in annualized labor as discussed above or in this adjustment.

Adjustment No. 7 – Uncollectible Expense Annualization

Q. 41 Please explain Adjustment No. 7 - Uncollectible Expense Annualization.

A. 41 Adjustment No. 7 annualizes the recorded amounts in Account 904, Uncollectible Expenses, to reflect a three-year average of net closing bill write-offs as a percentage of gross revenues. The write-off percent is applied to present revenues to determine the annualized amount, which is then compared to the recorded uncollectible expense to determine the adjustment amount. The Company used a normalized write-off percentage of 0.2145% to annualize uncollectible expense because the Company believes this better reflects the expected uncollectible expense going forward, as compared to using the test year net write-off percentage of 0.2377%. This adjustment decreases operating expenses by $851,635.

Adjustment No. 8 – Corporate Aircraft

Q. 42 Please explain Adjustment No. 8 – Corporate Aircraft.

A. 42 Adjustment No. 8 removes the rate base and expenses associated with the Company-owned corporate aircraft and replaces those costs with the cost of commercial-equivalent airfare for flights that are allocated to Arizona. This adjustment decreases net plant by $2,843,656 and operating expenses by $426,608 after allocation to Arizona. This adjustment's impact to depreciation expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Adjustment No. 9 – Self-Insured Retention

Q. 43 Please explain Adjustment No. 9 - Self-Insured Retention.

A. 43 Adjustment No. 9 adjusts test year recorded self-insured accruals charged to Account 925 during the test year to a normalized level.

Q. 44 What was the Company's level of self-insurance for general liability claims at the end of the test year?

A. 44 The Company is self-insured for up to $1 million of claims expense for each occurrence (per occurrence component). To the extent that a specific claim exceeds $1 million, the Company is self-insured for the excess over $1 million up to an aggregate (aggregate component) of $4 million. Once the $4 million aggregate is reached, any amount paid above the $4 million is the responsibility of the insurance carrier.

The up to $1 million per occurrence component has no annual limit as to the number of claims, is claim specific, and does not include costs emanating from more than one rate jurisdiction. Indeed, the per occurrence component of injuries and damages expense should be treated as a direct jurisdictional

expense.

Q. 45 Please explain the accounting for the self-insured portion of liability claims.

A. 45 When an incident is identified that may require payment, the Company accrues the estimated payment as a self-insured retention expense. The entry is a debit to Account 925, Injuries and Damages, and a credit to Account 228.2, Accumulated Provision for Injuries and Damages. Once the outcome of the claim becomes final, any costs paid are charged against the accrual in Account 228.2. If the amounts paid are different than the amount accrued, then the net difference is removed from Account 228.2 and charged back against Account 925.

Q. 46 Given the method used to account for the self-insured portion of liability claims, does the test year expense reflect on-going operations?

A. 46 No. It is not unusual to have large fluctuations in the net charges to Account 925 from period-to-period because of the nature of the method used to account for this process, and history has shown that large claims that reach the $4 million aggregate do not generally occur every year. This can result in Account 925 having an expense level during any given recorded period not being representative of on-going operations. For this reason, it is appropriate to normalize this cost based on claims experience over the last ten years.

Q. 47 Please explain the normalized adjustment to self-insured expense.

A. 47 The Company used a ten-year average of self-insured amounts to normalize this expense for ratemaking purposes. Schedule C-2, Adjustment No. 9, shows that the ten-year average of Arizona direct claims is $682,347 compared to the test year amount of $0, requiring a $682,347 adjustment. The ten-year average

system allocable expense is $165,885 compared to the test year amount of $50,000, requiring a $115,885 adjustment. After allocating a portion of this expense to Great Basin, the Arizona portion of the system allocable portion of this adjustment is an increase of $62,464. The total impact of this adjustment on Arizona's operating expenses is $744,811.

Adjustment No. 10 – Industry Dues

Q. 48 Please explain Adjustment No. 10 - Industry Dues.

A. 48 Adjustment No. 10 removes from operating expenses the portion of recorded industry dues identified as lobbying in nature. For the test year, 3.8 percent of American Gas Association (AGA) dues and 40 percent of Coalition for Renewable Natural Gas dues were identified as lobbying in nature. As such, a total of $37,255 of system allocable lobbying-related industry dues were removed. This adjustment reduces Arizona's operating expenses by $20,081.

Adjustment No. 11 – Great Basin/SGTC Allocation Annualization

Q. 49 Please explain Adjustment No. 11 - Great Basin/SGTC Allocation Annualization, which you previously referred to in your response to Question No. 19.

A. 49 Adjustment No. 11 annualizes the system allocable A&G amounts allocated to Great Basin through the MMF allocation methodology, the insurable property factor, and the rent revenue that Southwest Gas received from Great Basin for the test year ended August 31, 2021. The supporting workpapers to Adjustment No. 11 show the detailed calculations needed to derive the Great Basin rent expense and insurable property factor at August 31, 2021. This adjustment is consistent with the methodology approved by the Commission in the Company's last several rate cases.

The annualized MMF allocation factors are also used in the pro forma adjustments that impact system allocable A&G costs, in order to allocate a portion of the adjustment to Great Basin and SGTC before calculating the portion that is allocated to Arizona. This adjustment increases operating expenses by $13,266.

Adjustment No. 12 – Rate Case Expense

Q. 50 Please explain Adjustment No. 12 - Rate Case Expense.

A. 50 The Company estimated the incremental costs that would be incurred to prepare and process this GRC, including but not limited to printing, postage, court reporting, noticing, publication, travel, and outside consultants. The total incremental costs are divided by three, which is roughly equal to the number of years in one rate case cycle, to calculate an annual amortization to Account 928. The adjustment, which increases operating expenses by $86,609, is the difference between this new amortization amount and the amount of rate case expense amortized on the Company's books during the test year.

Adjustment No. 13 – Depreciation and Amortization Expense

Q. 51 Please explain Adjustment No. 13 - Depreciation and Amortization Expense.

A. 51 Adjustment No. 13 annualizes depreciation and amortization expense based on adjusted plant in service on August 31, 2021, using currently approved depreciation rates. The recorded test year amortizations in System Allocable FERC account 303 that will expire on or before August 31, 2022 were removed to synchronize with the PTY Plant adjustment. This adjustment increases operating expenses by $10,478,688.

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Q. 52 Please explain why an adjustment is necessary to annualize depreciation and amortization expense for the test year.

A. 52 This adjustment is necessary to synchronize the depreciation and amortization expense with the plant in service at the end of the test year, as adjusted. Like many utilities, Southwest Gas employs a depreciation convention based on the month the plant was first placed into service. Southwest Gas begins depreciation the month after the plant was first placed in service, and in turn, takes a full month's depreciation in the month it is removed or retired from service. As a result, plant that is placed in service or retired after the beginning of the test year has a partial year's depreciation expense recorded on the books of the Company. To allow Southwest Gas the opportunity to recover its reasonable and necessary operating expenses and to avoid charging customers for assets removed or retired from service, depreciation and amortization must be annualized based on adjusted end of test year plant balances. This adjustment accomplishes those objectives and is consistent with the methodology approved by the Commission in the Company's previous rate cases.

Q. 53 Did the Company make an additional adjustment for the amortizations related to System Allocable Miscellaneous Intangible Plant?

A. 53 Yes. Most of the items in system allocable miscellaneous intangible plant (FERC account 303) are software projects with three to five-year amortization periods. These amortization periods are roughly equivalent to the Company's Arizona rate case cycle. Absent an adjustment, customers may end up double-paying for certain projects through rates, while never paying for other projects. To mitigate this potential outcome, the Company proposes an adjustment to

remove the amortization expense for all projects with an amortization period expiring August 31, 2022 or earlier to match with the Company's PTY Plant adjustment for FERC account 303, where estimated amounts for projects expected to be closed to plant on or before to August 31, 2022 were added to rate base. This is a conservative adjustment because many small software projects spend a relatively short time in construction work in progress before being transferred to plant. Consequently, between the date this rate case was prepared and August 31, 2022, more projects may close to plant than are indicated by the estimated balances included in the Company's application. Indeed, this adjustment strikes a fair balance between project amortizations that will expire shortly after the end of the test year, and projects commencing amortization and serving customers when rates from this proceeding go into effect. Further, the Company's estimated amounts can be verified by Staff and other intervening parties throughout the discovery process, and prior to the hearing.

Q. 54 If a change is made to the 12-month PTY period requested by the Company, is a change necessary to this adjustment?

A. 54 Yes. Only the software amortizations that expire during the PTY period should be removed in this adjustment. If the PTY period is ultimately longer or shorter than the Company's proposal of twelve months at the time of filing, this portion of the adjustment must be recalculated.

Adjustment No. 14 – Taxes Other Than Income

Q. 55 Please explain Adjustment No. 14 – Taxes Other Than Income.

A. 55 Adjustment No. 14 adjusts property taxes to annualize that expense based on the Company's adjusted investment in plant and materials as of the end of the

test year and to update the amortization of the Property Tax Deferral Mechanism based on the test year ended balance.

For Arizona properties, the Company determines an estimated full cash value by using adjusted net plant in service at August 31, 2021, adding materials and supplies, and subtracting transportation equipment and land rights. The estimated full cash value is then multiplied by the 2022 assessment ratio of 17.5 percent to determine the assessed value. The assessed value is then multiplied by the composite property tax rate of 12.66 percent, which is then reduced by capitalized property taxes and increased by the Salt River Tribe Assessment[3] to determine the annualized property tax expense. The Company is proposing an adjusted test year property tax amount of $66,565,734, which would be the authorized amount that the Company would balance to in its Property Tax Deferral Mechanism. This adjustment increases operating expenses by $15,797,895. There is also an adjustment to reduce miscellaneous taxes by $5,633 to remove items expensed during the test year that are non-recurring.

Q. 56 Please explain the amortization for the Property Tax Deferral Mechanism.

A. 56 In D.76069, the Company was authorized to establish a Property Tax Deferral Mechanism. This mechanism allows the Company to defer any changes in property tax expense from the amount authorized and requires that the accumulated balance be recovered or refunded in the Company's next GRC through an amortization. The amortization of the balance included in the prior GRC commenced January 1, 2021, the effective date of rates from that GRC. The annual amortization expense needs to be updated in each GRC based on

[3] The Salt River Tribe Assessment is separately identified since it is not subject to balancing in the Property Tax Deferral Mechanism.

the balance of the Property Tax Deferral Mechanism at the end of the test year.

Q. 57 What was the ending balance of the Property Tax Deferral Mechanism at the end of the test year, and the annual amount being requested for recovery in this GRC?

A. 57 On August 31, 2021 the Company had an under-collected balance of $2,389,365. The Company is proposing that this amount be collected from customers over the next three years consistent with the prior GRC, or $796,555 per year. During the test year, credits totaling $1,499,132 were recorded to FERC account 408.1 between January 1 and August 31, 2021, which was 8/12 of the annual property tax deferral amortization amount authorized in the Company's last GRC. The Property Tax Deferral Mechanism balance was at an over-collected position in the prior GRC, resulting in credits to property tax expense recorded during these months. As such, this adjustment's impact to annual Arizona operating expenses is $2,295,887 to reflect the fact that the Property Tax Deferral Mechanism balance has flipped from an over-collected balance to an under-collected balance.

Adjustment No. 15 – Insurance Annualization

Q. 58 Please explain Adjustment No. 15 – Insurance Annualization

A. 58 The Company annualized its insurance premiums for property insurance, commercial general liability insurance, and Directors and Officers liability insurance to reflect current ongoing expenses as of the end of the test year. This adjustment increases operating expense after allocation to Arizona by $1,202,101.

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Adjustment No. 16 – Regulatory Amortizations

Q. 59 Please explain Adjustment No. 16 – Regulatory Amortizations.

A. 59 Adjustment No. 16 removes recorded test year regulatory amortizations from base rates that are recovered through the Demand Side Management Program (DSM) surcharge and the Transmission Integrity Management Program (TRIMP) surcharge. In addition, the Company is requesting to add two new regulatory amortizations related to: 1) COVID-19 Late Fees Waived and Suppressed; and 2) LNG Facility Deferral, and to amortize these balances over three years, a typical rate case cycle. The Company is also requesting to amortize the GCU Acquisition Adjustment as discussed in the Prepared Direct Testimony of Company Witness Nick Y. Liu. Decision No. 77850 authorized a three-year amortization related to certain unrecovered margin for the Customer-Owned Yardline (COYL) Program and Vintage Steel Pipe (VSP) Replacement Program. However, since there was approximately two years between rate cases, the Company needs to re-amortize the remaining balance for recovery in this proceeding. This adjustment increases operating expenses by $1,376,684 in Account 407.3 and increases operating expenses by $318,752 in Account 406.

Q. 60 Please explain the amortization requested for COVID-19 Late Fees Waived and Suppressed.

A. 60 As explained in the Prepared Direct Testimony of Company Witness Michelle L. Ansani, in response to the COVID-19 pandemic, the Company has tracked approximately $2.5 million in waived and suppressed late payment charges from April 1, 2020 through March 31, 2021. The Company is requesting to recover this amount over a three-year amortization period. During a Special Open

Meeting on May 6, 2020 when discussing Docket No. AU-00000A-20-0094, "Discussion, consideration and possible vote for Blanket/General accounting order for tracking expenses related to the COVID-19 pandemic," it was suggested that companies could track these costs on their own and request recovery in a GRC.[4] The Company agrees and believes this GRC is the appropriate venue to request a regulatory amortization for this item.

Q. 61 Please explain the amortization requested for the LNG Storage Facility Deferral.

A. 61 On January 27, 2014, Southwest Gas filed an application for Commission pre-approval to construct a Liquefied Natural Gas (LNG) storage facility near Tucson, Arizona (LNG Application), pursuant to the Commission's December 18, 2003 Policy Statement Regarding Natural Gas Infrastructure. The Company's LNG Application was approved in D.74875, as amended by D.75860. In D.76069, the Company was authorized to extend the deferral of the revenue requirement associated with all costs flowing from the construction of the LNG storage facility incurred before December 31, 2020.

The Company calculated deferrals on the revenue requirement associated with the LNG storage facility from December 2019, the month the LNG storage facility was placed into service, through December 2020, the month before recovery of the LNG storage facility in general rates began. There was a one-month lag between the calculation of the revenue requirement and when that revenue requirement was booked. The cumulative revenue requirement deferred was $11,951,653. The Company is requesting a three-year

[4] Recording of the May 6, 2020 Special Open Meeting, at 2:09:49 (Staff) and 2:11:00 (Commissioner Olson).

amortization of this balance.

Q. 62 The Company is proposing a three-year amortization for the above-mentioned items. Why is three years appropriate?

A. 62 The Company proposes to clear the above-mentioned regulatory assets over a typical rate case cycle. Consistent with the Company's proposed amortization period for rate case expense discussed above, three years approximates one typical rate case cycle.

Q. 63 Why is the Company proposing to reamortize the COYL and VSP amortizations, but not the Tax Reform Surcredit amortization, granted in its prior GRC?

A. 63 With the Commission's authorization of the Company's Tax Expense Adjustor Mechanism (TEAM) in the Company's last GRC, any remaining balance from the Tax Reform Surcredit when rates from this proceeding are effective can be timelier returned to customers dollar for dollar through the TEAM, rather than through base rates.

Adjustment No. 17 – Corporate Headquarters

Q. 64 Please explain Adjustment No. 17 – Corporate Headquarters.

A. 64 Adjustment No. 17 consists of two sections. The first allocates a portion of rate base and maintenance expenses associated with the Company's corporate headquarters at 8360 S Durango Drive in Las Vegas to Centuri based on each entity's relative equity. For purposes of this rate case this building is treated similarly to how certain Holding Company expenses are allocated to Southwest Gas, but the allocation methodology may change in the future based on detailed studies of how the space in the building is used. This adjustment also removes the rate base and non-recurring expenses related to the Company's former

Spring Mountain headquarters since it is no longer used and useful.

This adjustment reduces net plant by $20,209,922 and operating expenses by $1,394,145 after allocation to Arizona. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

Adjustment No. 18 – SAP and CSS Costs

Q. 65 Please explain Adjustment No. 18 – SAP and CSS Costs.

A. 65 Adjustment No. 18 is necessary to reflect a normalized level of expected ongoing costs related to the new SAP system (also referred as Project Horizon) that was part of the Company's Customer Data Modernization Initiative (CDMI) and the legacy customer service system (CSS) based on a three-year average, and to recover the incremental O&M associated with the implementation costs for the new SAP system over three years. Please refer to the Prepared Direct Testimony of Company witness Michelle L. Ansani for testimony on the benefits of Project Horizon. This adjustment reduces operating expenses by $662,858 after allocation to Arizona.

Q. 66 Can you please explain the SAP and CSS-related O&M costs the Company is requesting for recovery in this proceeding?

A. 66 Yes. The Company incurred $9,679,064 of O&M to support the implementation and ongoing operations and maintenance of SAP and $3,520,387 of O&M related to the legacy CSS system during the test year. The Company anticipates incurring approximately $5,583,733 annually to operate and maintain SAP and will incur approximately $2,059,495 on a normalized basis of ongoing CSS costs. The ongoing CSS costs are required to maintain the legacy system in

inquiry mode for 18-24 months after the May 2021 go-live date of Project Horizon to allow the Company access to certain historical data that is not available in the new system but is necessary to serve customers for the aforementioned period following Project Horizon's go-live date. As such, the Company believes it is appropriate to make a downward adjustment of $2,962,103 to test year recorded O&M to reflect the average ongoing level of annual costs in the next three-year rate case cycle after allocation to Arizona.

Q. 67 Please explain the incremental O&M associated with the implementation costs for the new SAP system.

A. 67 The Company incurred $6,897,735 of incremental project implementation costs that were charged to O&M because certain project implementation activities were not eligible for capitalization under generally accepted accounting principles, even though those activities resulted in used and useful software that is estimated to have a fifteen-year life. While these costs were valid business expenses, the amounts recorded during the test year are non-recurring and should not be recovered in full on an ongoing basis each year rates from this proceeding are effective. As such, the Company requests to recover $2,299,245 per year over a three-year rate case cycle, rather than the amount that was recorded during the test year for project implementation costs.

Q. 68 Why is the Company requesting incremental O&M associated with the new SAP system in this proceeding?

A. 68 In D. 77918, the Commission denied the Company's request for a regulatory asset to track and defer the revenue requirement associated with the SAP system (or CDMI). In that Decision, the Commission found that, "... the

traditional rate case setting is the most appropriate venue for SWG to request recovery of the costs associated with the CDMI project."[5] Accordingly, consistent with the Commission's finding in D. 77918, the Company is requesting recovery of these incremental costs in this proceeding.

Q. 69 Were any incremental O&M associated with the implementation costs for the new SAP system requested for recovery in the last GRC?

A. 69 No, there were no project implementation costs for Project Horizon recorded to O&M during the test year in the last GRC. These costs were inadvertently capitalized (i.e., charged to a work order) during that time, and the Arizona portion of those costs have never been recorded to O&M. That work order remains open and has never been included in rate base.

Adjustment No. 21 – Variable Pay Normalization

Q. 70 Please explain Adjustment No. 21 – Variable Pay Normalization.

A. 70 Adjustment No. 21 normalizes the expense associated with the Company's Performance Share Plan and Restricted Stock plan over three years. It also normalizes the Company's Management Incentive Plan based on a three-year average of awarded percent of target multiplied by eligible test year salaries. Finally, amounts for these plans associated with the non-utility measure that only applies to strategy executives were excluded from the cost of service. This adjustment reduces operating expenses by $391,462 after allocation to Arizona.

Adjustment No. 22 – Interest on Customer Deposits

Q. 71 Please explain Adjustment No. 22 - Interest on Customer Deposits.

A. 71 Adjustment No. 22 synchronizes interest expense on customer deposits based

[5] D. 77918 at 14.

on the interest rate at the end of the test year with the amount of customer deposits used as a rate base reduction. The difference between the adjusted amount and the recorded amount is the adjustment. Consistent with prior Commission decisions, interest expense is treated as an above-the-line expense. This adjustment decreases operating expenses by $766,669.

Q. 72 Why is this adjustment so large in relation to test year recorded interest on customer deposits?

A. 72 In D.77850, the Commission authorized the Company to update the interest rate to calculate interest on customer deposits annually based on the US Treasury one-year CMT, rather than the previously effective six percent fixed rate. Rates from that decision were effective on January 1, 2021, so four months of the test year were still recorded at the six percent rate. The rate at the end of the test year was 0.11%.

Adjustment No. 23 – Remittance Processing and Print to Mail

Q. 73 Please explain Adjustment No. 23 – Remittance Processing and Print to Mail

A 73 Adjustment No. 23 is necessary to reflect the level of expected ongoing costs related to the Company's outsourcing of bill print and mail function, and to remove the remittance processing and print to mail assets no longer serving customers from rate base. Company witness Michelle L. Ansani describes the bill print and mail function in her Prepared Direct Testimony. This adjustment increases operating expenses by $286,150 and reduces net plant by $257,998 after allocation to Arizona. This adjustment's impact to amortization expense is addressed in Adjustment No. 13, and its impact to deferred taxes is addressed in Adjustment No. 24.

VII. RATE BASE

Q. 74 Please describe and explain Schedules B-1 and B-2.

A. 74 Schedule B-1 is a high-level summary of the various components that comprise rate base. Rate base is presented on this schedule at original cost, reconstruction cost new, and at fair value. Schedules B-2 shows a summary of original cost gas plant by function, and the Company's pro forma adjustments to rate base, as further described below.

Q. 75 Please describe and explain Southwest Gas' Schedules B-3 and B-4.

A. 75 Schedule B-3 is a summary of the reproduction cost new less depreciation (RCND) study. The schedule contains both the direct and system allocable plant assigned to Arizona. The reproduction cost new data is utilized to develop the FVRB. The detail supporting Schedule B-3 is contained in Schedule B-4 which contains the Handy-Whitman indices that were used to trend original cost plant and deferred taxes to obtain the reproduction cost new data, and the reproduction cost new data by vintage year, by FERC account.

Q. 76 Please describe and explain the other rate base items contained in Southwest Gas' Schedule B-5 and B-6 that use the 13-month average balance rather than the end of test year balance.

A. 76 Schedules B-5 and B-6 contain four items that employ the 13-month average balance method for inclusion in rate base: 1) materials and supplies; 2) prepayments; 3) customer deposits; and 4) customer advances for construction. The use of the 13-month average balance as the method of calculation has been accepted by the Commission in the Company's past several rate cases.

Q. 77 Please describe and explain the items contained in Schedule B-5 and B-6 that do not employ the 13-month average balance method.

A. 77 The cash working capital allowance and the accumulated balance of deferred income taxes do not use the 13-month average balance method of calculation.

The cash working capital allowance in Schedule B-5 was determined through a comprehensive lead/lag study. The Company used the lead/lag study days presented in this GRC[6] and applied this information to adjusted test year amounts.

Deferred taxes in Schedule B-6 are based on the recorded balance at the end of the test year for state and federal deferred income taxes in Account 282 and the excess accumulated deferred income taxes (EADIT) in Account 254. The recorded amounts are adjusted as explained further below.

Q. 78 Please explain the revenue requirement impact related to EADIT.

A. 78 The Company is proposing to adjust the revenue requirement by the test period amount of amortization allowed by the IRS for the plant related protected EADIT. The Company is also proposing to continue to amortize the non-plant EADIT over the ten years authorized in its last GRC. The EADIT regulatory liability amounts are shown on Schedule B-6, Sheet 5, and the proposed annual EADIT amortization amounts are shown on Schedule B-6, Sheet 6. The methodology for EADIT amortization is consistent with what was authorized by the Commission in the Company's last GRC.

From a rate base perspective, the EADIT regulatory liability continues to be a rate base reduction, just as when it was a component of Accumulated Deferred Income Taxes. The amount of the regulatory liability will decline as

[6] Consistent with the 2019 AZ GRC, the Company utilized the lag day results from the lead lag study prepared in its recent Nevada GRC. In this case, the Company used the results from Nevada Docket No. 21-09001, test year ended May 31, 2021, for its Other O&M and Benefits tests. The Company calculated lead and lag days with test year ended August 31, 2021 data for the remaining items in its lead lag study.

EADIT is returned to customers. As EADIT is amortized, income taxes are reduced in the amount of the annual amortization, while an equal reduction is made to the EADIT regulatory liability.

Q. 79 Is the Company proposing any adjustments to the recorded rate base amounts on August 31, 2021?

A. 79 Yes. The Company is proposing seven adjustments to recorded rate base amounts: 1) Company-Owned Vehicles[7]; 2) Corporate Aircraft[8]; 3) Corporate Headquarters[9]; 4) PTY Plant; 5) GCU 6) Remittance Processing[10], and 7) Deferred Tax Adjustments. Please refer to the Prepared Direct Testimony of Company witness Nick Y. Liu for the Company's adjustment for PTY plant, and for the Company's adjustment to roll in the rate base from the GCU asset acquisition.

Adjustment No. 24 – Deferred Tax Adjustments

Q. 80 Please describe and explain Adjustment No. 24 - Deferred Tax Adjustments.

A. 80 There are two adjustments to recorded test year deferred tax balances, as summarized on WP B-6. The first adjustment was made to align deferred taxes to recorded plant at the end of the test year. The second adjustment was made to remove the deferred taxes associated with the Company's proforma rate base adjustments: Company-Owned Vehicle adjustment, Corporate Aircraft

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[7] The Company-owned vehicle adjustment is addressed in the operating expenses section in Adjustment No. 6.
[8] The Corporate Aircraft adjustment is addressed in the operating expenses section in Adjustment No. 8.
[9] The Corporate Headquarters adjustment is addressed in the operating expenses section in Adjustment No. 17.
[10] The Remittance Processing and Print to Mail adjustment is addressed in the operating expenses section in Adjustment No. 23.

adjustment, Corporate Headquarters adjustment, and Remittance Processing and Print to Mail adjustment from rate base.

Q. 81 What is the total impact of the Deferred Tax adjustment on rate base?

A. 81 This adjustment increases rate base by $1,261,540.

VIII. CONCLUSION

Q. 82 Does this conclude your prepared direct testimony?

A. 82 Yes.

SUMMARY OF QUALIFICATIONS
RANDI L. CUNNINGHAM

I graduated from the University of Washington in Seattle, Washington with a Bachelor of Arts in Business Administration, Accounting. My areas of concentration were accounting and finance. I graduated from the University of Nevada, Las Vegas with a Masters in Business Administration (MBA), with Beta Gamma Sigma honors. I am a Certified Management Accountant (CMA) and have the Certified in Strategy and Competitive Analysis (CSCA) credential, and a member of the Institute of Management Accountants.

One year before completing my bachelor's degree, I accepted employment at Washington Mutual Savings Bank in Seattle, Washington as an Asset/Liability Management intern. Upon graduation in 1993, I accepted a full-time position as a Financial Analyst Trainee in the Financial Forecasting Department. In 1994, I was promoted to Financial Analyst I. My responsibilities included assisting in the budget and forecasting process and various financial analyses.

In February 1995, I accepted a position as a Budget Analyst in the Budget and Forecasting Department at PriMerit Bank in Las Vegas, Nevada, which was a subsidiary of Southwest Gas at the time. In April 1996, I transferred to Southwest Gas as a Corporate Accountant I in the Accounting Control Department. In January 1998, I was promoted to Analyst I/Accounting. In February 1998, I transferred to the Revenue Requirements department as an Analyst. In January 2001 I was promoted to Specialist, in July 2003 I was promoted to Senior Specialist, in May 2007 I was promoted to Supervisor, and in April 2009 I was promoted to Manager. Subsequent to a reorganization in October 2014, I worked

in the Regulation and Energy Efficiency department as a Regulatory Professional. In February 2021 I was promoted to my current position, in which I am responsible for developing and ensuring compliance with regulatory cost accounting standards, am involved in complex and technical analyses and a subject matter expert on all Company regulatory matters.

I have attended numerous training and technical conferences related to utility ratemaking, regulatory, and accounting issues.

I served as instructor for the Cost of Service Problem course at “The Basics” conference presented by the Center for Public Utilities at New Mexico State University and the National Association of Regulatory Utility Commissioners from 2003 to 2014.

Tab H

Direct Testimony
of
Michelle L. Asani

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
MICHELLE L. ANSANI

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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Prepared Direct Testimony
of
Michelle L. Ansani

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Appendix A – Summary of Qualifications of Michelle L. Ansani

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony
of
Michelle L. Ansani

I. INTRODUCTION

Q. 1 Please state your name and business address.

A. 1 My name is Michelle L. Ansani. My business address is 8360 S. Durango Drive, Las Vegas, Nevada 89113.

Q. 2 By whom and in what capacity are you employed?

A. 2 I am employed by Southwest Gas Corporation (Southwest Gas or Company). My title is Vice President/Customer Engagement.

Q. 3 Please summarize your educational background and relevant business experience.

A. 3 My educational background and relevant business experience are summarized in Appendix A to this testimony.

Q. 4 Have you previously testified before any regulatory commission?

A. 4 Yes. I have previously provided testimony to the California Public Utilities Commission and the Public Utilities Commission of Nevada. I have also provided testimony to the Office of the Comptroller of Currency (OCC) and the Consumer Financial Protection Bureau (CFPB), while working for Capital One as a Sr. Director, Ombudsman for the Credit Card division. In 2017, I drafted a written response, submitted pursuant to a congressional inquiry, regarding the Sales Practices Investigation into the sales operations of the 49 largest, domestic financial institutions.

Q. 5 What is the purpose of your prepared direct testimony in this proceeding?

A. 5 My testimony provides an overview of the Company's focus on its customers and the related initiatives to improve customer engagement and interactions with Southwest Gas.

Q. 6 Please summarize your prepared direct testimony.

A. 6 My prepared direct testimony consists of the following key issues:

- Southwest Gas' customer support focus and initiatives;
- Support and assistance offered to customers in response to the COVID-19 Pandemic (COVID-19 or Pandemic);
- Economic assistance provided through government programs to customers affected by COVID-19;
- Statistics demonstrating customers' resiliency during the Pandemic and specifically how it relates to financially maintaining their Southwest Gas account;
- The outsourcing of the Company's bill print function; and
- Benefits of the Customer Data Modernization Initiative (CDMI).

II. CUSTOMER SERVICE AND CUSTOMER SUPPORT INITIATIVES

Q. 7 Please discuss the Company's customer-focused approach.

A. 7 The Company has provided safe and reliable service in Arizona since 1957.[1] As the officer with responsibility for customer care, my group places a high priority on working with customers and providing excellent customer service. As a Company, we are proud of our strong customer service ratings, with over 95%

[1] Southwest Gas expanded its service into Pinal and Greenlee Counties after acquiring Natural Gas Service of Arizona.

of our customers saying they are pleased with the Company's service. The Company works with customers, whether it be on payment arrangements during hard times, or through our actions during the Pandemic, while providing safe and reliable natural gas to the Arizona communities we serve.

Q. 8 How does the Company prioritize customer support and what are some customer focus initiatives currently in place?

A. 8 Prior to the Pandemic, the Company put in place several new initiatives to improve the customer experience, and to better support customers with stronger account management strategies. These initiatives include:

- Each month, approximately 2,300 customers participate in a voluntary post-call customer satisfaction survey asking "*Was your issue resolved?", "Was the agent knowledgeable?",* and "*Did we make it easy for you?*";
- Improved call center, agent handling requirements which includes a review of the customer account related to each inbound call to identify opportunities to educate the customer on optional servicing methods (e.g., digital self-service), stronger payment management strategies (e.g., Automatic Payment Plans and Equal Payment Plans), and internal and external support available to assist with financial hardships (e.g., installment plans, Low Income Rate Assistance (LIRA), and state agencies);
- Improved call center resources by replacing contract vendors with new vendors known for strong standards and performance; and

- A complete redesign of the Company's quality monitoring program and agent new hire training program, designed to focus on requiring and monitoring stronger customer servicing practices.

III. SUPPORT AND ASSISTANCE OFFERED TO CUSTOMERS IN RESPONSE TO COVID-19

Q. 9 Please provide an overview of the support and assistance the Company provided to its customers in response to the Pandemic.

A. 9 Starting in mid-March 2020, the Company took various voluntary steps to help customers navigate the challenges that were abruptly brought on by the Pandemic including:

- Proactive suspension of disconnections of service for non-payment;
- Suppression of Late Payment Charges (LPC) on past due account balances;
- Deferred payment plans in excess of the required six months;
- Suppression of deposits on commercial accounts;
- Waived deposits on residential accounts with customer requests;
- Proactive outreach on delinquent customer accounts to provide available programs and resources to secure financial assistance;
- Multi-channel communications focused on account management and resources available, including installment plans, LIRA, and referrals to federal and state agencies; and
- Collaboration and coordination with state and local government entities to facilitate the availability of economic assistance offered

through the Federal Coronavirus Aid Relief and Economic Security (CARES) Act (2020).

Q. 10 Please provide an overview of the costs and amounts recorded with respect to suppressed or waived fees, including LPC suppression.

A. 10 The Company recorded approximately $2.6 million in suppressed LPCs from April 1, 2020, through March 31, 2021. Additionally, the Company waived approximately $2,133 in Service Establishment Fees and $1,027 in Returned Item Fees (for Non-Sufficient Funds/Returned Checks), for any customer impacted by COVID-19. The Company proposal for recovery of costs related to the suppressed LPCs is discussed by Company witness Randi L. Cunningham.

Q. 11 Has the Company tracked any other costs of maintaining service to customers affected by the Pandemic?

A. 11 Yes. The Company recorded approximately $2.08 million in commercial deposits suppressed and/or waived, and approximately $186,267 in residential deposits waived, for customers who informed the Company of COVID-19 impacts. The Company is not seeking recovery of these waived deposits.

Q. 12 Please describe the support the Company provided with respect to account management.

A. 12 Effective April 1, 2020, the Company updated its inbound Interactive Voice Response (IVR) messaging to include the addition of a COVID-19 inbound hotline option. What this did was to immediately transfer customers impacted by COVID-19 to a highly trained, payment management specialist. Additionally, the Company added three questions to its voluntary post-call survey, including:

- Do you have confidence that Southwest Gas is there to support you and your family in this time of need? 92% of customers who responded, answered yes;
- Excluding your rent or mortgage, do you prioritize your natural gas bill over other monthly expenses? 73% of customer who responded, answered yes; and
- Would you like Southwest Gas to provide you with information on how we may be able to assist you with managing your account? 13% of customers who responded, answered yes. The Company followed up with 100% of customers with either a phone call and/or an email to provide additional information.

The Company updated its website to make information on payment assistance, including available programs and resources, more prominent. Additionally, the Company added a feature that specifically states, "I need assistance making my payment" that directly routes the customer to available resources, including receiving personal assistance from the Call Center department.

On June 1, 2020, the Company launched an outbound message campaign offering customers information about available programs and information on how to reach us and/or dial 211 to learn about more options.

On July 1, 2020, the Company launched an outbound dialing campaign to place direct outbound calls (from a team of highly trained financial assistance specialists) to provide education on available resources and programs to manage their account. During this campaign, the Company placed calls to

18,018 Arizona customers, and personally spoke to 2,728 of them. Of these 2,728 customers, the Company assisted 1,494 in making payment arrangements (or 55% success rate). Additionally, the Company enrolled 268 (or 10%) of the customers in the Equal Payment Plan (EPP), 109 (or 4%) in the Automatic Payment Plan (APP), established 78 (or 3%) in installment payment plans, and referred 454 (or 17%) of customers to agencies to assist with federal or state funding.

Q. 13 Did the Company see an increase in the number of installment payment plans that were entered into since March 2020?

A. 13 Yes, prior to the Pandemic, the Company averaged 500 active, customer-initiated installment plans annually. Since April 1, 2020, approximately 2,000 installment plans were requested and executed by customers.

Q. 14 Did the Company take any additional proactive steps to assist customers in managing their accounts?

A. 14 Yes, the Company identified that only a small portion of its customers with delinquent accounts were proactively calling Southwest Gas to seek payment assistance related to their balances in arrears. Based on this observation, the Company decided to proactively enroll customers in an installment plan payment arrangement to help them and continue to offer peace of mind as the state began its recovery. The Company began to automatically enroll all customers whose accounts were at least 60 days delinquent with a balance of at least $20 into an installment plan, spreading their past due balance into 6 equal payments, reducing their monthly amount due. From February 2021 through April 2021, the Company auto-enrolled 39,088 accounts representing a total balance of approximately $9.7 million, in an installment plan. All customers enrolled

received a corresponding letter informing them of the terms associated with the installment plan, encouraging customers to pay more than the reduced amount if financially able.

IV. ECONOMIC ASSISTANCE PROVIDED THROUGH GOVERNMENT ASSISTANCE PROGRAMS

Q. 15 Please provide an overview of the CARES Act (2020).

A. 15 The CARES Act was passed by Congress and signed into law by President Trump on March 27, 2020.[2] The CARES Act provided fast and direct economic assistance for American workers, families, small businesses, and industries.

Q. 16 Please explain the efforts put forth by the Company to facilitate the allocation of CARES funds for its customers

A. 16 In an effort to help customers who informed the Company of a financial hardship related to COVID-19, the Company partnered with the City of Tucson to provide the City information on customer balances in arrears in their respective jurisdictions. The Company followed all data security requirements in this process to protect customer information. As a result of this effort, the City of Tucson used internal policies and guidelines to issue checks to Southwest Gas for qualifying customers which were applied to the respective customer accounts. The Company is continuing to pursue and engage in similar partnerships with other Arizona communities within its service territory.

[2] https://home.treasury.gov/policy-issues/coronavirus/about-the-cares-act.

Q. 17 Has the Company received funds from these programs on behalf of its Tucson customers?

A. 17 Yes, the Company received $978,467 and applied the received funds to 6,426 customer accounts in Tucson.

V. BENIFITS OF PROJECT HORIZON

Q. 18 Please provide an overview of Project Horizon.

A. 18 Project Horizon involved the replacement of the Company's legacy Customer Service System (CSS) as a part of the Customer Data Modernization Initiative (CDMI), initiated to modernize the Company's legacy CSS and Gas Transaction System (GTS) systems by incorporating up to-date technology and integrated, scalable features to allow for improved functionality and increased operational efficiencies. Modernization of the Company's critical customer data systems also enables Southwest Gas to improve information security and provide enhanced customer service offerings that today's consumers have come to expect.

Q. 19 What are the customer benefits of Project Horizon?

A. 19 Several key benefits exist, including:

- A modernized customer information system to replace aging systems and technology that do not provide the ease of use for customer servicing needs, or the data security to protect our customers' sensitive data, including personally identifiable information.
- Improved design to make customer education more prominent and self-service more efficient.

- Improved internal efficiencies that will directly impact call handle and wait times, improving the customer experience.
- Enhanced data collection and reporting capabilities allowing the Company to more closely monitor customer trends and behaviors to evolve practices and programs to be more predicative which, in turn, allows the Company to engage in specific outreach and messaging to its customers.
- Improved functionality for local and state agencies by allowing for closer customer monitoring and ease of individual and/or bulk customer assistance payment processing.
- Flexible and expandable systems that will support customer growth, and enhanced products, programs, and services.
- The ability to expand bill print functionality to include Spanish bill capabilities, targeted to launch by year end.
- Replaced several manual processes and paper filing with automated and/or workflow capabilities, improving accuracy, quality and speed of service as well as tracking and reporting. Ability to upload documents within the system for improved servicing response time and data security
- Lays the foundation to further enhance edge (connected) systems capabilities to increase functionality and efficiency

Q. 20 Are the costs for Project Horizon reasonable and prudent and is the Company requesting cost recovery for Project Horizon in this case?

A. 20 Yes. Given the system improvements and customer benefits outline above, the investment in the new SAP system is reasonable and prudent. Project Horizon does, and will continue to, benefit customers. Company witness, Randi L.

Cunningham, addresses recovery of the incremental O&M costs related to this project in her prepared direct testimony.

VI. OUTSOURCING OF THE BILL PRINT AND MAIL FUNCTION

Q. 21 Please describe the Company's bill print and mail function.

A. 21 Customer bills are generated nightly for the respective meter reading cycle for that given day. The bills are printed onsite and inserted along with any bill inserts, and mailed the same day and/or the following morning to the customer's address of record.

Q. 22 Please describe the Company's decision to outsource this function.

A. 22 Southwest Gas was able to leverage external expertise with an outside vendor and made the decision to outsource the customer bill print and mail function because it was not core to the business of the organization. The paper bill quantities are decreasing and are expected to decrease more with new payment options such as electronic and mobile payments. Company-wide enrollment in paperless statements have increased 37 percent from approximately 863,000 customers to approximately 1.18 million. Further, customer payments were previously delivered directly to the Company's corporate office. The Company redesigned its bill presentation, and the Company's bill print and mailing hardware and software would have required upgrades, if not replacement, to continue operation and to accommodate the new bill format. The Company's onsite equipment was at its end of life and could not have supported the Company's new paper size, print format, envelopes, or color graphics and graphs. The Company now has redundancy in that the Company's outsource vendor has multiple sites that our bill print functionality can fail over to if/when there are technical or equipment issues. The Company's in-house process did

not have this capability and if/when issues occurred, the bill print operation would stop until the system could be recovered, or the equipment could be repaired. Finally, the Company's outsource vendor has the ability to ensure over 70% of the bills are printed and mailed the same day whereas in-house, bills could only be mailed the following day.

Q. 23 Why did the Company decide to change its bill presentment?

A. 23 The Company's bill had been in the same format since the 1990's and was using non-standard paper size. The prior systemic configurations did not allow for customer friendly presentation. The new bill presentment allows for multiple on-bill messages and comparison data for monthly usage. Finally, the Company's print vendor has state-of-the-art equipment and capabilities, and the Company can now target sub populations in order to provide tailored messaging to impacted and/or selected customers. For example, the Company plans to utilize this by having on bill messaging for Graham County Utility customers when they become part of the Southwest Gas family after Commission approval.

Q. 24 What are the expected annual costs for the outsourcing of the bill print and mail function?

A. 24 The Company anticipates a cost of approximately $9.5 million per year in O&M expense.

Q. 25 Are the costs for outsourcing the bill print and mail function reasonable and prudent, and appropriate for inclusion in the rates authorized in this proceeding?

A. 25 Yes. As discussed above, the bill print and mail function is an essential part of

the Company's business processes. Company witness Randi L. Cunningham addresses the adjustment to the Company's cost of service in her prepared direct testimony.

VII. CONCLUSION

Q. 26 Does this conclude your prepared direct testimony?

A. 26 Yes.

Summary of Qualifications
Michelle L. Ansani

I graduated from University of Phoenix, with a Bachelor of Science in Management and graduated from Boston University, with a Master of Science in Risk Management. I am currently attending Walden University, at the dissertation stage of a PhD in Industrial/Organizational Psychology. I am a member of the Society for Industrial and Organizational Psychology, I have a certification in Human Resource Management and am certified in Business Process Management. In the community, I serve as the chairperson of the board of directors of Junior Achievement.

Prior to joining Southwest Gas, I worked in Financial Services for 24 years. I was employed at HSBC while earning my bachelor's degree, working in the Credit Card division as Director of Customer Service. In 2012, Capital One purchased the domestic credit card portfolio and I became the Credit Card Ombudsman for the acquired HSBC portfolio and the Capital One portfolio. In this position I was the key business point of contact for federal agencies, including the Department of Treasury, Department of Justice, Office of the Comptroller of Currency, and the Consumer Financial Protection Bureau. I was also the main business contact for all state government agencies, as well as the office of attorneys general. In this role, I was directly responsible for approximately 2,500 tier 2/escalated complaint analysis employees and 200 tier 3/legal and regulatory complaint analysis employees. For the entire company (including Credit Cards, Retail Bank, Commercial and Mortgage Loans), I oversaw all complaint research, analysis, and response for the Sales Practices Exam conducted by the Office of the Comptroller of Currency, launched in 2016, after the Wells Fargo fraudulent sales practices issue occurred. This role included participating in depositions and providing testimony on

findings, as well as determining and conveying strategies and next steps for remediation and for future account handling practices.

In 2019, I joined Southwest Gas as the Director of Call Center and Back Office. A few months later, I assumed responsibility for managing bill print operations and became the key business lead and stakeholder for Project Horizon. My roles and responsibilities include managing the day-to-day operations of the call center, exceptions processing, and bill print production. Included in this role is serving as a key member of leadership responsible for the strategy and oversight of the end user/customer experience, account handling practices. Additionally, my team partners across the organization to coordinate account related messaging to customers in all channels including the Company's website, IVR, monthly bills, outbound calling, letters, social media, and MyAccount.

As the lead business stakeholder, I was responsible for decisions concerning system functionality and customer experience. I was also the lead for the Business Readiness team responsible for ensuring all 1,400 users were trained and all 52 departments had necessary practices and protocol in place for the conversion and post-conversion implementation.

When the COVID-19 pandemic began, I also assumed oversight of account handling practices, focused on customer education and support, as it relates to financial needs and account management. Additionally, I have the responsibility of tracking, reporting, and analyzing customer account trends and behaviors. This oversight helps the Company understand customer needs and resiliency, as well as help provide proactive, predictive customer interventions and outreach.

In August 2021, I was promoted to my current position of Vice President/Customer Engagement where I assumed responsibility for the Energy Solutions, Customer Engagement and Corporate Communications functions in addition to the Call Center and Back Office function discussed above.

Tab I

Direct Testimony
of
Ann E. Bulkley

IN THE MATTER OF
SOUTHWEST GAS CORPORATION
Docket No. G-01551A-21-0368

PREPARED DIRECT TESTIMONY
OF
ANN E. BULKLEY

ON BEHALF OF
SOUTHWEST GAS CORPORATION

DECEMBER 3, 2021

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of
Prepared Direct Testimony
of
Ann E. Bulkley

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Exhibit No._(AEB-3)	Constant Growth DCF Model
Exhibit No._(AEB-4)	Capital Asset Pricing Model / Empirical Capital Asset Pricing Model – Value Line and Bloomberg Beta
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Exhibit No. _(AEB-15)	Moody's Credit Analysis
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Exhibit No._(AEB-18)	Fair Value Rate of Return

BEFORE THE ARIZONA CORPORATION COMMISSION

Prepared Direct Testimony

of

Ann E. Bulkley

I. INTRODUCTION AND OVERVIEW

Q. 1 What is your name, business address, and position?

A. 1 My name is Ann E. Bulkley. I am employed by Concentric as a Senior Vice President. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. 2 On whose behalf are you submitting this prepared direct testimony?

A. 2 I am submitting this prepared direct testimony (Direct Testimony) before the Arizona Corporation Commission (the ACC or Commission) on behalf of Southwest Gas Corporation (Southwest Gas or Company).

Q. 3 Please describe your educational background, as well as your business and professional experience.

A. 3 I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with more than 25 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. I have included

my resume and a summary of testimony that I have filed in other proceedings as Appendix A to this testimony.

Q. 4 Please describe Concentric's activities in energy and utility engagements.

A. 4 Concentric provides financial and economic advisory services to many and various energy and utility clients across North America. Our regulatory, economic, and market analysis services include utility ratemaking and regulatory advisory services; energy market assessments; market entry and exit analysis; corporate and business unit strategy development; demand forecasting; resource planning; and energy contract negotiations. Our financial advisory activities include buy and sell-side merger, acquisition and divestiture assignments; due diligence and valuation assignments; project and corporate finance services; and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues on behalf of clients throughout North America.

Q. 5 Please describe the purpose of your Direct Testimony.

A. 5 The purpose of my Direct Testimony is to present evidence and provide a recommendation regarding the appropriate Return on Equity (ROE)[1] and to provide an assessment of the capital structure to be used for ratemaking purposes. My Direct Testimony also provides evidence and a recommendation as to the appropriate Fair Value Rate of Return (FVROR) and to the reasonableness of the Company's proposed Fair Value Rate

[1] Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "cost of equity."

Base (FVRB). My analyses and recommendations are supported by the data presented in Exhibit No. ___(AEB-1) through Exhibit No._(AEB-18), which I or others under my supervision have prepared.

Q. 6 Please provide a brief overview of the analyses that led to your ROE recommendation.

A. 6 As discussed in more detail in Section VI, in developing my ROE recommendation, I applied the Discounted Cash Flow (DCF) model, the Capital Asset Pricing Model (CAPM), and a Risk Premium approach. I also considered several additional risk factors that affect the Company's required ROE, including: (1) Flotation costs; (2) the Company's capital expenditure requirements; (3) the regulatory environment in which the Company operates; and (4) the Company's adjustment mechanisms. Finally, I considered the Company's proposed capital structure as compared to the capital structures of the proxy companies. While I did not make any specific adjustments to my ROE estimates for any of these factors, I did take them into consideration in aggregate when determining where the Company's cost of equity falls within the range of analytical results.

Q. 7 Are you sponsoring any required filing schedules?

A. 7 Yes. I sponsor Schedules A-3, and Schedules D-1 through D-4.

Q. 8 What are your conclusions regarding the appropriate cost of equity and FVROR for Southwest Gas?

A. 8 My analyses indicate that Southwest Gas's Cost of Equity should be within a range from 9.90 percent to 10.50 percent. Considering the results of the analyses summarized in Figure 1 and discussed in greater detail in the

remainder of my Direct Testimony, I believe that the Company's requested ROE of 9.90 percent is reasonable and may be a conservative estimate of the cost of equity. The Company's proposed return on the Fair Value Increment of 0.00 percent is well below reasonable estimates of the minimum rate of return that should be applied to the fair value increment and results in an FVROR of 5.48 percent.

Q. 9 How is the remainder of your Direct Testimony organized?

A. 9 Section II provides a summary of my analyses and conclusions. Section III reviews the regulatory guidelines pertinent to the development of the cost of capital. Section IV discusses current and projected capital market conditions and the effect of those conditions on Southwest Gas's cost of equity in Arizona. Section V explains my selection of a proxy group of natural gas utilities. Section VI describes my analyses and the analytical basis for the recommendation of the appropriate ROE for Southwest Gas. Section VII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for Southwest Gas in this case. Section VIII discusses the capital structure of the Company as compared with the proxy group. Section IX presents my conclusions and recommendations for the market cost of equity. Section X discusses my analysis of the FVROR as recently applied by the Commission. Section XI discusses the estimation of the FVROR.

II. SUMMARY OF ANALYSES AND CONCLUSIONS

Q. 10 Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A. 10 In developing my recommended ROE for Southwest Gas, I considered the following:

- The *Hope* and *Bluefield* decisions[2] that established the standards for determining a fair and reasonable allowed ROE, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.
- The effect of current and projected capital market conditions on investors' return requirements.
- The results of several analytical approaches that provide estimates of the Company's cost of equity, including the Constant Growth form of the DCF model, the CAPM, and the Risk Premium Approach. The Company's regulatory, business, and financial risks relative to the proxy group of comparable companies, and the implications of those risks.[3] This includes: (1) Flotation Costs; (2) the Company's capital expenditure requirements; (3) the regulatory environment in which the Company operates; and (4) the Company's adjustment mechanisms.

Q. 11 Please explain how you considered those factors.

A. 11 After considering these factors and the results of my analyses, I relied on the range of results produced by the Constant Growth DCF model, the CAPM and ECAPM and a Risk Premium analysis. As shown in Figure 1, these ROE estimation models produce a wide range of results. My

[2] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944); Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia, 262 U.S. 679 (1923).

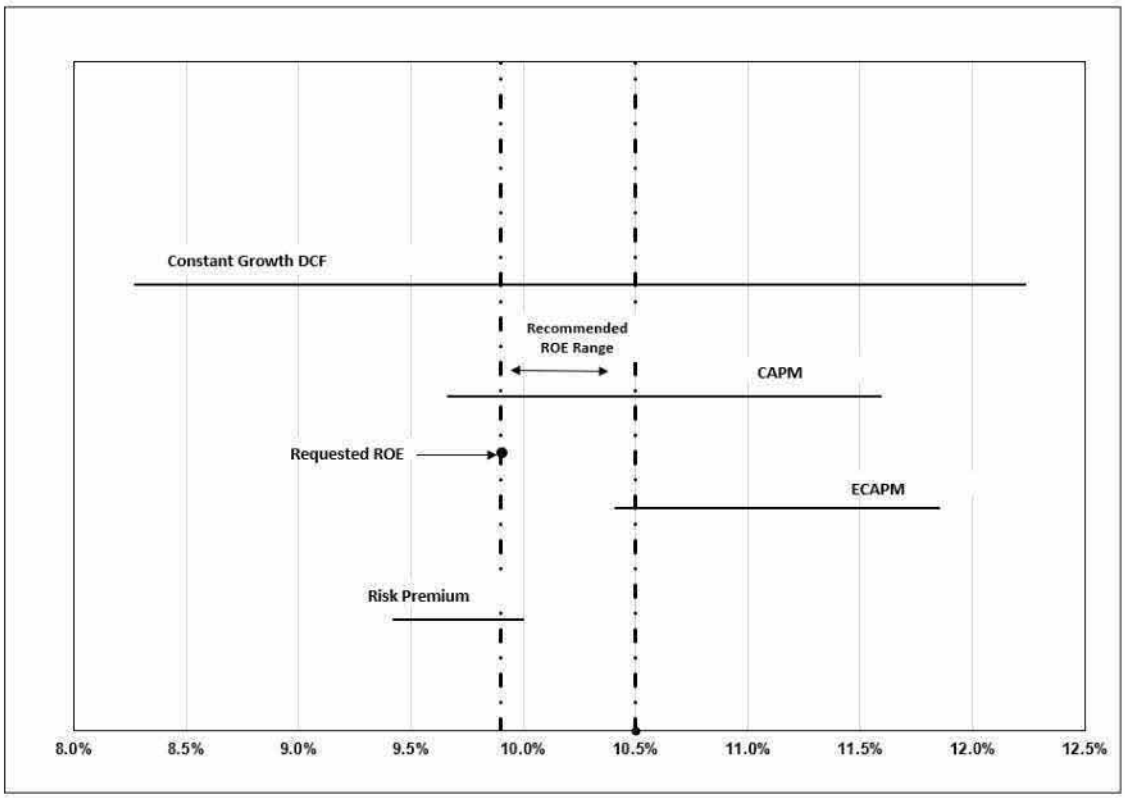
[3] The selection and purpose of developing a group of comparable companies will be discussed in detail in Section V of my Direct Testimony.

conclusion as to where, within that range of results, Southwest Gas's cost of equity falls is based on my assessment of market conditions, and the Company's business and financial risk relative to the proxy group. Although the companies in my proxy group are generally comparable to Southwest Gas, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's business and financial risk in the aggregate in comparison to that of the proxy group companies when determining where the Company's ROE falls within the reasonable range of analytical results to account for any residual differences in risk.

Q. 12 Please summarize the results of the ROE estimation models that you considered to establish the range of ROEs for Southwest Gas.

A. 12 Figure 1 summarizes the range of results produced by the Constant Growth DCF, CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses.

Figure 1: Summary of Cost of Equity Analytical results [4]



As shown in Figure 1 (and in Exhibit Nos._(AEB-3) through (AEB-8), the range of results across all methodologies is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies. As a result, my ROE recommendation considers the range of results of the Constant Growth DCF model, as well as the results of the CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses. My ROE recommendation also considers Southwest Gas's company-specific risk factors and current and prospective capital market conditions.

[4] The analytical results reflect the results of the Constant Growth DCF analysis excluding the results for individual companies that did not meet the minimum threshold of 7.00 percent.

Q. 13 What is your recommended ROE for Southwest Gas?

A. 13 Considering the analytical results presented in Figure 1, as well as the level of regulatory, business, and financial risk faced by Southwest Gas's natural gas operations in Arizona relative to the proxy group, I believe a range from 9.90 to 10.50 percent is reasonable. This recommendation reflects the mean to mean-high range of the DCF models for the proxy group companies, the range of other analytical approaches and the relative risk of Southwest Gas's natural gas operations in Arizona as compared to the proxy group, and current capital market conditions. Within that range, the Company is requesting an ROE of 9.90 percent, which is the low end of my recommended range and is reasonable based on current market conditions, the results of the ROE estimation models, and the risk factors discussed throughout my Direct Testimony.

Q. 14 Please summarize the analysis you conducted in determining that Southwest Gas's requested capital structure is reasonable and appropriate.

A. 14 Based on the analysis presented in Section VIII of my Direct Testimony, I conclude that Southwest Gas's proposed 51.00 percent common equity is reasonable. To determine if Southwest Gas's requested capital structure was reasonable, I reviewed the capital structures of the utility subsidiaries of the proxy companies. As shown in Exhibit No._(AEB-16), the results of that analysis demonstrate that the average equity ratios for the utility operating companies of the proxy group range from 47.44 percent to 60.04 percent, with an average of 55.56 percent. Comparing the recommended equity ratio to the proxy group demonstrates that the Company's requested

equity ratio is significantly below the average equity ratio for the utility operating subsidiaries of the proxy group companies. The increased leverage in the Company's capital structure as compared with the proxy group companies demonstrates greater overall risk than the proxy group companies which would reasonably be reflected in the investor-required ROE. Further, the Company's proposed equity ratio is reasonable considering the negative effect of federal tax reform legislation and COVID-19 on the cash flows and credit metrics of regulated utilities.

Q. 15 How did you estimate the FVROR?

A. 15 I estimated the FVROR using the approach relied on by the Commission in several recent rate cases. In applying that method, I also conclude that the minimum rate of return that should be applied to the fair value "increment" of rate base is the real risk-free rate of return. As discussed in more detail in Section VI, I estimate the real risk-free rate of return to be approximately 1.07 percent. However, the Company is proposing a return of 0.00 percent on the FVI, which is significantly lower than reasonable estimates of the minimum rate of return that should be applied to the fair value increment. As shown in Figure 2 and Figure 3, the result of that analysis is a FVROR of 5.48 percent.

Figure 2: Estimation of the FVRB

Capital	$ Millions	Percent	Weighted FVRB
OCRB	$2,642.068	50.00%	$ 1,321.034
RCND	$4,186.764	50.00%	$ 2,093.382
FVRB			$ 3,414.416

Figure 3: Estimation of the FVROR

Capital	$ Millions	Percent	Cost Rate	Weighted Cost Rate
Long-Term Debt	$1,294.613	37.92%	4.15%	1.57%
Common Equity	$ 1,347.455	39.46%	9.90%	3.91%
Fair Value Increment	$ 772.348	22.62%	0.00%	0.00%
Total	$ 3,414.416			5.48%

III. REGULATORY GUIDELINES

Q. 16 Please describe the guiding principles to be used in establishing the cost of capital for a regulated utility.

A. 16 The United States Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the result reached, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[5]

Q. 17 Has the Commission provided similar guidance in establishing the appropriate return on common equity?

A. 17 Yes. The Commission has noted that under the Arizona Constitution, a public utility is entitled to a fair return on the fair value of its property devoted to public uses. The Commission is required to find the fair value of the utility's property and to use that value to establish just and reasonable rates.[6]

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[5] *Hope*, 320 U.S. 591 (1944); *Bluefield*, 262 U.S. 679 (1923).
[6] *See, e.g., Arizona Corp. Comm'n v. Ariz. Water Co.*, 85 Ariz. 198, 203, 335 P.2d 412, 415 (1959).

Q. 18 Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A. 18 An ROE that is adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable natural gas service while maintaining its financial integrity. To the extent the Company is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders are disadvantaged.

Q. 19 Is a utility's ability to attract capital also affected by the ROEs that are authorized for other utilities?

A. 19 Yes. Utilities compete directly for capital with other investments of similar risk, which include other natural gas and electric utilities. Therefore, the ROE awarded to a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for other investments of comparable risk, investors have an incentive to direct their capital to those investments. Thus, an authorized ROE significantly below authorized ROEs for other natural gas and electric utilities can inhibit the utility's ability to attract capital for investment in Arizona.

Furthermore, because Southwest Gas has natural gas operations in Arizona, Nevada and California, Southwest Gas's operations in Arizona compete with the operations in Nevada and California for discretionary investment capital. In determining how to allocate its finite discretionary capital resources, it would be reasonable for Southwest Gas to consider

the authorized ROE of each of its state operations. As shown in Figure 4, the Commission approved an ROE of 9.10 percent (along with a return on FVI of 0.18 percent) for Southwest Gas's natural gas operations in Arizona in Docket No. G-01551A-19-0055 which is the lowest authorized ROE of the states where Southwest Gas has natural gas operations.

Figure 4: Authorized ROE for Southwest Gas[7]

Company	State	Service Type	Order Date	ROE
Southwest Gas Corporation	Arizona	Natural Gas	12/9/20	9.10%
Southwest Gas Corporation	California	Natural Gas	3/25/21	10.00%
Southwest Gas Corporation	Nevada	Natural Gas	9/25/20	9.25%

Q. 20 What are your conclusions regarding regulatory guidelines?

A. 20 The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility services, a utility must have the opportunity to recover the return of, and the market-required return on, its invested capital. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions; doing so balances the long-term interests of the utility and its customers.

The financial community carefully monitors the current and expected financial condition of utility companies, and the regulatory framework in which they operate. In that respect, the regulatory framework is one of the most important factors in both debt and equity investors' assessments of risk. The Commission's order in this proceeding, therefore, should

[7] Sources: S&P Capital IQ Pro.

establish rates that provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms under a variety of economic and financial market conditions; (2) sufficient to ensure good financial management and firm integrity; and (3) commensurate with returns on investments in enterprises with similar risk. To the extent Southwest Gas is authorized the opportunity to earn its market-based cost of capital, the proper balance is achieved between customers' and shareholders' interests.

IV. CAPITAL MARKET CONDITIONS

Q. 21 Why is it important to analyze capital market conditions?

A. 21 The ROE estimation models rely on market data that are either specific to the proxy group, in the case of the DCF model, or to the expectations of market risk, in the case of the CAPM. The results of the ROE estimation models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE that is established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates and interest rates, in the ROE estimation models to estimate the required return for the subject company.

As discussed in the remainder of this section, analysts and regulatory commissions have concluded that current market conditions have affected the results of the ROE estimation models. As a result, it is important to consider the effect of these conditions on the ROE estimation models when determining the appropriate range and recommended ROE for a future period. If investors do not expect current market conditions to be sustained

in the future, it is possible that the ROE estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is very important to consider projected market data to estimate the return for that forward-looking period.

Q. 22 What factors are affecting the cost of equity for regulated utilities in the current and prospective capital markets?

A. 22 The cost of equity for regulated utility companies is being affected by several factors in the current and prospective capital markets, including: (1) the dramatic shifts in market conditions during 2020, the economic recovery in 2021, and the expectations for 2022, and the effect of these changes on the assumptions used in the ROE estimation models; and (2) effects of Federal tax reform on utility cash flows. In this section, I discuss each of these factors and how they affect the models used to estimate the cost of equity for regulated utilities.

Q. 23 What effect do current and prospective market conditions have on the cost of equity for Southwest Gas?

A. 23 The economy is currently in the recovery phase of the business cycle. During the recovery phase, interest rates are expected to increase, and investors are expected to rotate into cyclical sectors that stand to benefit the most from the economic recovery. In fact, over the past few months, the yield on the 30-year Treasury bonds and inflation have increased from the pandemic lows seen in 2020. Utilities, which are a defensive sector, have historically underperformed the market during periods of economic expansion. Therefore, investors are currently expecting utilities to underperform over the near-term, which means the share prices of utilities

will likely decline. A decline in share prices will increase the dividend yields of utilities and thus the cost of equity for utilities is expected to increase over the near-term. This is important because the cost of equity in this proceeding is being estimated for the period that Southwest Gas's rates will be in effect. Since the cost of equity is expected to increase over the near-term for utilities, ROE estimates based on current market conditions will understate the ROE during the period that the Company's rates will be in effect. For example, the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity for Southwest Gas over the near term.

A. Economic Recovery and Performance of the Utility Sector

Q. 24 Do recent economic projections indicate the expectation for a continued strong economic recovery in 2022?

A. 24 Yes. The Federal Open Market Committee ("FOMC") issued its Summary of Economic Projections in June 2021, where the FOMC's median projection for GDP growth from Q4 2021 to Q4 2022 is 3.8 percent.[8] The Congressional Budget Office ("CBO") issued an update to its outlook on economic conditions on July 1, 2021. In that report, the CBO projected strong GDP growth for 2021 and significant strength in overall economic conditions:

- Real GDP growth of 7.4 percent in 2021 and 3.1 percent in 2022, which is a significant change from the negative 2.4 percent growth rate in 2020;
- Inflation indicators at or above the 2.0 percent threshold in 2021 and continuing through 2031;

[8] Federal Open Market Committee, Summary of Economic Projections, September 22, 2021, at 2.

- Labor force expected to be restored to pre-pandemic levels in 2022; and
- Interest rates on federal borrowing increasing through 2031.[9]

Finally, investors expect increased inflation levels to persist into 2022. Goldman Sachs forecasts consumer price inflation, excluding food and energy costs, to still be above 4 percent when the Federal Reserve ends their tapering of bond purchases in 2022 which Goldman Sachs expects will result in the Federal Reserve increasing the Federal Funds rate twice in 2022.[10] Similarly, respondents to the recent CNBC Fed Survey, indicated the CPI is expected to rise 3.5 percent in 2022 which is an increase from the September Survey of 3.0 percent, and the yield on the 10-year Treasury Bond is expected to increase to 2.2 percent.[11] U.S. bond yields have already rebounded considerably in the past year, with 30-year Treasury bond yields up 81 basis points between April 1, 2020, and September 30, 2021. These trends indicate strong economic recovery over the next year, with robust consumer spending expected.

Q. 25 Please summarize the recent monetary policy of the Federal Reserve.

A. 25 In response to the COVID-19 pandemic, the Federal Reserve has:

- Decreased the Federal Funds rate twice in March 2020, resulting in a target range of 0.00 percent to 0.25 percent;
- Increased its holdings of both Treasury and mortgaged-back securities;

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[9] Congressional Budget Office, An Update to the Budget and Economic Outlook 2021 to 2031, July 2021.

[10] Kennedy, Simon. "Goldman Now Sees Fed Hiking Rates in July as Inflation Lingers." Bloomberg.com, Bloomberg, 30 Oct. 2021, https://www.bloomberg.com/news/articles/2021-10-30/goldman-now-sees-fed-hiking-rates-in-july-as-inflation-lingers.

[11] Liesman, Steve. "Investors Expect a Faster Pace for Fed Rate Hikes, CNBC Survey Shows." CNBC, CNBC, 2 Nov. 2021, https://www.cnbc.com/2021/11/02/investors-expect-a-faster-pace-for-fed-rate-hikes-cnbc-survey-shows.html.

- Started expansive programs to support credit to large employers – the Primary Market Corporate Credit Facility to provide liquidity for new issuances of corporate bonds; and the Secondary Market Corporate Credit Facility to provide liquidity for outstanding corporate debt issuances; and
- Supported the flow of credit to consumers and businesses through the Term Asset-Backed Securities Loan Facility.

In addition, Congress also passed the Coronavirus Aid, Relief, and Economic Security ("CARES") Act in March 2020, the Consolidated Appropriations Act, 2021 in December 2020, and the American Rescue Plan Act in March 2021, which included $2.2. trillion, $900 billion and $1.9 trillion, respectively, in fiscal stimulus aimed at also mitigating the economic effects of COVID-19. These expansive monetary and fiscal programs mitigated the economic effects of the COVID-19 pandemic and are currently providing additional support as the economy recovers from the COVID-19 recession.

Q. 26 Has the Federal Reserve indicated that it will start to slowly end some of the accommodative policy tools that were used to support the economy during COVID-19?

A. 26 Yes. Most recently, at the November 3, 2021 meeting, the Federal Reserve noted that given the substantial improvement in the economy, it plans to begin reducing asset purchases of Treasuries by $10 billion and mortgage-backed securities by $5 billion on a monthly basis starting in November.[12] This follows several Federal Reserve statements that demonstrate the intention to end accommodative policies. Specifically, at the September

[12] Federal Reserve, Press Release, November 3, 2021.

22, 2021 meeting, half of the 18 members of the FOMC forecasted once increase in the federal funds rate by the end of 2022 with a median federal funds rate projection of 1.0 percent by 2023 (i.e., three to four increases in the federal funds rate).[13]

Further, on June 2, 2021, the Federal Reserve announced that it plans to start selling the corporate bonds and exchange-traded funds (ETF) that it purchased to support the corporate bond market during the COVID-19 pandemic.[14] The process will be gradual, but the Federal Reserve expects to complete the sale of its corporate bond holdings by the end of 2021.

Q. 27 What effect, if any, will the Federal Reserve's accommodative monetary policy have on long-term interest rates over the near-term?

A. 27 The Federal Reserve has acknowledged that they will keep the federal funds rate near zero for at least the next year with, as noted above, the possibility of rate increases towards the second half of 2022. The goal of the accommodative monetary policy is to achieve the Federal Reserve's dual mandate of maximum employment and stable prices. However, while the current accommodative monetary policy will keep short-term interest rates low for at least the next year, it does not have a direct effect on long-term interest rates. Long-term interest rates can increase even though monetary policy is accommodative. In fact, one of the leading indicators used by investors to determine what stage of the business cycle the economy is in is to review the yield curve which shows the difference

[13] Federal Reserve, Summary of Economic Projections, September 22, 2021.

[14] Scaggs, Alexandra. "The Federal Reserve Is Going to Sell Its Corporate Bond Portfolio. What It Means." The Federal Reserve Will Sell Its Corporate Bond Portfolio. What It Means., Barrons, 3 June 2021, www.barrons.com/articles/federal-reserve-corporate-bond-portfolio-51622679701.

between long-term and short-term interest rates. A flat or inverted yield curve is when long-term interest rates are equivalent to or less than short-term interest rates and usually occurs prior to a recession. Conversely, a steepening yield curve is when the difference between long-term interest rates and short-term interest rates is increasing and indicates that the economy is entering a period of economic expansion and inflation following a recession.[15]

Q. 28 Have you reviewed the yield curve to determine investors' expectations regarding the economy over the near-term?

A. 28 Yes, I have. I reviewed the yield curve, calculated as the difference between the yield on the 10-year Treasury Bond and the yield on the 2-year Treasury Bond from January 2015 through October 2021. I selected the 10-year Treasury Bond yield to represent long-term interest rates and the yield on the 2-year Treasury Bond to represent short-term interest rates. As shown in Figure 5, the yield curve has been steepening, with the spread increasing to approximately 160 basis points in April 2021, which is a level not seen since the middle of 2015. The 30-day average spread as of October 31, 2021, was 118 basis points. The 30-day average yield spread as of December 9, 2020, the date of the Commission's decision in the Company's last rate case, was approximately 72 basis points. Comparing these two periods indicates the expectations for greater inflation in the current economic conditions, as compared to that seen in

[15] "What is a yield curve", Fidelity.com. https://www.fidelity.com/learning-center/investment-products/fixed-income-bonds/bond-yield-curve

capital markets at the time of the Commission's decision in the Company's last general rate case proceeding.

The steepening of the yield curve indicates that investors expect economic growth and inflation to increase in the near-term, and as a result they are rotating out of long-term government bonds to avoid being locked into to low interest rates for the long-term. The steep yield curve signals that higher yields are required by investors to invest in long-term government bonds. Over the near and long-term, long-term interest rates are still expected to continue to increase and thus the yield curve will continue to steepen.[16]

[16] *See* Landsman, Stephanie. "Inflation Breakout Will Drive 10-Year Treasury Yields above 2% in Coming Months, Wells Fargo Predicts." CNBC, CNBC, 18 June 2021, www.cnbc.com/2021/06/18/inflation-breakout-will-soon-drive-10-year-yields-above-2percent-wells-fargo.html and Domm, Patti. "The Mystifying Bond Market Behavior Could Last All Summer." *CNBC*, CNBC, 17 July 2021, www.cnbc.com/2021/07/16/the-mystifying-bond-market-behavior-could-last-all-summer.html.

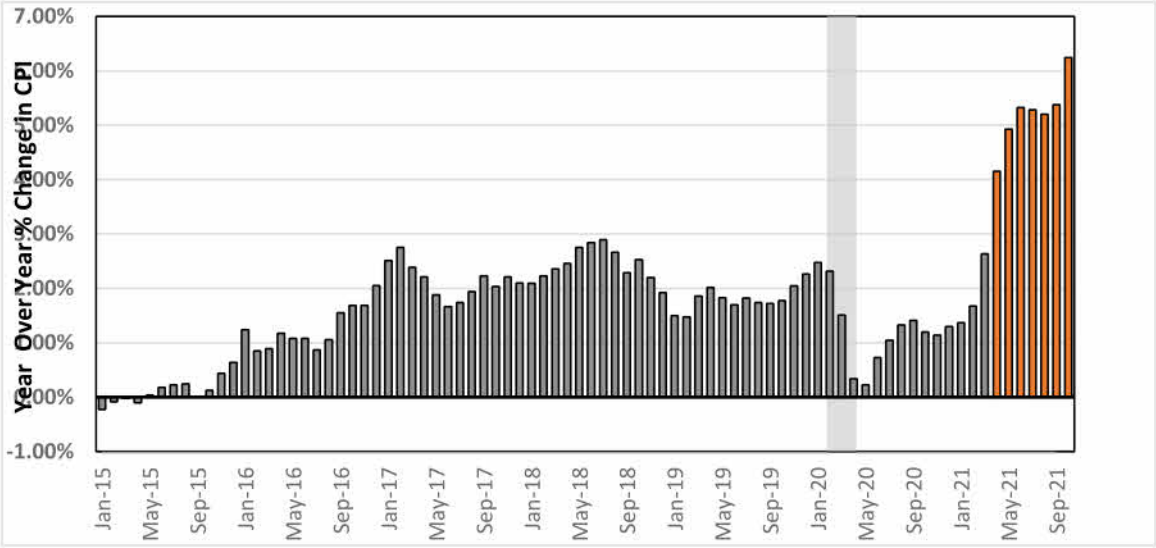
Figure 5: 10-year Treasury Bond Yield Minus 2-year Treasury Bond Yield – January 2015 – October 2021[17]

Q. 29 Has inflation increased as predicted by the steepening of the yield curve?

A. 29 Yes, it has. As shown in Figure 6, the year over year (YOY) change in the Consumer Price Index (CPI) published by the Bureau of Labor statistics has increased steadily in 2021 rising from 1.37 percent in January to 6.24 percent in October. The 6.24 percent YOY in the CPI in October 2021 is significantly greater than any level seen since January 2015. Therefore, inflation has increased as predicted by the steeping of the yield curve. If inflation continues to increase as expected, then long-term interest rates will also increase as investors require higher yields to compensate for the increased risk of inflation.

[17] Federal Reserve Bank of St. Louis, 10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity [T10Y2Y], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/T10Y2Y, October 31, 2021.

Figure 6: Consumer Price Index – Year over Year Percent Change – January 2015 – October 2021[18]



Q. 30 What have equity analysts said about long-term government bond yields?

A. 30 Several equity analysts have noted that they expect economic conditions to continue to improve and thus the yields on long-term government bonds to continue to increase through the end of 2021 and into 2022. For example, Bloomberg recently noted that forecasters were projecting the yield on the 10-year Treasury Bond will increase to approximately 1.8 percent by the end of 2021.[19] Similarly, strategists at CitiGroup Inc. recently noted that they expect the yield of the 10-year Treasury Bond to increase to 2 percent in 2022.[20]

In terms of equity recommendations considering the expected increase in long-term government bond yields, Federated Hermes prefers cyclical

[18] Source: Bureau of Labor Statistics, shaded area indicates the COVID-19 pandemic recession.
[19] Galouchko, Ksenia. "Citi Cuts Tech-Heavy U.S. Stocks on Treasury Yield Surge Call." Bloomberg.com, Bloomberg, 4 Aug. 2021, https://www.bloomberg.com/news/articles/2021-08-04/citi-cuts-tech-heavy-u-s-stocks-on-treasury-yield-surge-call.
[20] *Ibid.*

industries such as financials and industrials. When cyclical stocks are favored, historically the utility sector underperforms.

> "We like financials and industrials and materials and small cap and yes, international stocks in that environment," he said. "But I think the overall equity index will have every ability to move higher in that pro-cyclical, higher inflationary environment just like it did last September through April." [21]

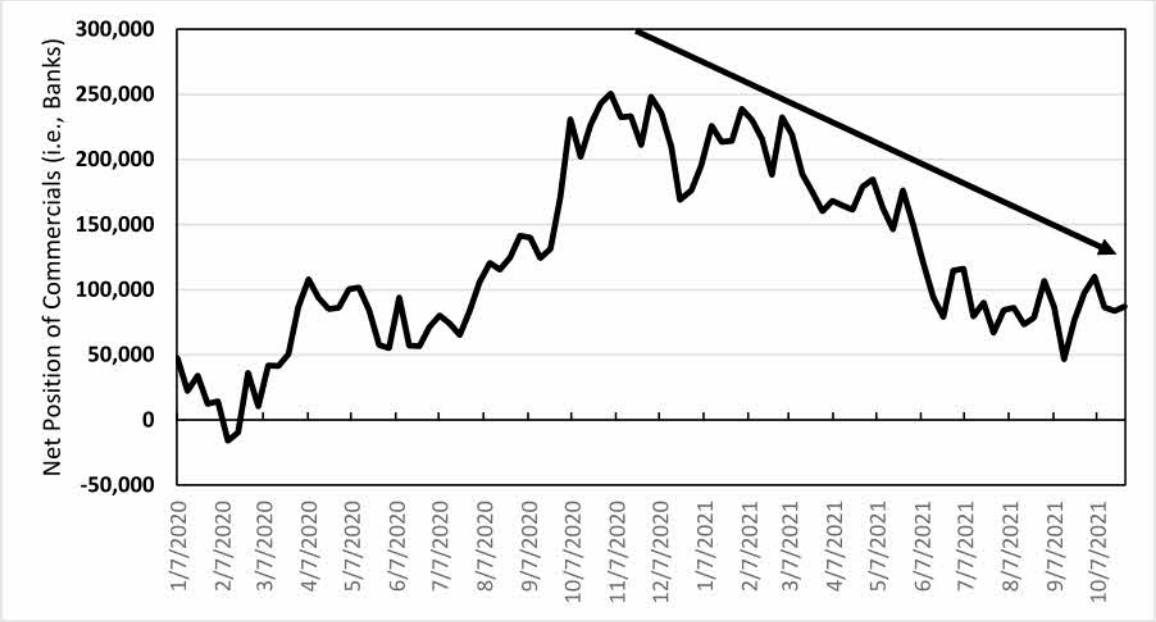
Q. 31 Have you considered any additional indicators which may imply long-term interest rates are expected to increase?

A. 31 Yes, I have. I considered the net position of commercials (i.e., banks) in U.S. Treasury Bond futures contracts as reported in the Commitment of Traders (COT) Report produced by the Commodity Futures Trading Commission (CFTC). A net position is defined as the total number of long positions in a futures contract minus the total number of short positions in a futures contract. A long position means that an investor agrees to purchase an asset in the future at a specified price today and therefore profits if the price of the underlying asset increases. Conversely, short position is when an investor agrees to sell an asset at a time in the future at a specified price today and profits if the price of the asset declines. Therefore, if banks are increasing the number of short positions and thus have a declining net position, the banks are assuming that the price of the asset will decline. As shown in Figure 7, the net position of banks in U.S. Treasury Bonds has been decreasing since the end of 2020. Therefore, banks are forecasting a decrease in the price of long-term government

[21] Gurdus, Lizzy. "Citi Calls for 10-Year at 2%. Here Are Ways to Play a High-Rate Environment." CNBC, CNBC, 5 Aug. 2021, www.cnbc.com/2021/08/05/citi-calls-for-10-year-at-2percent-here-are-ways-to-play-a-high-rate-environment.html.

bonds and thus the yields (which are inversely related to the price) to increase over the near-term.

Figure 7: Commitment of Traders Report – Net Position of Commercials (i.e., Banks) in U.S. Treasury Bond Futures Contracts[22]



Q. 32 How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A. 32 Equity analysts project that utilities are expected to continue to underperform the broader market as interest rates increase. For example, in a recent article, Barron's conducted its Big Money poll of professional investors regarding the outlook for the next twelve months. Approximately 60 percent of respondents projected the yield on the 10-year Treasury Bond will be 2.00 percent or greater at the end of the next twelve months which is an increase from the current 30-day average 10-year Treasury

[22] Commitment of Traders Report, as of October 30, 2021 - https://www.cftc.gov/MarketReports/CommitmentsofTraders/HistoricalCompressed/index.htm

Bond yield as of September 30, 2021 of 1.35 percent.[23] Furthermore, the professional investors surveyed by Barron's selected the utility sector as the sector which will perform the worst over the next twelve months indicating they are projecting that utilities will underperform the broader market in 2022.

Other equity analysts concur with this conclusion. Fidelity recently recommended underweighting the utility sector and noted that "[w]eak fundamentals and high valuations could be headwinds for utilities and real estate, especially if rates increase."[24] In its 2021 Midyear Outlook, Wells Fargo classified the utility sector as "most unfavorable" as economic growth continues to rebound.[25] Finally, Charles Schwab has classified the utilities sector overall as "Underperform," noting negatives for the sector that include "interest rates are expected to recover from recent decline" and "economic recovery makes the sector less attractive, relative to other sectors".[26]

Q. 33 How has the utility sector performed historically during periods where the yield curve is steepening, and the economy is in the early stage of the business cycle?

A. 33 In a recent report, Fidelity noted that the utility sector has historically been one of the worst performing sectors during the early phase of the business

[23] Jasinski, Nicholas. Stocks Are Still the Place to Be, Our Exclusive Big Money Poll Finds. Barron's, 16 Oct. 2021, https://www.barrons.com/articles/stock-market-covid-economy-outlook-51634312012?mod=hpsubnav&tesla=y.

[24] Fidelity, "Q4 2021 sector scorecard," October 27, 2021.

[25] Well Fargo Investment Institute, 2021 Midyear Outlook, June 2021.

[26] Charles Schwab, "Schwab Sector Insights: A view on 11 Equity Sectors," September 30, 2021.

cycle with a geometric average return of -10.5 percent.[27] This conclusion is further supported by studies conducted by both Goldman Sachs and Deutsche Bank that examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (i.e., increases in bond yields resulted in the decline of utility share prices).[28] This is important because if the utility sector underperforms over the near term, and prices of utility stocks decline, then the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity for Southwest Gas over the near term or the period that Company's rates will be in effect.

Q. 34 Why do utilities historically underperform in the early stage of the business cycle?

A. 34 Utilities are considered a defensive sector and are therefore affected less by changes in the business cycle relative to other market sectors since consumers need energy during all phases of the business cycle. Therefore, utilities tend to perform well during periods of uncertainty where the prospect of slowing economic growth increases. As Fidelity noted, historically utilities outperform the market in latter and recession phases of the business cycle.[29] This relationship mostly held during the past few years as the share prices of utilities were bid up to unsustainable levels as

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[27] Fidelity Investments, "The Business Cycle Approach to Equity Sector Investing," 2020.

[28] Lee, Justina. "Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks." Bloomberg.com, 11 Mar. 2021, www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks.

[29] Fidelity Investments, "The Business Cycle Approach to Equity Sector Investing," 2020.

investors responded to economic uncertainty due to the trade war between the U.S. and China and ultimately the COVID-19 pandemic.

Q. 35 How do the recent valuations of utilities compare to historical averages?

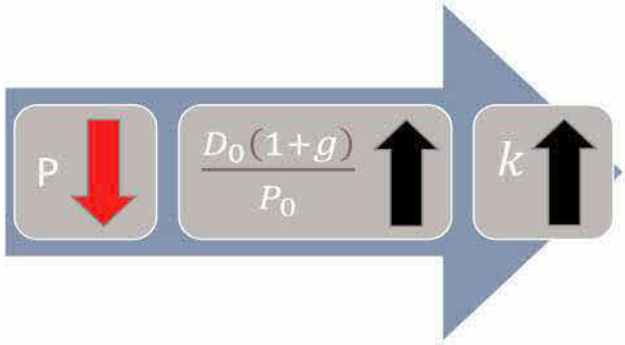
A. 35 The utility sector's valuations remain above the long-term historical average. According to a recently published report by Yardeni Research, Inc., the forward price-to-earnings ("P/E") ratio for the S&P Utilities Index is approximately 20.3 which is higher than it has been historically.[30] It is not reasonable to expect utilities to maintain P/E ratios that are above long-term averages over the long term.

Q. 36 What is the effect of expected market conditions on the DCF model?

A. 36 If the utility sector underperforms over the near term as expected, and prices of utility stocks decline, then the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity. For example, Figure 8 below summarizes the effect of a decline in share price on the dividend yield and thus the cost of equity estimated by the Constant Growth DCF model.

[30] Yardeni Research, Inc. "S&P 500 Industry Briefing: Utilities." September 15, 2021, p. 5.

Figure 8: The Effect of a decline in Stock Prices on the Constant Growth DCF model



A decline in stock prices will increase the dividend yields and thus the estimate of the ROE produced by the Constant Growth DCF model. Therefore, this expected change in market conditions supports consideration of the range of ROE results produced by the mean to mean-high DCF results since the mean DCF results would likely understate the cost of equity during the period that the Company's rates will be in effect. Moreover, prospective market conditions warrant consideration of other ROE estimation models such as the CAPM, ECAPM and Risk Premium, which may better reflect expected market conditions. For example, two out of three inputs to the CAPM (i.e., the market risk premium and risk-free rate) are forward-looking.

B. Effect of Tax Reform on the ROE and Capital Structure

Q. 37 Should the effect of tax reform be considered in determining the cost of equity for the Company?

A. 37 Yes. The credit rating agencies have commented on the adverse effect of the Tax Cuts and Jobs Act (TCJA) on the cash flows of regulated utilities.[31] Specifically, the TCJA has reduced utility revenues due to lower federal income taxes in the revenue requirement, the end of bonus depreciation, and the requirement to return "unprotected" excess accumulated deferred income taxes. This change in revenue reduced funds from operations metrics across the sector, and absent regulatory mitigation strategies, has led to weaker credit metrics and negative ratings actions for some utilities.[32]

Q. 38 What has been the effect of the TCJA on utility financial risk?

A. 38 The TCJA reduced utilities' financial flexibility through the loss of bonus depreciation and the return of excess ADIT to customers. After the TCJA was passed, credit rating agencies initially revised the outlook on utilities.

Q. 39 Does tax reform continue to present challenges for utilities?

A. 39 Yes. The TCJA resulted in a permanent change in the cash flow metrics of utilities. Credit rating agencies have recognized this change in metrics and have proposed that increasing ROEs and the use of thicker equity layers can improve credit metrics. Since 2018, Moody's has downgraded the

[31] Standard & Poor's Ratings, "Industry Top Trends 2019, North America Regulated Utilities", November 8, 2018; FitchRatings, Special Report, What Investors Want to Know, "Tax Reform Impact on the U.S. Utilities, Power & Gas Sector", January 24, 2018.

[32] Ibid.

credit ratings of more than 30 utilities related in part to the TCJA beginning in June 2018 and continuing into 2021.

Q. 40 Did the Company experience a downgrade related to cash flow metrics resulting from tax reform?

A. 40 Yes. Southwest Gas was downgraded in January of 2021. Moody's downgrade of Southwest Gas was due to increasing debt needed to fund the Company's capital expenditures, regulatory lag as a result of the Company's most recent rate case decision in Arizona and the cash flow effects of the passage of tax reform in December 2017.[33] The downgrade of Southwest Gas by Moody's highlights the fact that the financial performance of Southwest Gas is heavily reliant on the financial performance of its natural gas operations in Arizona. As Moody's noted in its recent ratings action on Southwest Gas, Arizona is the Company's largest regulatory jurisdiction.[34] Thus, it is important that the Commission authorize an ROE and equity ratio for Southwest Gas in this proceeding that is considered credit supportive so as to avoid the possibility of future credit downgrades for Southwest Gas and its holding company, Southwest Gas Holdings, Inc.

[33] Moody's Investors Service, Rating Action: Moody's downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable, January 29, 2021.
[34] Ibid.

Q. 41 Have state regulatory commissions recognized that the TCJA has had an adverse impact on utility cash flows?

A. 41 Yes. The Oregon Public Utilities Commission ("Oregon PUC"),[35] the Wyoming Public Service Commission ("Wyoming PSC")[36] and the Utah Public Service Commission ("Utah PSC")[37] have acknowledged the negative effect of the TCJA on the cash flow of utilities.

Further, in a December 2019 order for Georgia Power Company, the Georgia Public Service Commission found it appropriate to authorize a higher equity ratio as a means to address the negative impacts of the TCJA:

> As pointed out by the Company, in April 2018, this Commission adjusted the Company's equity ratio upward from the 51%, which was previously approved in the 2013 Rate Case, to 55% as part of the Tax Cuts and Jobs Act settlement between the Company and Commission PIA Staff in Docket No. 36989 ("Tax Reform Settlement"). The equity adjustment approved in the Tax Reform Settlement was implemented to address the negative implications of tax reform, provide support for maintaining the Company's credit profile, and allow the Company timely access to capital markets and the ability to borrow at reasonable interest rates. Based on the evidence presented, the Commission finds and concludes that the Settlement Agreement's proposed capital structure of 56% common equity level is just and reasonable considering all the evidence presented and is necessary to avoid a credit rating downgrade.[38]

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[35] See In the Matter of Avista Corporation, dba Avista Utilities, Application for Authorization to Issue 3,500,000 Shares of Common Stock, Docket UF 4308, Order No. 19-067 (Feb. 23, 2019); In the Matter of Avista Corporation, dba Avista Utilities, Application for Authorization to Issue and Sell $600,000,000 of Debt Securities, UF 4313, Order No. 19-249 (July 30, 2019); In the Matter of Portland General Electric Company, Request for Authority to Extend the Maturity of an Existing $500 Million Revolving Credit Agreement, Docket UF 4272(3), Order No. 19-025 (Jan. 23, 2019).

[36] In the Matter of Questar Gas Company dba Dominion Energy Wyoming's Application for Approval of Amended Stipulation Previously Approved in Docket No. 30010-150-GA-16, Docket No. 30010-180-GA-18 (Record No. 15138) (Aug. 20, 2019).

[37] Report and Order, Docket No. 19-057-02, Dominion Energy Utah, February 25, 2020, at 6.

[38] Georgia Public Service Commission Docket No. 42516, Short Order Adopting Settlement Agreement as Modified, December 17, 2019, at 7-8.

C. Conclusion

Q. 42 Have state regulatory commissions considered market events and the utility's ability to attract capital in determining the equity **return?**

A. 42 Yes. In a recent rate case for Consumers Energy Company, the Michigan Public Service Commission ("Michigan PSC") noted that it is important to consider how a utility's access to capital could be affected in the near-term as a result of market reactions to global events like those that have occurred in the recent past.[39] Specifically, the Michigan PSC noted that:

> [i]n setting the ROE at 9.90%, the Commission believes there is an opportunity for the company to earn a fair return during this period of atypical market conditions. This decision also reinforces the belief, as stated in the Commission's March 29 order, "that customers do not benefit from a lower ROE if it means the utility has difficulty accessing capital at attractive terms and in a timely manner." These conditions still hold true based on the evidence in the instant case. The fact that other utilities have been able to access capital despite lower ROEs, as argued by many intervenors, is also a relevant consideration. *It is also important to consider how extreme market reactions to global events, as have occurred in the recent past, may impact how easily capital will be able to be accessed during the future test period should an unforeseen market shock occur. The Commission will continue to monitor a variety of market factors in future rate cases to gauge whether volatility and uncertainty continue to be prevalent issues that merit more consideration in setting the ROE.*[40]

The Michigan PSC references "global events" and the overall effect the events could have on the ability of a utility to access capital. Consistent with the Michigan PSC's views, it is important to consider current market conditions and the impact of those conditions on the access to and cost of

[39] Michigan Public Service Commission Order, Cause No. U-20697, Consumers Energy Company, December 17, 2020, at 165.
[40] *Id.*, at 43 (emphasis added).

capital, and to position utilities to be able to maintain access in rapidly changing market conditions.

Q. 43 What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A. 43 The important conclusions regarding capital market conditions are:

- As markets continue to rebound from the uncertainty and volatility that characterized capital markets in 2020 and interest rates continue to increase from the market lows in August 2020, it is reasonable that equity investors would require a higher return on equity to compensate for the additional risk associated with owning common stock. Likewise, if natural gas utilities continue to underperform the broader market, as expected by analysts, this will indicate additional risk associated with these investments.

- Investors' current expectations regarding the economy highlights the importance of using forward-looking inputs in the models used to estimate the cost of equity. Current utility valuations are still well above the long-term average. The current high valuations result in low dividend yields for utilities, which means that DCF models using recent historical data likely underestimate investors' required return over the period that rates will be in effect.

- Credit rating agencies have demonstrated concern about the cash flow metrics of utilities, related to the negative effects of both current market conditions and the TCJA, which increases investor risk expectations for utilities. Therefore, it is increasingly important to consider a rate of return and capital structure that support the Company's cash flow metrics to enable Southwest Gas the ability to attract capital at reasonable terms during the period that rates will be in effect.

V. PROXY GROUP SELECTION

Q. 44 Why have you used a group of proxy companies to estimate the cost of equity for Southwest Gas?

A. 44 In this proceeding, we are focused on estimating the cost of equity for a natural gas utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and because Southwest Gas's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that is both publicly traded and comparable to Southwest Gas in certain fundamental business and financial respects to serve as its "proxy" in the ROE estimation process. Even if Southwest Gas was a publicly-traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to the Company, and thus provide a reasonable basis to derive and estimate the appropriate ROE for Southwest Gas.

Q. 45 Please provide a brief profile of Southwest Gas.

A. 45 Southwest Gas is a wholly owned subsidiary of Southwest Gas Holdings, Inc. ("Southwest Gas Holdings") and provides natural gas distribution service to 2,133,000 customers in Arizona, Nevada and California.[41] The Company's natural gas operations in Arizona represent approximately 53

[41] Southwest Gas Holdings, Investor Presentation, AGA Financial Forum, May 19-20, 2021, at 6.

percent (approximately 1,130,000 customers) of the Company's total natural gas customer base.[42] Similarly, Southwest Gas's natural gas operations in Arizona represent 53 percent of Southwest Gas's total operating margin[43] and 48.49 percent of the Company's total authorized rate base.[44] Southwest Gas's and Southwest Gas Holdings' long-term corporate or issuer ratings are shown in Figure 9 below.

Figure 9: Long-Term Corporate/Issuer Credit Ratings[45]

Company	S&P Rating (Outlook)	Moody's Rating (Outlook)
Southwest Gas	BBB (Negative)	Baa1 (Stable)
Southwest Gas Holdings	BBB- (Negative)	Baa2 (Stable)

Q. 46 How did you select the companies included in your proxy group?

A. 46 I began with the group of 10 companies that Value Line classifies as Natural Gas Distribution Utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, because companies that do not cannot be analyzed using the Constant Growth DCF model;
- have investment grade long-term issuer ratings from S&P and/or Moody's;
- are covered by at least two utility industry analysts;
- have positive long-term earnings growth forecasts from at least two utility industry equity analysts;

[42] *Id.*, at 7.
[43] Ibid.
[44] *Id.*, at 49.
[45] S&P Global Market Intelligence, September 17, 2021.

- derive more than 60.00 percent of their total operating income from regulated operations;
- derive more than 60.00 percent of regulated operating income from gas distribution operations; and
- were not parties to a merger or transformative transaction during the analytical periods relied on.

Q. 47 Did you include Southwest Gas Holdings in your analysis?

A. 47 No. It is my practice not to include the subject company or its parent holding company in the proxy group in order to avoid the circular logic that otherwise would occur. Furthermore, Southwest Gas Holdings is currently the subject of a transformative transaction that would cause this company to be excluded from the proxy group on that basis.

Q. 48 What is the composition of your proxy group?

A. 48 The screening criteria discussed above are shown in Exhibit No._(AEB-2) and resulted in a proxy group consisting of the companies shown in below Figure 10.

Figure 10: Proxy Group

Company	Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
NiSource Inc.	NI
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
South Jersey Industries, Inc.	SJI
Spire, Inc.	SR

Q. 49 Do your screening criteria result in a proxy group that is risk comparable to Southwest Gas?

A. 49 Yes, they do. The overall purpose of developing a set of screening criteria is to select a proxy group of companies that align with the financial and operational characteristics of Southwest Gas and that investors would view as comparable to the Company. I developed the screens and thresholds for each screen based on judgment with the intention of balancing the need to maintain a proxy group that is of sufficient size with establishing a proxy group of companies that are comparable in business and financial risk to Southwest Gas. This resulted in the group of seven companies shown in Figure 10 which have business and financial risks that are comparable to Southwest Gas.

Q. 50 Did you adjust the operating income data for any of the companies included in your proxy group to remove the effects of a one-time financial event?

A. 50 Yes, I did. As shown in Exhibit No._(AEB-2), I relied on the three-year average of operating income from 2018 to 2020 for two of my proxy group screening criteria: a) the total operating income from regulated operations; and b) regulated operating income from gas distribution operations. The operating income data from 2018 through 2020 for NiSource Inc. ("NiSource") was affected by a one-time financial event. The event was related to the company's former operating subsidiary, Columbia Gas of Massachusetts. On September 13, 2018, Columbia Gas of Massachusetts, experienced a significant event as a result of over pressured lines on their system. The incident resulted in immediate financial ramifications for

NiSource in 2018 with NiSource reporting operating income for its natural gas distribution operations segment in 2018 of -$254,100.[46] In addition, NiSource incurred impairment charges associated with the Massachusetts assets in 2019 and 2020. The 2019 impairment charges were incurred because the fair value of the Massachusetts assets was determined to be less than the book value[47] while NiSource incurred an impairment charge in 2020 due to a loss on the sale of the Massachusetts assets to Eversource Energy which closed on October 9, 2020.[48] The inclusion of the impairment charges and the financial effect of the incident in 2018 would have resulted in NiSource deriving less than 60 percent of its regulated operating income from the natural gas distribution operations segment.

Q. 51 Why is it appropriate to adjust the operating income data for NiSource to remove the financial effects of the incident associated the company's Massachusetts assets?

A. 51 The incident in 2018 and the impairment charges in 2019 and 2020 will likely only affect the Company's financials in 2018, 2019 and 2020 because NiSource sold the Massachusetts assets to Eversource Energy in October of 2020. Therefore, reported operating income from 2018 to 2020 for the company's natural gas distribution operations segment is not indicative of the segment's contributions to earnings in the future. As a result, the company will still derive a majority of its operating income from natural gas

[46] NiSource Inc., 2020 10-K, at 114.
[47] *Id.*, at 71.
[48] *Id.*, at 60.

distributions operation and thus, investors would view the company as comparable to Southwest Gas.

Q. 52 How did you adjust the operating income data for NiSource?

A. 52 As shown in Exhibit No._(AEB-9), I obtained the total cost of the incident in 2018 and the total value of the impairment charges in 2019 and 2020 and added those values to the total operating income reported for the natural gas distribution operations segment for 2018 through 2020. Additionally, I also adjusted the corporate and other business segment for another impairment charge that NiSource realized in 2019 related to the Massachusetts assets. The adjustments resulted in NiSource deriving 63.49 percent to 68.83 percent of its operating income from the natural gas operations segment for period of 2018 through 2020.

Q. 53 Did you calculate NiSource's operating income by business segment prior to 2018?

A. 53 Yes, I did. I calculated the percentage of operating income derived from regulated natural gas operations for NiSource from 2010 through 2017. As shown in Exhibit No._(AEB-9), the only year where NiSource's percentage of operating income from natural gas operations was below 60 percent was 2017; however, the percentage in 2017 was 59.72 percent, only slightly less than 60 percent. In fact, the average for 2010 through 2017 for NiSource is 64.67 percent. Therefore, it is evident from my analysis of 2010 through 2017 and my adjustment to the remove the one-time financial event from 2018 through 2020, that NiSource does derive a majority its operating income from natural gas operations and would be considered

comparable to Southwest Gas. Thus, I have included NiSource in my proxy group.

VI. COST OF EQUITY ESTIMATION

Q. 54 Please briefly discuss the ROE in the context of the regulated rate of return.

A. 54 The ROE is the cost rate applied to the equity capital in the ROR. The ROR for a regulated utility is the weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q. 55 How is the required ROE determined?

A. 55 The required ROE is estimated by using one or more analytical techniques that rely on market-based data to quantify investor expectations regarding required equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company (in the context of the proxy group), in particular.

Q. 56 What methods did you use to determine Southwest Gas's ROE?

A. 56 I considered the results of the Constant Growth DCF model, the CAPM model, the ECAPM model and the Bond Yield Plus Risk Premium methodology. As discussed in more detail below, a reasonable ROE

estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

A. Importance of Multiple Analytical Approaches

Q. 57 Why is it important to use more than one analytical approach?

A. 57 Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all of the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[49] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski [50] recommend the CAPM, DCF, and Bond Yield Plus Risk Premium approaches.

Q. 58 Is it important given the current market conditions to use more than one analytical approach?

A. 58 Yes. Low interest rates and the effects of the investor "flight to quality" can be seen in high utility share valuations, relative to historical levels and

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[49] Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed. (New York: McKinsey & Company, Inc., 2000), at 214.

[50] Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed. (Orlando: Dryden Press, 1994), at 341.

relative to the broader market. Higher utility stock valuations produce lower dividend yields and result in lower cost of equity estimates from a DCF analysis. Low interest rates also affect the CAPM in two ways: (1) the risk-free rate is lower, and (2) because the market risk premium is a function of interest rates, (i.e., it is the return on the broad stock market less the risk-free interest rate), the risk premium should move higher when interest rates are lower. Therefore, it is important to use multiple analytical approaches to moderate the impact that the current low interest rate environment is having on the ROE estimates for the proxy group and, where possible, consider using projected market data in the models to estimate the return for the forward-looking period.

Q. 59 Has the Commission recognized that it is important to consider the results of multiple ROE estimation models?

A. 59 Yes. In its order for UNS Electric in Docket No. E-04204A-15-0142, the Commission authorized an ROE of 9.50 percent which the Commission noted was supported by the evidence in the case.[51] Specifically, the Commission noted that:

> [t]he estimates for the Cost of Equity in this proceeding range from 8.75 percent by TASC to UNSE's 10.35 percent. The agreed 9.5 percent is within the range and supported by the evidence. Although UNSE's financial metrics, such as its bond rating and capitalization, have improved since its last rate case due to the Financial support of its parent Fortis, interest rates are rising, and UNSE faces significant risks from challenging economic conditions in its service area, declining energy sales, and a current rate design that requires substantial modification in order to comply with traditional

[51] Decision No. 75697 (August 18, 2016), at 18.

principles of cost causation. A Cost of Equity of 9.5 percent is not unreasonable in this case.[52]

Therefore, the Commission considered the results of the various models presented by the parties in the case such as the DCF, CAPM and Risk Premium and capital market conditions as the Commission noted that interest rates were rising at the time of the decision. Thus, the Commission has recognized the importance of considering the results of each model presented in the rate case and market conditions since changes in market conditions can affect the model results.

Q. 60 What are your conclusions about the results of the DCF and CAPM models?

A. 60 Recent market data that is used as the basis for the assumptions for both models have been affected by market conditions. As a result, relying exclusively on historical assumptions in these models, without considering whether these assumptions are consistent with investors' future expectations, will underestimate the cost of equity that investors would require over the period that the rates in this case are to be in effect. In this instance, relying on the historically low dividend yields that are not expected to continue over the period that the new rates will be in effect will underestimate the ROE for Southwest Gas.

Furthermore, as discussed in Section IV above, long-term interest rates have increased since August 2020 and this trend is expected to continue over the near-term as the economy enters the recovery phase of the business cycle. Therefore, the use of current averages of Treasury bond

[52] Ibid.

yields as the estimate of the risk-free rate in the CAPM is not appropriate since recent market conditions are not expected to continue over the long-term. Instead, analysts should rely on projected yields of Treasury Bonds in the CAPM. The projected Treasury Bond yields results in CAPM estimates that are more reflective of the market conditions that investors expect during the period that the Company's rates will be in effect.

B. Constant Growth DCF Model

Q. 61 Please describe the DCF approach.

A. 61 The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_\infty}{(1+k)^\infty} \qquad [2]$$

Where P0 represents the current stock price, D1…D∞ are all expected future dividends, and k is the discount rate, or required ROE. Equation [2] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [1]$$

Equation [1] is often referred to as the Constant Growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q. 62 What assumptions are required for the Constant Growth DCF model?

A. 62 The Constant Growth DCF model requires the following four assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are violated, considered judgment and/or specific adjustments should be applied to the results.

Q. 63 What market data did you use to calculate the dividend yield in your Constant Growth DCF model?

A. 63 The dividend yield in my Constant Growth DCF model is based on the proxy companies' current annualized dividend and average closing stock prices over the 30-, 90-, and 180-trading days ended October 31, 2021.

Q. 64 Why did you use 30-, 90-, and 180-day averaging periods?

A. 64 In my Constant Growth DCF model, I use an average of recent trading days to calculate the term P_0 in the DCF model to ensure that the ROE is not skewed by anomalous events that may affect stock prices on any given trading day. The averaging period should also be reasonably representative of expected capital market conditions over the long-term. However, the averaging periods that I use rely on historical data that are not consistent with the forward-looking market expectations. Therefore, the results of my Constant Growth DCF model using historical data may underestimate the forward-looking cost of equity. As a result, I place more weight on the mean to mean-high results produced by my Constant Growth DCF model.

Q. 65 Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A. 65 Yes, I did. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected first-year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. 66 Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A. 66 In its Constant Growth form, the DCF model (*i.e.*, Equation [2]) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, one must assume that the payout ratio remains constant and that earnings per share, dividends per share and book value per share all grow at the same constant rate. Over the long run, however, dividend growth can only be sustained by earnings growth. Therefore, it is important to incorporate a variety of sources of long-term earnings growth rates into the Constant Growth DCF model.

Q. 67 Which sources of long-term earnings growth rates did you use?

A. 67 My Constant Growth DCF model incorporates three sources of long-term earnings growth rates: (1) Zacks Investment Research; (2) Thomson First Call (provided by Yahoo! Finance); and (3) Value Line Investment Survey.

Q. 68 How did you calculate the range of results for the Constant Growth DCF Models?

A. 68 I calculated the low result for my DCF models using the minimum growth rate (*i.e.*, the lowest of the First Call, Zacks, and Value Line earnings growth rates) for each of the proxy group companies. Thus, the low result reflects the minimum DCF result for the proxy group. I used a similar approach to calculate the high results, using the highest growth rate for each proxy group company. The mean results were calculated using the average growth rates from all sources.

Q. 69 What were the results of your DCF analyses?

A. 69 Figure 11 summarizes the results of my DCF analyses. As shown in Figure 11, the median DCF results range from 10.06 percent to 10.12 percent, and the median high results (using the high growth rate scenarios) are in the range of 10.88 percent to 11.19 percent. The median low results range from 8.83 percent to 9.23 percent. However, given the expected underperformance of utility stocks and thus the likelihood that the DCF model is understating the cost of equity, I do not believe it is appropriate to consider the median low DCF results at this time.

Figure 11: Median Discounted Cash Flow Results[53]

	Mean Low	Mean	Mean High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%

[53] *See* Exhibit No._(AEB-3).

Q. 70 What are your conclusions about the results of the DCF models?

A. 70 As discussed previously, one primary assumption of the DCF models is a constant P/E ratio. That assumption is heavily influenced by the market price of utility stocks. Since utility stocks are expected to underperform the broader market over the near-term as interest rates increases, it is important to consider the results of the DCF models with caution. This means that the results of the current DCF models are below where they would otherwise be under more normal market conditions. Therefore, while I have given weight to the results of the Constant Growth DCF model, my recommendation also gives weight to the results of other ROE estimation models.

C. CAPM Analysis

Q. 71 Please briefly describe the Capital Asset Pricing Model.

A. 71 The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security. This second component is the product of the market risk premium and the Beta coefficient, which measures the relative riskiness of the security being evaluated.

The CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market ROE;

β = Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market.

In this specification, the term (rm – rf) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Non-diversifiable risk is measured by Beta, which is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \quad [4]$$

The variance of the market return (i.e., Variance (r_m)) is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the general market (i.e., Covariance (r_e, r_m)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, Beta represents the risk of the security relative to the general market.

Q. 72 What risk-free rate did you use in your CAPM analysis?

A. 72 I relied on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds of 2.13 percent;[54] (2) the projected 30-year Treasury yield for Q1 2022 – Q1 2023 of 2.50 percent;[55] and (3) the average projected 30-year Treasury bond yield for the period 2023 through 2027 of 3.50 percent.[56]

[54] Bloomberg Professional as of October 31, 2021.
[55] Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2.
[56] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.

Q. 73 Would you place more weight on one of these scenarios?

A. 73 Yes. Based on current market conditions, I place more weight on the results of the projected yields on the 30-year Treasury bonds. As discussed previously, the estimation of the cost of equity in this case should be forward-looking because it is the return that investors would receive over the future rate period. Therefore, the inputs and assumptions used in the CAPM analysis should reflect the expectations of the market at that time. While I have included the results of a CAPM analysis that relies on the current average risk-free rate, this analysis fails to take into consideration the effect of the market's expectations for interest rate increases on the cost of equity.

Q. 74 What Beta coefficients did you use in your CAPM analysis?

A. 74 As shown on Exhibit No._(AEB-4), I used the Beta coefficients for the proxy group companies as reported by Bloomberg and Value Line. The Beta coefficients reported by Bloomberg were calculated using ten years of weekly returns relative to the S&P 500 Index. Value Line's calculation is based on five years of weekly returns relative to the New York Stock Exchange Composite Index.

Additionally, as shown in Exhibit No._(AEB-5), I also considered an additional CAPM analysis which relies on the long-term average utility Beta coefficient for the companies in my proxy group. The long-term average utility Beta coefficient was calculated as an average of the Value Line Beta coefficients for the companies in my proxy group from 2011 through 2020.

Q. 75 How did you estimate the market risk premium in the CAPM?

A. 75 I estimated the Market Risk Premium (MRP) as the difference between the implied expected equity market return and the risk-free rate. The expected return on the S&P 500 Index is calculated using the Constant Growth DCF model discussed earlier in my Direct Testimony for the companies in the S&P 500 Index. In my calculation of the market return, I included companies in the S&P 500 that: 1) had either a dividend yield or Value Line long-term earnings projection; and 2) had a Value Line long-term earnings growth rate that was greater than 0 percent and less than or equal to 20 percent. As shown in Exhibit AEB-7, based on an estimated market capitalization-weighted dividend yield of 1.75 percent and a weighted long-term growth rate of 10.79 percent, the estimated required market return for the S&P 500 Index is 12.64 percent.

Q. 76 Have other regulators endorsed the use of a forward-looking MRP?

A. 76 Yes, they have. For example, the Minnesota Department of Commerce (Minnesota DOC) relied on a forward-looking market return (estimated using a Constant Growth DCF model) in the CAPM for Great Plains Natural Gas Company (Docket No. G-004/GR-19-511). Specifically, the Minnesota DOC used the dividend yield reported by S&P for the S&P 500 and the three- to five-year earnings growth estimate for the State Street Global Advisors S&P 500 exchange traded fund (ETF), which resulted in a projected market return of 13.44 percent.[57] The Minnesota DOC has historically relied on the Constant Growth DCF model to estimate a

[57] Docket No. G-004/GR-19-511, In the Matter of the Petition By Great Plains Natural Gas Co., a Division of Montana-Dakota Utilities Co., for Authority to Increase Natural Gas Rates in Minnesota (March 3, 2020), at Ex. DER-9, CMA-S-8.

forward-looking market return for the CAPM, and that market return has been considered by the Minnesota Public Utilities Commission (Minnesota PUC) in prior proceedings.[58] In addition, the Federal Energy Regulatory Commission (FERC) has relied on a forward-looking market return estimated using a Constant Growth DCF model) in recent Opinions including Opinion No. 569.[59]

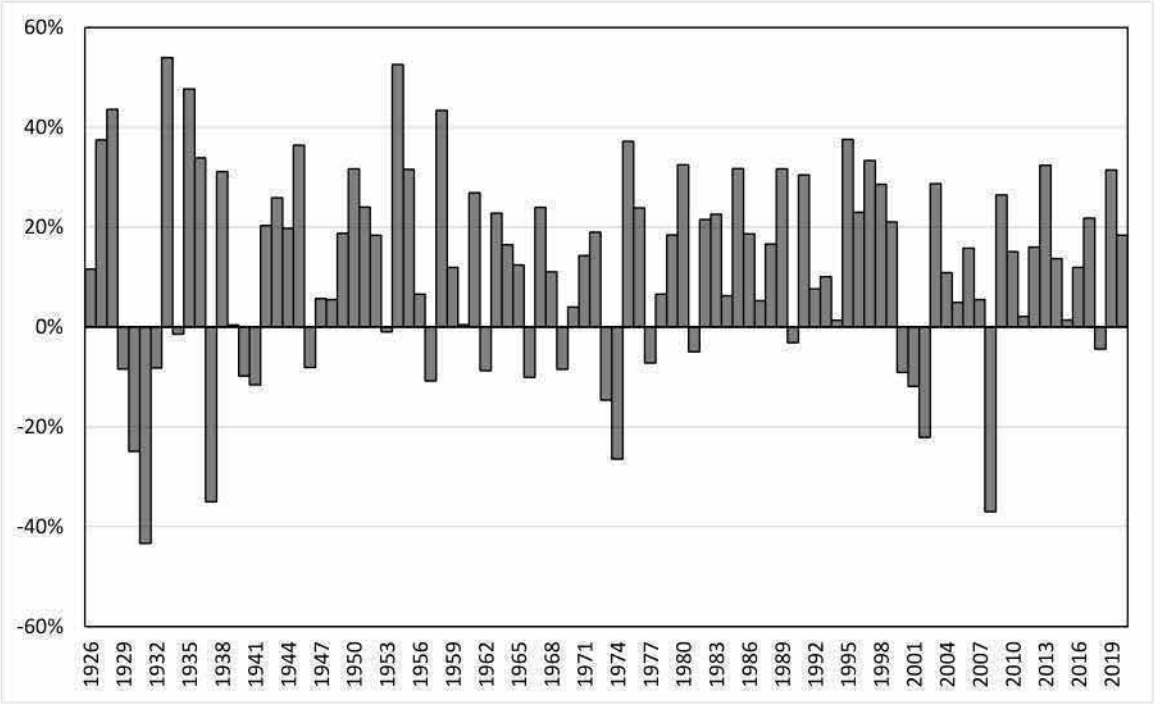
Q. 77 How does the current expected market return of 12.64 percent compare to observed historical market returns?

A. 77 Given the range of annual equity returns that have been observed over the past 94 years (shown in Figure 12 below), a current expected return of 12.64 percent is not unreasonable. In 48 of the past 94 years (i.e., more than half of all observations), the realized total equity return was at least 12.64 percent or greater.

[58] *See* Docket No. E017/GR-15-1033, Findings of Fact, Conclusions and Order, May 1, 2017, at 54-56; and Docket No. E015/GR-16-664, Findings of Fact, Conclusions and Order, March 12, 2018, at 60-61.

[59] Federal Energy Regulatory Commission Opinion 569, Order on Briefs, Rehearing and Initial Decision, November 21, 2019, para 260 through 273.

Figure 12: Realized U.S. equity market returns (1926-2020)[60]



Q. 78 Is it reasonable to rely on a single stage DCF model to calculate the market return used to estimate the market risk premium?

A. 78 Yes. This issue was specifically addressed by the FERC in Opinion 569. In addition to citing to academic articles where the return on the S&P 500 was based on a single stage DCF model using 5-year IBES growth rates,[61] the FERC stated that:

> Because dividend paying members of the S&P 500 constitute a large portfolio of stocks, they include companies at all stages of growth. Some are relatively young companies with new products that have not yet fully penetrated the markets and thus are likely to have quite high IBES growth rates. However other companies are mature companies with limited growth potential which are likely to have quite low IBES growth rates. The

[60] Depicts total annual returns on large company stocks, as reported in the 2021 Duff & Phelps SBBI Yearbook.

[61] Federal Energy Regulatory Commission Opinion 569, Order on Briefs, Rehearing and Initial Decision, November 21, 2019, para 260 through 273.

inclusion of the IBES growth rates of such mature companies in the overall average IBES growth rate of all the dividend paying members of the S&P 500 performs the same role as the inclusion of the long-term GDP growth rate in the DCF analysis of a single utility: it reflects the fact that companies cannot maintain the indefinitely high growth rates of their early years. Thus, using the IBES growth rates of all dividend paying S&P 500 companies, without using a long-term GDP growth projection can reasonably reflect investors' consensus expectation about the market as a whole.[62]

***

[W]hile it may be unreasonable to expect an individual company to have a high short-term growth rate in perpetuity, the same cannot be true for a broad representative market index that is regularly updated to include new companies. Put differently, a portfolio of companies behaves differently than an individual company.[63]

Q. 79 Did you consider another form of the CAPM in your analysis?

A. 79 Yes, I did. I have also considered the results of an Empirical CAPM ("ECAPM")[64] in estimating the cost of equity for Southwest Gas. The ECAPM calculates the product of the adjusted Beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [5]$$

Where:

[62] *Id.*, at para 265.
[63] *Id.*, at para 266.
[64] *See* e.g., Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 189.

k_e = the required market ROE;

β = Adjusted Beta coefficient of an individual security;

rf = the risk-free rate of return; and

r_m = the required return on the market as a whole.

In essence, the Empirical form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low Beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted Betas; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[65]

As with the CAPM, my application of the ECAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted earlier as the risk-free rate, and the Bloomberg, Value Line and long-term average Beta coefficients.

Q. 80 What are the results of your CAPM and ECAPM analyses?

A. 80 As shown in Figure 13 (*see* also Exhibit No._(AEB-4) and Exhibit No._(AEB-5)), my traditional CAPM analysis produces a range of returns from 9.66 percent to 11.59 percent. The ECAPM analysis results range from 10.41 percent to 11.85 percent.

[65] *Id.*, at 191.

Figure 13: CAPM and ECAPM Results

	Current Risk-Free Rate (2.13%)	Q1 2022–Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
CAPM			
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-term Avg. Beta	9.66%	9.77%	10.05%
ECAPM			
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-term Avg. Beta	10.41%	10.49%	10.70%

D. Bond Yield Plus Risk Premium Analysis

Q. 81 Please describe the Bond Yield Plus Risk Premium approach.

A. 81 In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Risk premium approaches, therefore, estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I used actual authorized returns for natural gas utility companies as the historical measure of the cost of equity to determine the risk premium.

Q. 82 Are there other considerations that should be addressed in conducting this analysis?

A. 82 Yes. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach)

is inversely related to the level of interest rates. That is, as interest rates increase (decrease), the equity risk premium decreases (increases). Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. Such an analysis can be developed based on a regression of the risk premium as a function of U.S. Treasury bond yields. If we let authorized ROEs for natural gas utilities serve as the measure of required equity returns and define the yield on the long-term U.S. Treasury bond as the relevant measure of interest rates, the risk premium simply would be the difference between those two points.[66]

Q. 83 Is the Bond Yield Plus Risk Premium analysis relevant to investors?

A. 83 Yes. Investors are aware of ROE awards in other jurisdictions, and they consider those awards as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because my Bond Yield Plus Risk Premium analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors.

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[66] *See e.g.*, S. Keith Berry, *Interest Rate Risk and Utility Risk Premia during 1982-93*, Managerial and Decision Economics, Vol. 19, No. 2 (March, 1998), in which the author used a methodology similar to the regression approach described below, including using allowed ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates. *See also* Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholders Required Rates of Return*, Financial Management, Spring 1986, at 66.

Q. 84 What did your Bond Yield Plus Risk Premium analysis reveal?

A. 84 As shown in Figure 14 below, from 1992 through October 2021, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + b(T) \text{ [6]}$$

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year U.S. Treasury bonds)

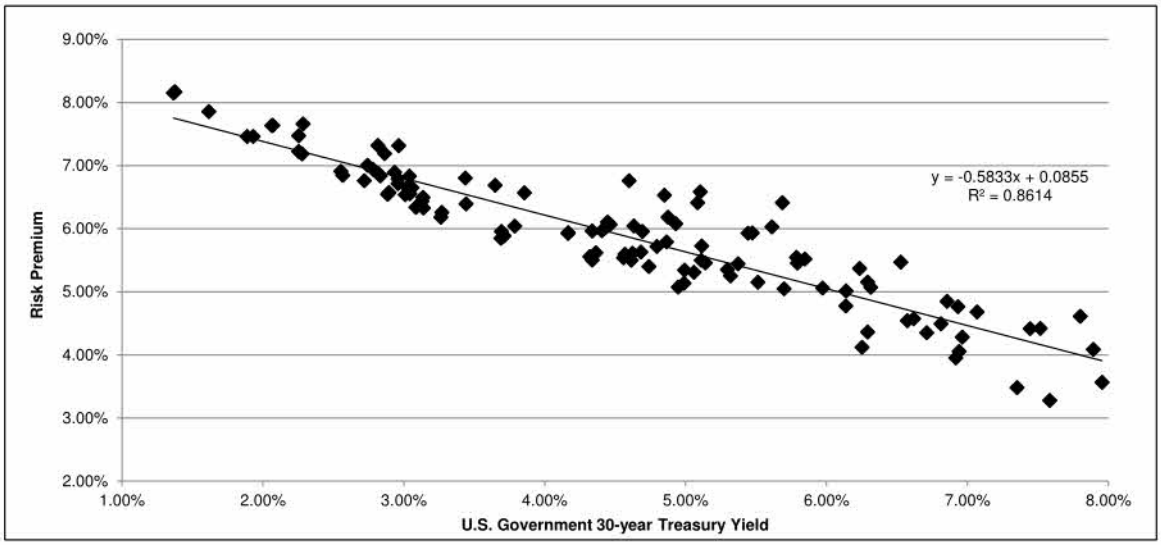
a = intercept term

b = slope term

T = 30-year U.S. Treasury bond yield

Data regarding allowed ROEs were derived from 700 natural gas utility rate cases from 1992 through October 2021 as reported by Regulatory Research Associates ("RRA"). This equation's coefficients were statistically significant at the 99.00 percent level.

Figure 14: Risk Premium Results



As shown on Exhibit No._(AEB-8), based on the current 30-day average of the 30-year U.S. Treasury bond yield (i.e., 2.03 percent), the risk premium would be 7.37 percent, resulting in an estimated ROE of 9.40 percent. Based on the near-term (Q1 2022 – Q1 2023) projections of the 30-year U.S. Treasury bond yield (i.e., 2.50 percent), the risk premium would be 7.09 percent, resulting in an estimated ROE of 9.59 percent. Based on longer-term (2023-2027) projections of the 30-year U.S. Treasury bond yield (i.e., 3.50 percent), the risk premium would be 6.51 percent, resulting in an estimated ROE of 10.01 percent.

Q. 85 How did the results of the Bond Yield Risk Premium inform your recommended ROE for Southwest Gas?

A. 85 I have considered the results of the Bond Yield Risk Premium analysis in setting my recommended ROE for Southwest Gas. As noted above, investors consider the ROE award of a company when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions. The risk premium analysis takes into account this

comparison by estimating the return expectations of investors based on the current and past ROE awards of natural gas utilities across the US.

VII. REGULATORY AND BUSINESS RISKS

Q. 86 Do the mean DCF, CAPM, and ECAPM results for the proxy group, taken alone, provide an appropriate estimate of the cost of equity for Southwest Gas?

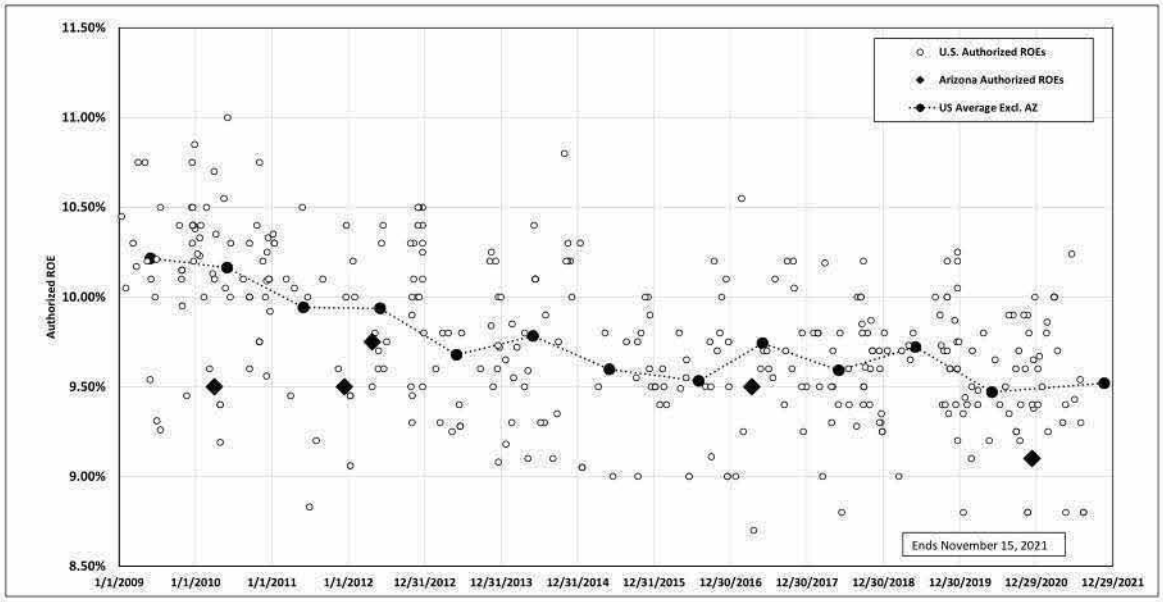
A. 86 No. These results provide only a range of the appropriate estimate of the Company's cost of equity. There are several additional factors that must be taken into consideration when determining where the Company's cost of equity falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Arizona Allowed ROEs

Q. 87 How do recent returns in Arizona compare to the authorized returns in other jurisdictions?

A. 87 As shown in Figure 15, the recent authorized ROEs established by the Arizona Commission have been well below the national average. Specifically, the authorized returns for natural gas utilities in Arizona have been at the bottom of the range produced by the authorized ROEs from other state jurisdictions. The Commission authorized an ROE of 9.10 percent in Decision No. 77850 for Southwest Gas in December 2020 which was significantly below the average authorized ROE of 9.52 percent for natural gas utilities from January 1, 2021, through November 19, 2021.

Figure 15: Comparison of Arizona and U.S. Authorized Natural Gas Returns



Q. 88 Considering the return on the fair value increment awarded to natural gas utilities in Arizona, are the authorized ROEs in Arizona still below the average authorized ROE for natural gas utilities in other jurisdictions across the U.S.?

A. 88 Yes. For example, in Decision No. 77850 for Southwest Gas, the Commission noted that the authorized ROE of 9.10 percent included a reduction of 20 basis points to account for the reduced risk associated with awarding a return on the fair value increment.[67] Thus, the Commission found the ROE for Southwest Gas to be 9.30 percent excluding the fair value return increment. However, an ROE of 9.30 percent is still 18 basis points below the authorized ROE for natural gas utilities from January 1, 2020, through August 31, 2021, of 9.48 percent.

[67] Decision No. 77850 (December 17, 2020), at 70.

Q. 89 Do investors consider the relative returns awarded in jurisdictions across the U.S.?

A. 89 Yes, they do. In fact, in a recent article from Barron's, an equity analyst from KeyBanc Capital Markets, Inc. recommended buying shares in Duke Energy as opposed to Consolidated Edison for reasons which included that the regulatory outcomes in the jurisdictions where Duke Energy operates were more favorable. Specifically, KeyBank analyst Sophie Karp noted:

> The regulatory environment is favorable in Duke's major markets: the Carolinas, Florida, and Indiana. "There's not so much of the utility bashing that goes on down there as it is in New York routinely," says KeyBanc's Karp. "So they have more constructive outcomes. They have better returns." A starting point of below-average customer bills helps. So does healthy population growth. New York has neither.[68]

Q. 90 Is there any reason that the Commission should be concerned about authorizing equity returns that are at the low end of the range established by other state regulatory jurisdictions?

A. 90 Yes, for several reasons. First, as noted previously, Arizona utility subsidiaries must compete for capital within their own corporate structures, which must in turn compete for capital with other utilities and businesses. Since investors consider the relative returns of state jurisdictions in their investment decisions, placing Southwest Gas at the low end of authorized ROEs outside Arizona over the longer term can negatively impact the Company's access to capital. Second, as noted in Sections IV and VI, the economy is in the expansion phase of the business cycle; thus, interest

[68] Hough, Jack. 3 Electric Utility Stocks to Give Your Portfolio a Jolt. Barron's, 26 July 2021, www.barrons.com/articles/-utility-stocks-duke-energy-51627080936?mod=hp_columnists.

rates are expected to increase, and utilities are expected to underperform over the near-term. If utility stocks underperform over the near-term then utility dividend yields will increase resulting in higher estimates of the ROE results produced by the DCF model. Therefore, the current results of the DCF model will underestimate investors' expected ROE over the period in which Southwest Gas's rates will be in effect. As a result, it is important that the Commission consider the results of alternative methods such as the forward looking CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses and the returns that have been authorized by other jurisdictions where Southwest Gas operates and other natural gas utilities across the U.S.

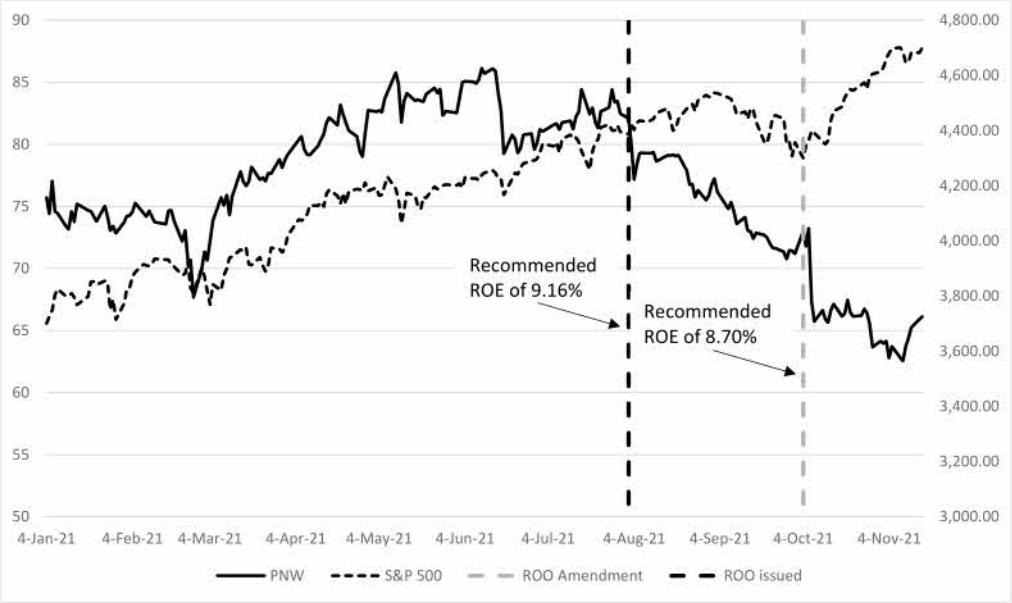
Q. 91 How has the market responded to the returns that have recently been authorized by the Arizona Commission?

A. 91 The market has had a strong negative response to recent returns authorized by the ACC, including the most recent ROE determination of an 8.70 percent ROE for Arizona Public Service Company, in Decision No. 78313.

S&P Global Market Intelligence (Regulatory Research Associates) noted that this decision was "among the lowest ROEs RRA had encountered in its coverage of vertically integrated electric utilities in the past 30 years".

As shown in Figure 16 below, shares of Pinnacle West stock, the parent company of APS, have experienced a significant decline since the Commission first introduced its proposal to authorize an ROE that was well below the national average.

Figure 16: Pinnacle West Capital Stock Price vs. S&P 500 utilities.



Finally, Standard & Poor's downgraded Pinnacle West Capital's long-term from A- to BBB+ and put the company on credit watch negative following the Commission's November vote which officially authorized the 8.70 percent ROE.[69] In October, prior to the final commission vote on the APS proceeding, Moody's placed the ratings of Pinnacle West and APS on review for downgrade, prompted by the "deteriorating regulatory framework as evidenced by last week's hearings where the Arizona Corporation Commission (ACC) voted to lower the utility's ROE and to consider cost recovery disallowances."[70]

[69] S&P Global Market Intelligence, November 9, 2021.
[70] Moody's Investor Service, Rating Action: Moody's places Pinnacle West and Arizona Public Service ratings on review for downgrade, October 12, 2021.

Q. 92 What are your conclusions surrounding the recently authorized ROEs in Arizona?

A. 92 The market response to the recently authorized ROEs in Arizona strongly suggests that the rate case determinations, including the authorized ROEs, do not meet the *Hope* and *Bluefield* standards and the most recent Commission decisions have resulted in a perception by investors of significantly increased regulatory risk in Arizona.

B. Flotation Cost

Q. 93 What are flotation costs?

A. 93 Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

Q. 94 Why is it important to consider flotation costs in the allowed ROE?

A. 94 A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. 95 Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. 95 Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and, therefore, are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority

of a utility's flotation cost is incurred prior to the test year but remains part of the cost structure that exists during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, it is irrelevant whether an issuance occurs during the test year or is planned for the test year because failure to allow recovery of past flotation costs may deny Southwest Gas the opportunity to earn its required ROR in the future.

Q. 96 Please provide an example of why a flotation cost adjustment is necessary to compensate investors for the capital they have invested.

A. 96 Suppose Southwest Gas Holdings issues stock with a value of $100, and an equity investor invests $100 in Southwest Gas Holdings in exchange for that stock. Further suppose that, after paying the flotation costs associated with the equity issuance, which include fees paid to underwriters and attorneys, among others, Southwest Gas Holdings ends up with only $97 of issuance proceeds, rather than the $100 the investor contributed. Southwest Gas Holdings invests that $97 in plant used to serve its customers, which becomes part of rate base. Absent a flotation cost adjustment, the investor will thereafter earn a return on only the $97 invested in rate base, even though she contributed $100. Making a small flotation cost adjustment gives the investor a reasonable opportunity to earn the authorized return, rather than the lower return that results when the authorized return is applied to an amount less than what the investor contributed.

Q. 97 Is the date of Southwest Gas Holdings' last issued common equity important in the determination of flotation costs?

A. 97 No. As shown in Exhibit No._(AEB-10), Southwest Gas Holdings closed on an equity issuance of approximately $259 million (for a total of 3.57 million shares of common stock) in November 2018. The vintage of the issuance, however, is not particularly important because the investor suffers a shortfall in every year that he should have a reasonable opportunity to earn a return on the full amount of capital that he has contributed. Returning to my earlier example, the investor who contributed $100 is entitled to a reasonable opportunity to earn a return on $100 not only in the first year after the investment, but in every subsequent year in which he has the $100 invested. Leaving aside depreciation, which is dealt with separately, there is no basis to conclude that the investor is entitled to earn a return on $100 in the first year after issuance, but thereafter is entitled to earn a return on only $97. As long as the $100 is invested, the investor should have a reasonable opportunity to earn a return on the entire amount.

Q. 98 Is the need to consider flotation costs recognized by the academic and financial communities?

A. 98 Yes. The need to reimburse shareholders for the lost returns associated with equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair ROR. According to Dr. Shannon Pratt:

> Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm's required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[71]

Q. 99 How did you calculate the flotation costs for Southwest Gas?

A. 99 My flotation cost calculation is based on the costs of issuing equity that were incurred by Southwest Gas Holdings in its most recent common equity issuance. These issuance costs were applied to my proxy group. Applying the actual issuance costs for Southwest Gas Holdings provided in Exhibit No._(AEB-10), to the DCF analysis, the flotation costs are estimated to be 0.15 percent (i.e., 15 basis points).

Q. 100 Do your final results include an adjustment for flotation cost recovery?

A. 100 No. I did not make an explicit adjustment for flotation costs to any of my quantitative analyses. Rather, I provide the above result for consideration in my recommended ROE, which reflects the range of results from my Constant Growth DCF, CAPM, ECAPM and Risk Premium.

[71] Shannon P. Pratt, Cost of Capital Estimation and Applications, Second Edition, at 220-221.

C. Capital Expenditures

Q. 101 Please summarize the Company's capital expenditure requirements.

A. 101 The Company's current projections for 2022 through 2026 include approximately $1.7 billion in capital investments for the period in Arizona.[72] Based on the Company's net utility plant in Arizona of approximately $2.94 billion as of December 31, 2020,[73] the anticipated capital expenditures are approximately 57.89 percent of Southwest Gas's net utility plant as of December 31, 2020.

Q. 102 How is the Company's risk profile affected by their substantial capital expenditure requirements?

A. 102 As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q. 103 Do credit rating agencies recognize the risks associated with elevated levels of capital expenditures?

A. 103 Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an

[72] Data provided by Southwest Gas for Capital Expenditures 2022-2026.
[73] Data provided by Southwest Gas.

> important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[74]

Therefore, to the extent that Southwest Gas's rates do not permit the opportunity to recover its capital investments on a regular basis, the Company will face increased recovery risk and thus increased pressure on its credit metrics.

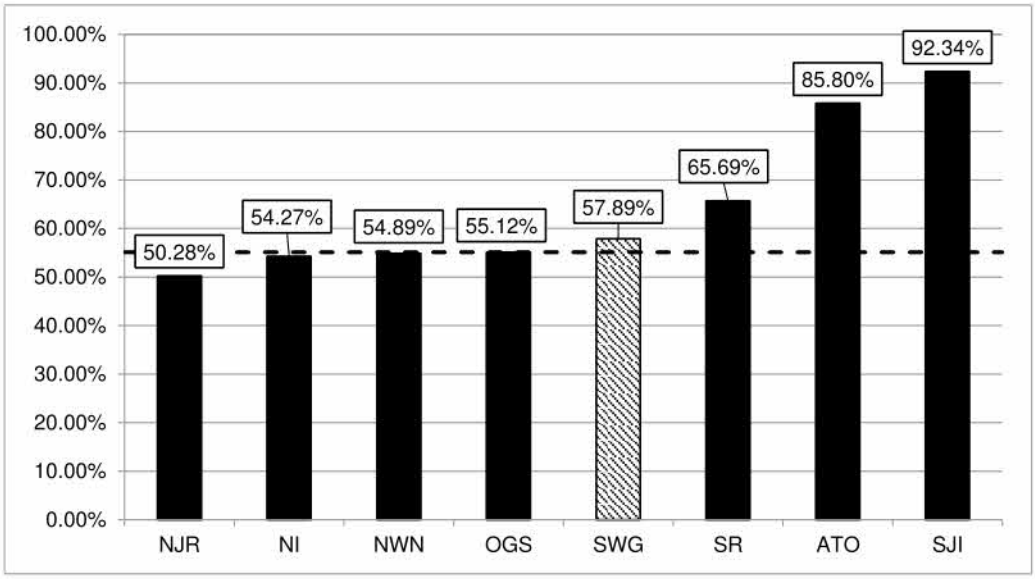
Q. 104 How do Southwest Gas's capital expenditure requirements compare to those of the proxy group companies?

A. 104 As shown in Exhibit No._(AEB-11), I calculated the ratio of expected capital expenditures to net utility plant for Southwest Gas's natural gas operations in Arizona and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2022-2026 by its total net utility plant as of December 31, 2020. As shown in Exhibit No._(AEB-11) (*see* also Figure 17 below), Southwest Gas's ratio of capital expenditures as a percentage of net utility plant is 57.89 percent, which is

[74] S&P Global Ratings, "Assessing U.S. Investor-Owned Utility Regulatory Environments," August 10, 2016, at 7.

approximately 1.05 times the median for the proxy group companies of 55.12 percent, generally consistent with the proxy group.

Figure 17: Comparison of Capital Expenditures – Proxy Group Companies



Q. 105 Have credit rating agencies commented on the size of Southwest Gas's capital spending program?

A. 105 Yes. Moody's has noted the sizeable capital spending program at Southwest Gas and has indicated that the Company's credit metrics have weakened as a result which Moody's expects to persist in the coming years. Specifically, Moody's writes:

> Southwest Gas' capital expenditures remain robust, with approximately $700 million planned annually over the next two years, close to the annual average of about $720 million over the last three years. The utility intends to finance this capital spending with operating cash flow and a mix of debt and equity. However, largely debt financed cash shortfalls over the 2018-2019 period, together with cash flow that has not kept pace with this higher debt, have resulted in a deterioration in financial metrics that we expect to persist. The utility's CFO preW/C to debt ratio has fallen from 20% in 2017

to below 15% in both 2019 and 2020, and we do not expect it to recover materially in coming years.[75]

Q. 106 Does Southwest Gas have a comprehensive capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A. 106 Currently, Southwest Gas has one capital tracking mechanism, the Customer-Owned Yard Line (COYL) replacement program. The COYL program allows Southwest Gas to recover the annual revenue requirement associated with repairing and replacing the customer-owned exterior service line which connects the meter to the customer's premise. However, it is important to note that the majority of the costs included in Southwest Gas's capital expenditures plan do not qualify for cost recovery through the COYL. It is my understanding that the capital expenditures that would be covered under the COYL represents less than 3.00 percent of projected capital expenditures for 2022 through 2026 in Arizona. As a result, Southwest Gas still depends on general rate case filings for the majority of its capital cost recovery. Additionally, as shown in Exhibit No._(AEB-12), 76 percent of the proxy group utilities recover costs through capital tracking mechanisms. Therefore, Southwest Gas arguably has somewhat greater risk from a capital expenditure standpoint than the proxy group companies.

[75] Moody's Investors Service, Rating Action: Moody's downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable, January 29, 2021.

Q. 107 What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A. 107 The Company's capital expenditure requirements as a percentage of net utility plant are significant and are anticipated to continue at this level over the next few years. Credit rating agencies have noted the Company's significant capital expenditure plan which is expected to weaken credit metrics in the coming years. Although Southwest Gas's COYL program is designed to recover a small portion of these expenditures, the majority of operating subsidiaries held by the proxy group also have a capital tracking mechanism, meaning that this risk mitigation is already reflected in the proxy group companies. Further 97 percent of Southwest Gas's capital expenditures are not funded through a capital cost recovery mechanism, like the COYL; as such, the Company is still dependent on general rate case filings to recover the majority of its capital expenditures. My conclusion is that Southwest Gas's significant capital expenditure plan results in a risk profile that is greater than that of the proxy group and supports an ROE toward the higher end of the reasonable range of ROEs.

D. Regulatory Risk

Q. 108 Please explain how the regulatory environment affects investors' risk assessments.

A. 108 The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory authorities recognize that because utility operations are capital intensive,

regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of investors and customers. Utilities must finance their operations and require the opportunity to earn a reasonable return on their invested capital to maintain their financial profiles. Southwest Gas is no exception. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q. 109 Please explain how credit rating agencies consider regulatory risk in establishing a company's credit rating.

A. 109 Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[76]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[77] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[78]

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[76] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 4.

[77] Standard & Poor's Global Ratings, Ratings Direct, U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others, June 25, 2018, at 2.

[78] *Id.*, at 1.

Q. 110 How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. 110 The regulatory environment can significantly affect both the access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations." [79] Moody's further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[80]

Q. 111 Have you conducted any analysis of the regulatory framework in Arizona relative to the jurisdictions in which the companies in your proxy group operate?

A. 111 Yes. I have evaluated the regulatory framework in Arizona on four factors that are important in terms of providing a regulated utility an opportunity to earn its authorized ROE. These are: 1) test year convention (i.e., forecast vs. historical); 2) method for determining rate base (i.e., average vs. year-end); 3) use of revenue decoupling mechanisms or other clauses that mitigate volumetric risk; and 4) prevalence of capital cost recovery between

[79] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 6.
[80] Ibid.

rate cases. The results of this regulatory risk assessment are shown in Exhibit No._(AEB-12) and are summarized below.

Test year convention: Southwest Gas uses a historical test year adjusted for known and measurable changes in Arizona, while approximately 60.00 percent of the operating companies held by the proxy group provide service in jurisdictions that use a fully or partially forecasted test year. Forecast test years have been relied on for several years and produce cost estimates that are more reflective of future costs which results in more accurate recovery of incurred costs and mitigates the regulatory lag associated with historical test years. As Lowry, Hovde, Getachew, and Makos explain in their 2010 report, Forward Test Years for US Electric Utilities:

> This report provides an in depth discussion of the test year issue. It includes the results of empirical research which explores why the unit costs of electric IOUs are rising and shows that utilities operating under forward test years realize higher returns on capital and have credit ratings that are materially better than those of utilities operating under historical test years. The research suggests that shifting to a future test year is a prime strategy for rebuilding utility credit ratings as insurance against an uncertain future.[81]

Rate Base: The Company's rate base in Arizona is determined based the on year-end methodology. Similarly, 60.00 percent of the operating companies held by proxy group are allowed to use year-end rate base, meaning that the rate base includes capital additions that occurred in the second half of the test year and is more reflective of net utility plant going forward.

[81] M.N. Lowry, D. Hovde, L. Getachew, and M. Makos, Forward Test Years for US Electric Utilities, prepared for Edison Electric Institute, August 2010, at 1.

Volumetric Risk: Southwest Gas does have protection against volumetric risk in Arizona, through a revenue decoupling mechanism (Delivery Charge Adjustment (DCA)) that was approved for continuation in the Company's last general rate case.[82] Similarly, 88.00 percent of the operating companies held by the proxy group have some form of protection against volumetric risk.

Capital Cost Recovery: Southwest Gas has a capital tracking mechanism to recover a limited range of capital investment costs between rate cases. As discussed above, 76 percent of the operating companies held by the proxy group have some form of capital cost recovery mechanism in place.

Q. 112 Have you developed any additional analyses to evaluate the regulatory environment in Arizona as compared to the jurisdictions in which the companies in your proxy group operate?

A. 112 Yes. I have conducted two additional analyses to compare the regulatory framework of Arizona to the jurisdictions in which the companies in the proxy group operate. Specifically, I considered two different rankings: (1) the Regulatory Research Associates ("RRA") ranking of regulatory jurisdictions; and (2) S&P's ranking of the credit supportiveness of regulatory jurisdictions.

[82] Decision No. 77850 (December 17, 2020), at 79-80.

Q. 113 Please explain how you used the RRA ratings to compare the regulatory jurisdictions of the proxy group companies with the Company's regulatory jurisdiction.

A. 113 RRA develops their ranking based on their assessment of how investors perceive the regulatory risk associated with ownership of utility securities in that jurisdiction, specifically reflecting their assessment of the probable level and quality of earnings to be realized by the State's utilities as a result of regulatory, legislative, and court actions. RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3," with nine total rankings between these categories. I applied a numeric ranking system to the RRA rankings with "Above Average/1" assigned the highest ranking ("1") and "Below Average/3" assigned the lowest ranking ("9"). As shown in Exhibit No._(AEB-13), the Arizona regulatory environment is ranked as "Below Average/1," while the proxy group is ranked "Average/2". Additionally, Arizona is one of nine Commissions[83] out of the 53 Commissions that RRA ranks to receive a rating of either "Below Average/1", "Below Average/2" or "Below Average/3".

Q. 114 How did you conduct your analysis of the S&P Credit Supportiveness?

A. 114 S&P classifies the regulatory jurisdictions into five categories ranging from "Credit Supportive" to "Most Credit Supportive" based on the level of credit

[83] The other eight Commissions are the District of Columbia Public Service Commission, the Connecticut Public Utilities Regulatory Authority, the Kansas Corporation Commission, the Montana Public Service Commission, the New Jersey Board of Public Utilities, the New Mexico Public Regulation Commission, the Public Service Commission of West Virginia and the Regulatory Commission of Alaska.

supportiveness. Similar to the RRA regulatory ranking analysis discussed above, I assigned a numerical ranking to each jurisdiction ranked by S&P, from most credit supportive ("1") to credit supportive ("5"). As shown in Exhibit No._(AEB-14), the proxy group is ranked between very credit supportive and highly credit supportive while the Arizona regulatory jurisdiction is only ranked as more credit supportive. Thus, similar to the results using the RRA regulatory rankings, Arizona is perceived as being below the average for the proxy group.

Q. 115 Have you compared the Moody's rankings of the proxy group companies and Southwest Gas?

A. 115 Yes, I have. As shown in Exhibit No. (AEB-15), I reviewed the Moody's rankings of the proxy group companies to Southwest Gas Company. I established a numerical scale for the Moody's ratings with the "Aaa" ranking equal to a "4", "Aa" equal to a "3", "A" equal to a "2" and "Baa" equal to a "1". I considered all for regulatory factors evaluated by Moody's; 1) Legislative and judicial underpinnings of the regulatory framework, 2) Consistency and Predictability of Regulation, 3) Timeliness of Recovery of Operating and Capital Costs and 4) Sufficiency of Rates and Returns. As shown in Exhibit No. __(AEB-15), Southwest Gas received the lowest average score as compared with the remainder of the proxy group at 1.50 which is midway between an A and Baa rating.

Q. 116 Has RRA provided recent commentary regarding its regulatory ranking for the Arizona?

A. 116 Yes. In May 2021, RRA updated its evaluation of the regulatory environment in Arizona and noted the following:

Regulatory Research Associates, a group within S&P Global Market Intelligence, had viewed the Arizona regulatory environment as somewhat restrictive from an investor perspective. The policies of the Arizona Corporation Commission, or ACC, which is comprised of elected officials, have generally been highly politicized, contributing to a heightened degree of risk for the state's utilities. There also continues to be a relatively high rate of turnover in the leadership ranks, with a majority of the current ACC commissioners seated for fewer than three years, further increasing uncertainty as commissioners get up to speed on complex issues. The ACC's status as a constitutionally created entity had allowed it to operate with a degree of autonomy relative to the legislature. However, this standing was upended last year when the state supreme court determined that the authority of the legislature can supersede that of the commission in non-ratemaking matters, adding a degree of uncertainty as Arizona addresses energy transition and regulatory reform issues. In addition, the recent enactment of legislation governing the appeals process for ACC decisions has introduced yet another layer of uncertainty. ACC equity return authorizations have generally approximated or have been below prevailing national averages at the time established, and the commission's most recent rate case decisions have included below average returns. Regulatory lag, associated with long rate case lead times and reliance on historical test years, remains a pervasive problem for the Arizona utilities, rendering it difficult for the utilities to earn their authorized returns. The more constructive elements of ACC regulation include the recognition of certain post-test-period adjustments in rate cases, the allowance of a premium rate of return on fair-value rate base, the adoption of decoupling mechanisms for both the electric and gas utilities, the use of riders for recovery of certain expenses and investments between rate cases, and the adoption of innovative rate designs. In order to maintain balance in the ranking system, at this time, RRA is lowering the ranking of Arizona regulation to Below Average/1 from Average/3.[84]

[84] Regulatory Research Associates, Profile of Arizona Corporation Commission, accessed July 23, 2021.

Q. 117 What are your conclusions regarding the perceived risks related to the regulatory environment in Arizona?

A. 117 As discussed throughout this section of my Direct Testimony, both Moody's and S&P have identified the supportiveness of the regulatory environment as an important consideration in developing their overall credit ratings for regulated utilities. Considering the regulatory adjustment mechanisms, many of the companies in the proxy group have more timely cost recovery through forecasted test years, year-end rate base, cost recovery trackers and revenue stabilization mechanisms than Southwest Gas has in Arizona. In addition, the RRA jurisdictional ranking and the S&P credit supportiveness ranking for Arizona indicates greater risk than the average for the proxy group. Finally, as discussed above and noted by RRA, the returns authorized in Arizona for natural gas utilities have generally been below the average authorized returns for natural gas utilities in other jurisdictions across the U.S. Therefore, the average ROE for the proxy group would understate the return on equity that an investor would require in Arizona because the risks of timely and full cost recovery are greater for Southwest Gas in Arizona than for the proxy group. For that reason, I conclude that the authorized ROE for Southwest Gas should be higher than the proxy group mean.

VIII. CAPITAL STRUCTURE

Q. 118 What capital structure has historically been used by the Commission for ratemaking purposes?

A. 118 The Commission's longstanding practice has been to rely on the permanent capital structure that is used to finance the long-term rate base

investment of the utility. This capital structure excludes short-term debt because utilities generally use short-term debt to finance working capital requirements, including construction work in progress and deferred energy balances. Short-term debt that is used to finance construction work in progress and energy balances should not be included in setting the capital structure for ratemaking purposes because the ratemaking financing structure is intended to reflect the cost of financing the long-term rate base. Including short-term debt in the calculation for long-term financing would result in an inaccurate estimate of the cost of financing long-term rate base assets.

Q. 119 Have you reviewed Commission precedent for the exclusion of short-term debt from the ratemaking capital structure?

A. 119 Yes. This precedent is discussed in Decision No. 57075 (August 1990):

> It properly excludes short-term debt from the capital structure in accordance with prior decisions. See e.g., APS, Decision Nos. 53761 (date), 55228 (October 9, 1986) 55931 (April 1, 1988); and Mountain States Telephone and Telegraph Company, Decision No. 53849 (December 22, 1983).[85]

The Commission has consistently accepted Southwest Gas's proposals in general rate case filings to exclude short-term debt from its ratemaking capital structure.

[85] Decision No. 57075, August 1990, p. 67.

Q. 120 What is the Company's current Commission-authorized ratemaking capital structure for its Arizona rate jurisdiction?

A. 120 The Company's currently authorized Arizona capital structure was established in Decision No. 77850, where the Commission adopted the following capital structure:

Southwest Gas Corporation
Arizona Rate Jurisdiction

Component	Ratio
Total Debt	48.90%
Common Equity	51.10%
Total	100.00%

Q. 121 Is the capital structure of the Company an important consideration in the determination of the appropriate ROE?

A. 121 Yes, it is. Assuming other factors equal, a higher debt ratio increases the risk to investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental risk of a higher debt ratio is more significant for common equity shareholders, who are the residual claimants on the cash flow of the Company. Therefore, the greater the debt service requirement, the less cash flow is available for common equity holders.

Q. 122 What is Southwest Gas's proposed capital structure?

A. 122 The Company proposes to establish a target capital structure consisting of 51.00 percent common equity and 49.00 percent long-term debt. The recommended target capital structure is the capital structure the Company

reasonably expects to achieve and is more representative of how it will finance rate base assets longer-term.

Q. 123 Did you conduct any analysis to determine if this requested equity ratio was reasonable?

A. 123 Yes, I did. I reviewed the Company's proposed capital structure and the capital structures of the utility operating subsidiaries of the proxy companies. Because the ROE is set based on the return that is derived from the risk-comparable proxy group, it is reasonable to look to the proxy group average capital structure to benchmark the equity ratio for the Company.

Q. 124 Please discuss your analysis of the capital structures of the proxy group companies.

A. 124 I calculated the mean proportions of common equity, long-term debt and preferred equity for the most recent year for each of the companies in the proxy group at the operating subsidiary level.[86] My analysis of the capital structures of the proxy group companies is provided in Exhibit No._(AEB-16). As shown in Exhibit No._(AEB-16), the equity ratios for the proxy group at the operating utility company level ranged from 47.44 percent to 60.04 percent, with an average of 55.56 percent.

Q. 125 What do you conclude from the analysis examining the actual equity ratios of the companies in the proxy group?

A. 125 Southwest Gas's request for a 51.00 percent equity ratio is conservative as compared with the actual ratios of the proxy companies. Utility operating

[86] Source: SNL Financial and FERC Form 1 and FERC Form 2 annual reports.

subsidiaries owned by holding companies with business characteristics similar to those of Southwest Gas have maintained average common equity ratios that are considerably higher than the 51.00 percent equity ratio that the Company is requesting. These higher proxy group equity ratios reflect a level of financial risk that is lower than the financial risk implied by the proposed 51.00 percent equity ratio for Southwest Gas.

Q. 126 Is the actual capital structure, at any point in time, solely determined by a firm's management?

A. 126 No. The management of the firm determines the appropriate target capital structure. At any point in time, the firm's actual capital structure may deviate from that target due to factors outside the control of the firm's management. In addition, a firm's capital structure is fluid and will fluctuate month-to-month, as it is impacted by numerous factors including profitability, seasonality in earnings, external financings, and dividends. The existence of actual and target capital structures, and the speed of adjustment back to the target capital structure, has been observed and is the focus of numerous empirical studies on the capital structure decisions of firms.[87]

Q. 127 What factors have negatively affected the Company's capital structure, moving it away from its target capital structure?

A. 127 The key factors that have contributed in pressuring the Company's capital structure and credit metrics are the Company's elevated capital expenditures, in combination with the negative cash flow impacts of tax

[87] For example, see Baum, C.F., Caglayan, M. & Rashid, A. Capital structure adjustments: Do macroeconomic and business risks matter?. *Empirical Economics* 53, 1463–1502 (2017) and Harry DeAngelo, Linda DeAngelo, Toni M. Whited, Capital structure dynamics and transitory debt, *Journal of Financial Economics,* Volume 99, Issue 2, 2011, p. 235-261

reform and below average authorized ROEs in two of its regulatory jurisdictions. In addition, also impacting the capital structure was the lack of any equity issuances by Southwest Gas' parent company, Southwest Gas Holdings, Inc., during the first quarter of 2020. This was due to the capital market volatility resulting from the COVID-19 pandemic, which created unfavorable conditions for Southwest Gas Holdings, Inc. to issue common through its Equity Shelf Program (ESP). During the test period in this proceeding, the capital structure was negatively impacted by the February 2021 weather event that significantly impacted natural gas costs.

Southwest Gas anticipates that capital expenditures will level off at current levels over the 2021-2023 period and that the common equity ratio will improve, through retained earnings and periodic equity contributions from the parent company, Southwest Gas Holdings, Inc., through the proceeds of additional common stock issuances.

Q. 128 Has the parent company, Southwest Gas Holdings, Inc., demonstrated a commitment to issue additional common equity to maintain the Company's strong investment grade credit ratings?

A. 128 Yes. Southwest Gas is committed to maintaining an appropriate capital structure to support its strong investment grade credit ratings. This commitment has been demonstrated by the parent company's willingness to continue to issue new equity to finance the Company's investment in utility plant and maintain its capital structure. New equity issuances to support Southwest Gas's capital structure have come primarily from the

establishment of a $300 million ESP[88] and a $500 million ESP[89]. During the test period ended August 31, 2021, Southwest Gas Holdings, Inc. sold, through the ESP an aggregate of 3,158,505 shares of common stock (1,644,427 shares under the $300 million ESP filed in May 2019 and 1,514,078 shares under the $500 million ESP filed in December 2020) in the open market at a weighted average price of $66.89 per share, resulting in proceeds to Southwest Gas Holdings, Inc. of $209,158,157 net of $2,112,709 in agent commissions. As of August 31, 2021, Southwest Gas Holdings, Inc. had $0 of common stock available for sale under the $300 million ESP filed in May 2019 and $397,132,412 under the $500 million ESP filed in December 2020. Net proceeds from the sale of shares of common stock under the ESP are intended for general corporate purposes, including the acquisition of property for the construction, completion, extension or improvement of pipeline systems and facilities located in and around the communities served by Southwest Gas Corporation. Net proceeds during the twelve months ended August 31, 2021, were

88 On May 8, 2019, Southwest Gas Holdings, Inc. filed with the Securities and Exchange Commission ("SEC") an automatic shelf registration statement on Form S-3 (File No. 333-231297), which became effective upon filing, for the offer and sale of up to $300 million of common stock from time to time in at-the-market offerings under the prospectus included therein and in accordance with the Sales Agency Agreement, dated May 8, 2019, between the Company and BNY Mellon Capital Markets, LLC (the "$300 million Equity Shelf Program").

89 On December 2, 2020, Southwest Gas Holdings, Inc. filed with the Securities and Exchange Commission ("SEC") an automatic shelf registration statement on Form S-3 (File No. 333-251074), which became effective upon filing, and included, among other registered securities, for the offer and sale of up to $500 million of common stock from time to time in at-the-market offerings under the prospectus included therein. On April 8, 2021, Southwest Gas Holdings, Inc. entered into a Sales Agency Agreement, with BNY Mellon Capital Markets, LLC and J.P. Morgan Securities LLC. (the "$500 million Equity Shelf Program").

contributed to, and reflected in the records of, Southwest Gas Corporation, as a capital contribution from the parent holding company.

Going forward, Southwest Gas Holdings, Inc. disclosed that it anticipates additional common stock issuance of $600 million to $800 million over the three-year period ending December 31, 2023. The Company has also disclosed its capital structure policy, with a target capital structure at Southwest Gas Holdings consisting of approximately 50% equity and 50% debt with a slightly higher target equity ratio at Southwest Gas Corporation. Southwest Gas Holdings, Inc. has clearly demonstrated that it has and will continue to issue additional common stock to fund capital expenditures by the Company, which are required to maintain an appropriate capital structure for its credit ratings.

Q. 129 Will the credit rating agencies view the use of the target capital structure for ratemaking purposes as being credit supportive?

A. 129 Yes. Rating agencies will analyze the effect of the authorized capital structure and return on common equity on the utility's projected financial performance. In doing so, rating agencies will look to see if the capital structure employed for ratemaking purposes is consistent with the utility's ratings and if the authorized return on common equity is comparable to other utilities are being authorized of the same credit quality. A reduction in the authorized common equity ratio will be viewed as credit negative, as well as a common equity ratio that is below the average authorized. For example, in comments by Moody's for their rationale for the Company's downgrade in January 2021, commenting on the outcome of the

Company's most recent Arizona general rate case, Moody's Investors Service ("Moody's") states:

However, the utility's allowed return on equity (ROE) was lowered to a below-industry average 9.1% from 9.5% and equity capitalization was lowered to 51.1% from 51.7%, both credit negatives.[90]

Moreover, the Company's credit metrics have declined since the Company's last general rate case, with Fitch Ratings ("Fitch") revising the Company's credit rating outlook to "Negative" on June 4, 2021. Fitch stated the following rationale for the change in the outlook: The Negative Outlook at SWG reflects expected credit metrics that are outside of stated Fitch's downgrade threshold over Fitch's forecast period following another round of rate case filings in Arizona and Nevada expected later this year. Recent rate case decisions in both states, and in particular in Arizona, were modestly disappointing and do not provide sufficient cash flow to keep leverage below negative sensitivity threshold.

Absent additional equity funding or better than projected resolution of the upcoming general rate cases that would return metrics to within the stated threshold by 2023, negative rating action is likely.[91]

The use of the Company's requested target capital structure, a capital structure it is projected to achieve by 2023, will be seen as constructive by the rating agencies and will augment the Company's efforts, via the infusion

[90] Moody's Investors Service, Ratings Action: *Moody's Downgrades Southwest Gas Corporation and Southwest Gas Holdings; outlooks stable*, January 29, 2021, p. 1.

[91] Fitch Ratings, *Fitch Affirms SWX and SWG at 'BBB+' and 'A-'; SWG Outlook Revised to Negative from Stable*, June 4, 2021, p. 1.

of additional equity capital from the parent company resulting from stock offerings, in preserving the Company's strong investment grade credit ratings.

Q. 130 Does the use of a 51.00 percent equity ratio have any implications for your recommendation concerning the Company's ROE?

A. 130 Yes. The average equity ratio of the proxy companies is considerably higher than 51.00 percent, which means that all else equal, the proxy companies have lower financial risk than is implied by the equity ratio proposed by the Company. The use of a lower equity ratio than the proxy companies further supports a ROE at the high end of the range of results presented in Figure 18 below.

Q. 131 Will the capital structure and ROE authorized in these proceedings affect the Company's access to capital at reasonable rates?

A. 131 Yes. The level of earnings authorized by the Commission directly affects the Company's ability to fund their operations with internally generated funds. Both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally generated funds.

It also is important to realize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-run financing requirements of the assets placed into service. Those assurances, which often are measured by the relationship between internally generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. Therefore, both the ROE and capital structure are very important to debt and equity investors.

Furthermore, considering the capital market conditions discussed in Section IV, the authorized ROE and capital structure take on even greater significance.

Q. 132 What is your conclusion regarding an appropriate equity ratio for Southwest Gas?

A. 132 Considering the actual capital structures of the proxy group operating companies, I believe that Southwest Gas's proposed common equity ratio of 51.00 percent is reasonable. The proposed equity ratio is below the average equity ratio established by the capital structures of the utility operating subsidiaries of the proxy companies. In addition, based on the cash flow concerns raised by credit rating agencies as a result of the TCJA, COVID-19 and increased capital expenditures, it is reasonable to rely on a higher equity ratio than the Company may have relied on in prior rate cases.

IX. CONCLUSIONS AND RECOMMENDATION

Q. 133 What is your conclusion regarding a fair ROE for Southwest Gas?

A. 133 Figure 18 below provides a summary of my analytical results. Based on these results, the qualitative analyses presented in my Direct Testimony, the business and financial risks of Southwest Gas compared to the proxy group, and the effects of Federal tax reform and COVID-19 on the cash flow metrics of utilities, it is my view that the Company's requested ROE of 9.90 percent is reasonable and would fairly balance the interests of customers and shareholders. This ROE would enable the Company to maintain its financial integrity and therefore its ability to attract capital at reasonable rates under a variety of economic and financial market

conditions, while continuing to provide safe, reliable and affordable natural gas utility service to customers in Arizona.

Figure 18: Summary of Analytical Results

Constant Growth DCF			
	Mean Low	Mean	Mean High
30-Day Average Price	8.45%	10.36%	12.42%
90-Day Average Price	8.23%	10.14%	12.19%
180-Day Average Price	8.14%	10.04%	12.09%
	Median Low	Median	Median High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%
Capital Asset Pricing Model			
	Current Risk-Free Rate (2.13%)	Q1 2022 – Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-term Average Beta	9.66%	9.77%	10.05%
Empirical Capital Asset Pricing Model			
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-term Average Beta	10.41%	10.49%	10.70%
Bond Yield Plus Risk Premium			
	Current Risk-Free Rate (2.13%)	Q1 2022 – Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
Risk Premium Results	9.40%	9.59%	10.01%

Q. 134 What is your conclusion with respect to Southwest Gas's proposed capital structure?

A. 134 My conclusion is that Southwest Gas's proposal to establish a target capital structure consisting of 51.00 percent common equity, and 49.00 percent long-term debt is reasonable when compared to the capital structures of the companies in the proxy group and taking in consideration the effect of

the TCJA, increased capital expenditures and COVID-19 on cash flows and therefore should be adopted.

X. FAIR VALUE RATE OF RETURN

Q. 135 What is the fair value standard in Arizona?

A. 135 As the Commission noted in its decision regarding *Chaparral City Water Company*,[92] the Arizona Constitution requires the use of a fair value rate base in establishing rates. Article XV, Section 14 of the Arizona Constitution states:

> The corporation commission shall, to aid it in the proper discharge of its duties, ascertain the fair value of the property within the state of every public service corporation doing business therein; and every public service corporation doing business within the state shall furnish to the commission all evidence in its possession, and all assistance in its power, requested by the commission in aid of the determination of the value of the property within the state of such public service corporation.[93]

As interpreted by the Arizona Court of Appeals, this paragraph requires the Commission to find the fair value of a public service corporation's property and to use that value to set just and reasonable rates.[94]

Q. 136 Does the fair value standard also require consideration of the fair return on the fair value of the Company's assets?

A. 136 Yes. As noted above, the Arizona Constitution requires that the Commission establish just and reasonable rates using the fair value of the Company's property. In establishing the revenue requirement, the

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[92] Decision No. 70441 (July 28, 2008), at 20-21.
[93] Arizona Constitution, Article XV, Section 14.
[94] Decision No. 75697 (August 18, 2016), Decision No. 71914, (September 30, 2010), at 48-49. See also, Decision No. 70441 (July 28, 2008), at 20-21.

Commission would also need to establish the appropriate ROE to apply to the equity component of the FVRB.

Q. 137 How has the Commission historically estimated the FVROR on the FVRB?

A. 137 The Commission has determined the FVROR by applying the market ROE and the cost of debt to the Company's OCRB based on the percent of equity and debt in the Company's proposed capital structure. The Commission then applies a different rate, traditionally one half of the risk-free rate, to what has been commonly referred to as the "fair value increment."[95] The fair value increment is the difference between the OCRB and the Company's proposed FVRB. The FVROR is then the sum of the returns on each of the three components: (1) equity capital; (2) debt capital; and (3) the fair value increment, weighted by the percentage of each in the FVRB.

Q. 138 What does the fair value increment represent?

A. 138 As described in the Commission's Decision No. 77850, the fair value increment represents the appreciation in the value of the assets to their current value due to inflation. The sum of the OCRB and the fair value increment is the total fair value of the utility's property.[96]

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[95] Decision No. 77856 (December 31, 2020), at 69-70, Decision No. 77850 (December 17, 2020), at 74, Decision No. 70665 (December 24, 2008), at 32 and Decision No. 75697 (August 18, 2016), at 14.

[96] Ibid.

XI. ESTIMATING THE FAIR VALUE RATE OF RETURN

Q. 139 Do you agree with the methodology of determining the rate of return to be applied to the fair value increment traditionally used by the Commission, *i.e.*, half of the risk-free interest rate?

A. 139 No. There is no basis whatsoever for reducing this return component to one-half of the risk-free rate. Since equity investors are the residual claimants after bondholders and preferred stockholders, it is inconceivable to me that an investor would accept a rate of return that is less than the cost of debt for an equity position in any investment. At the very least, the market expectation is that investments that are not risk-free should earn a rate of return that exceeds the risk-free rate. Furthermore, the application of 50.00 percent of the risk-free rate as a measure of the Cost of Equity on the fair value increment is subjective and has no basis in financial theory. The risk-free rate sets the low-end of the range of returns that I believe would be appropriate to apply to the fair value increment.

Q. 140 Have you estimated the FVROR in this case?

A. 140 I have estimated the FVROR using three approaches, all based generally on the methodology that has been relied on by the Commission in prior cases.

Q. 141 Please explain the methodologies you used to estimate the risk-free rate of return.

A. 141 As shown in Exhibit No._(AEB-17), in all three cases, the risk-free rate is estimated based on a nominal projection of the risk-free rate and an interest rate assumption to establish the real risk-free rate. In the first two scenarios, I relied on a projected nominal risk-free rate of return as the

average of the 2023-2027 projected yield on 30-year U.S. Treasury bonds of 3.50 percent and the 2028-2032 projected yield on 30-year U.S. Treasury bonds of 3.90 percent as reported in the Blue Chip Financial Forecasts.[97] I then adjusted the nominal risk-free rate of 3.70 percent by a measure of inflation.

In scenario 1, the nominal risk-free rate was adjusted based on a projected estimate of inflation that was based on the growth in the Consumer Price Index and the GDP Chain-type Price Index over the period from 2022-2032 (see Exhibit No._(AEB-17)). The rate of inflation of 2.23 percent is based on three measures: (1) the average 2023-2027 and 2028-2032 projected growth rate in the CPI of 2.20 percent, as reported by Blue Chip Financial Forecasts;98 (2) the compound annual growth rate of the CPI for all urban consumers for 2022-2032 of 2.20 percent as projected by the EIA in the Annual Energy Outlook 2021; and (3) the compound annual growth rate of the GDP Chain-Type Price Index for 2022-2032 of 2.28 percent, also reported by the EIA in the Annual Energy Outlook 2021.99 Using these indexes, the estimate of inflation was 2.23 percent. Removing inflation from the nominal risk-free rate resulted in a real risk-free rate of 1.44 percent.

In scenario 2, the estimate of inflation was based on the 180-day average yield on the 30-year U.S. Treasury Bond (i.e., 2.08 percent) minus the 180-day average yield on the 30-year U.S. Treasury Inflation Protected Security

[97] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14.
[98] Ibid.
[99] U.S. Energy Information Administration, Annual Energy Outlook 2021, Table 20, Macroeconomic Indicators.

(TIPS) (i.e., -0.1 percent). This resulted in an estimate of inflation of 2.21 percent.[100] The resulting real risk-free rate after adjusting for inflation is 1.49 percent.

Q. 142 Did you consider other estimates of the risk-free rate?

A. 142 Yes, I also considered a normalized estimate of the risk-free rate. As discussed previously in my Direct Testimony, though recent data has demonstrated historically low interest rates, investors are expecting to see increases in interest rates over time. In order to address the uncertainty on the correct level of interest rates, in scenario 3, I have relied on a normalized risk-free rate, as published by Duff and Phelps in the 2020 Valuation Handbook of 2.50 percent. This normalized interest rate is then converted to a real rate using the difference between the yield on the 30-year U.S. Treasury Bond and the yield on the TIPS of 2.21 percent. The resulting real risk-free rate is 0.29 percent.

Q. 143 What is your conclusion on the appropriate real risk-free rate in this case?

A. 143 The range established by the three methodologies that I developed is from 0.29 percent to 1.49 percent. In reviewing the inflation estimates, I believe that the inflation estimate developed in Scenario 3, which relies on the normalized risk-free rate from Duff and Phelps may understate the expected risk-free rate over the near-term given, as discussed in Section IV above, that investors expect interest rates to increase as the economy recovers from the COVID-19 pandemic. Averaging the results from all three

[100] Docket No. WS-01303A-17-0257 Joint Notice of Filing Issues Matrix July 13, 2018, p. 1.

scenarios results in a real risk-free rate of 1.07 percent. However, to simplify the Company's request in this case, the Company is requesting a return of 0.00 percent be relied on for the FVI cost rate.

Q. 144 Please explain how you applied the Commission's methodology to estimate the FVROR.

A. 144 As shown in Exhibit No._(AEB-18) and in Figure 19 and Figure 20 below, I calculated the difference between the Company's OCRB and the Company's proposed FVRB, which includes a 50.00 percent weight on original cost. That difference represents the appreciation in the value of the assets based on the "market value" of the OCRB and has been commonly referred to as the "fair value increment."[101] The weighted average cost of debt and the market Cost of Equity were applied to the OCRB.

Q. 145 Please explain how you estimated the rate of return that you applied to the fair value increment.

A. 145 As discussed above, I believe that the appropriate return that could be applied to the fair value increment ranges from the low-end as measured by the risk-free rate to the high-end as measured by the cost of equity for the proxy group as discussed in Section VI of my Direct Testimony. Nevertheless, the Company has requested that I estimate the FVROR by applying 0.00 percent to the fair value increment.

[101] Decision No. 77856 (December 31, 2020), at 69-70, Decision No. 77850 (December 17, 2020), at 74, Decision No. 70665 (December 24, 2008), at 32 and Decision No. 75697 (August 18, 2016), at 14.

Figure 19: Estimation of the FVRB

Capital	$ Millions	Percent	Weighted FVRB
OCRB	$2,642.068	50.00%	$ 1,321.034
RCND	$4,186.764	50.00%	$ 2,093.382
FVRB			$ 3,414.416

Figure 20: Estimation of the FVROR

Capital	$ Millions	Percent	Cost Rate	Weighted Cost Rate
Long-Term Debt	$1,294.613	37.92%	4.16%	1.57%
Common Equity	$ 1,347.455	39.46%	9.90%	3.91%
Fair Value Increment	$ 772.348	22.62%	0.00%	0.00%
Total	$ 3,414.416			5.48%

Q. 146 What is the resulting FVROR?

A. 146 As shown in Figure 19 and Figure 20 (see also, Exhibit No._(AEB-18)) based on the calculation discussed previously, the FVROR that would be applied to the FVRB is 5.48 percent.

Q. 147 Does this conclude your Direct Testimony?

A. 147 Yes, it does.

CONCENTRIC ENERGY ADVISORS

ANN E. BULKLEY
Senior Vice President

Ms. Bulkley has more than two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has extensive state and federal regulatory experience on both electric and natural gas issues including rate of return, cost of equity and capital structure issues. Ms. Bulkley has provided expert testimony on the cost of capital in nearly 100 regulatory proceedings before 32 state regulatory commissions and the Federal Energy Regulatory Commission. In addition to her regulatory experience, Ms. Bulkley has provided valuation and appraisal services for a variety of purposes including the sale or acquisition of utility assets, regulated ratemaking, ad valorem tax disputes, and other litigation purposes. In addition, Ms. Bulkley has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring and regulatory and litigation support. Prior to joining Concentric, Ms. Bulkley held senior expertise-based consulting positions at several firms, including Reed Consulting Group and Navigant Consulting, Inc. where she specialized in valuation. Ms. Bulkley holds an M.A. in economics from Boston University and a B.A. in economics and finance from Simmons College. Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Analysis and Ratemaking

Ms. Bulkley has provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking. Specific services have included: cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies; development of merchant function exit strategies; analysis and program development to address residual energy supply and/or provider of last resort obligations; stranded costs assessment and recovery; performance-based ratemaking analysis and design; and many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation).

Cost of Capital

Ms. Bulkley has provided expert testimony on the cost of capital and capital structure in nearly 100 regulatory proceedings before state and federal regulatory commissions in the United States.

Ratemaking

Ms. Bulkley has assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.

Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Analyzed and evaluated rate application. Attended hearings and conducted

investigation of rate application for regulatory staff. Prepared, supported and defended recommendations for revenue requirements and rates for the company. Developed rates for gas utility for transportation program and ancillary services.

Valuation

Ms. Bulkley has provided valuation services to utility clients, unregulated generators and private equity clients for a variety of purposes including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Ms. Bulkley's appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Prepared appraisals of electric utility transmission and distribution assets for ad valorem tax purposes.
- Prepared appraisals of several hydroelectric generating facilities for ad valorem tax purposes.
- Conducted appraisals of fossil fuel generating facilities for ad valorem tax purposes.
- Conducted appraisals of generating assets for the purposes of unwinding sale-leaseback agreements.
- Confidential Utility Client: Prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost and comparable sales approaches.

- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Prepared Feasibility Reports analyzing the expected net benefits resulting from municipal ownership of investor-owned utility operations.
- Prepared independent analyses of proposal for the proposed government condemnation of the investor-owned utilities in the State of Maine and the formation of a Public Power District.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

Strategic and Financial Advisory Services

Ms. Bulkley has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Senior Vice President
Vice President
Assistant Vice President
Project Manager

Navigant Consulting, Inc. (1995 – 2002)
Project Manager

Cahners Publishing Company (1995)
Economist

EDUCATION

Boston University
M.A., Economics, 1995

Simmons College
B.A., Economics and Finance, 1991

CERTIFICATIONS

Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A-19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A-19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A-15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A-15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A-12-0504	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Co	10/21	Oklahoma Gas and Electric Co	Docket No. D-18-046-FR	Return on Equity
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
San Jose Water Company	05/21	San Jose Water Company	A2105004	Return on Equity
Colorado Public Utilities Commission				
Public Service Company of Colorado	07/21	Public Service Company of Colorado	21AL-0317E	Return on Equity
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
Connecticut Public Utilities Regulatory Authority				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
United Illuminating	05/21	United Illuminating	Docket No. 17-12-03RE11	Return on Equity
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory Commission				
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Idaho Public Utilities Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commission				
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Indiana Utility Regulatory Commission				
Indiana Michigan Power Co.	07/21	Indiana Michigan Power Co.	IURC Cause No. 45576	Return on Equity
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Iowa Department of Commerce Utilities Board				
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020-0001	Return on Equity
Kansas Corporation Commission				
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG-079-RTS	Return on Equity
Kentucky Public Service Commission				
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity
Maine Public Utilities Commission				
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Maryland Public Service Commission				
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Tax Board				
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department of Public Utilities				
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16-001888-TT	Valuation of Electric Generation Assets
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
Minnesota Public Utilities Commission				
CenterPoint Energy Resources	11/21	CenterPoint Energy Resources	D-G-008/GR-21-435	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/21	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-21-630	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19-511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17-563	Return on Equity
Missouri Public Service Commission				
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021-0240 Docket No. GR-2021-0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Commission				
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
New Hampshire - Board of Tax and Land Appeals				
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets
New Hampshire Public Utilities Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Hampshire-Merrimack County Superior Court				
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property
New Hampshire-Rockingham Superior Court				
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public Utilities				
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	EO18101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	EO18060629 GO18060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulation Commission				
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department of Public Service				
Corning Natural Gas Corporation	07/21	Corning Natural Gas Corporation	Case No. 21-G-0394	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/19	New York State Electric and Gas Company Rochester Gas and Electric	19-E-0378 19-G-0379 19-E-0380 19-G-0381	Return on Equity
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service Commission				
Montana-Dakota Utilities Co.	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Commission				
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility Commission				
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020-3019369 (water) Docket No. R-2020-3019371 (wastewater)	Return on Equity
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017-2595853	Return on Equity
South Dakota Public Utilities Commission				
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commission				
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
Utah Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equity
Virginia State Corporation Commission				
Virginia American Water Company, Inc.	11/21	Virginia American Water Company, Inc.	Docket No. PUR-2021-00255	Return on Equity
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018-00175	Return on Equity
Washington Utilities Transportation Commission				
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity

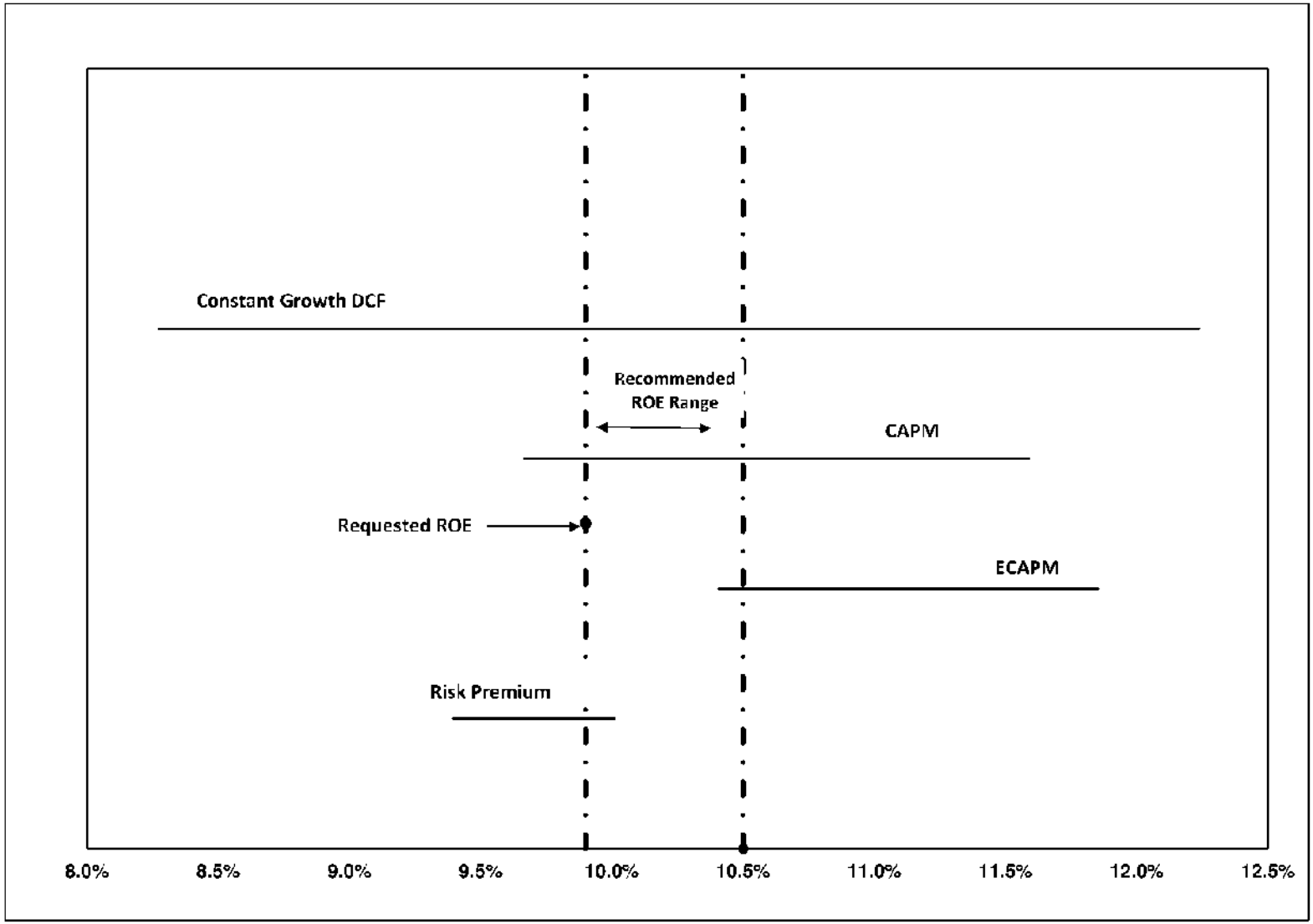
SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service Commission				
West Virginia American Water Company	04/21	West Virginia American Water Company	Case No. 21-02369-W-42T	Return on Equity
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Commission				
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity
Wyoming Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578-ER-20	Return on Equity
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity

SUMMARY OF ROE ANALYSES RESULTS AS OF OCTOBER 31, 2021

Constant Growth DCF			
	Mean Low	Mean	Mean High
30-Day Average	8.45%	10.36%	12.42%
90-Day Average	8.23%	10.14%	12.19%
180-Day Average	8.14%	10.04%	12.09%
Constant Growth Average	8.28%	10.18%	12.24%
	Median Low	Median	Median High
30-Day Average	9.23%	10.12%	11.19%
90-Day Average	8.94%	10.06%	11.06%
180-Day Average	8.83%	10.08%	10.88%
Constant Growth Average	9.00%	10.09%	11.04%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.43%	11.48%	11.59%
Bloomberg Beta	10.46%	10.54%	10.75%
Long-Term Avg. Beta	9.66%	9.77%	10.05%
ECAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.73%	11.77%	11.85%
Bloomberg Beta	11.01%	11.06%	11.22%
Long-Term Avg. Beta	10.41%	10.49%	10.70%
Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	9.40%	9.59%	10.01%

	X
Constant Growth DCF	8.28%
	10.18%
	12.24%
CAPM	9.66%
	11.59%
ECAPM	10.41%
	11.85%
Risk Premium	9.40%
	10.01%
Recommended ROE Range	9.90%
	9.90%
Recommended ROE Range	10.50%
	10.50%
Requested ROE	9.90%

SUMMARY OF ROE ANALYSES RESULTS AS OF OCTOBER 31, 2021



PROXY GROUP SCREENING DATA AND RESULTS - FINAL PROXY GROUP

Company	Ticker	[1] Dividends	[2] S&P Credit Rating Between BBB- and AAA	[3] Covered by More Than 1 Analyst	[4] Positive Growth Rates from at least two sources (Value Line, Yahoo! First Call, and Zacks)	[5] % Regulated Operating Income > 60%	[6] % Regulated Natural Gas Operating Income > 60%	[7] Announced Merger
Atmos Energy Corporation	ATO	Yes	A-	Yes	Yes	100.00%	64.64%	No
New Jersey Resources Corporation	NJR	Yes	A+	Yes	Yes	67.77%	100.54%	No
NiSource Inc.	NI	Yes	BBB+	Yes	Yes	99.76%	66.71%	No
Northwest Natural Gas Company	NWN	Yes	A+	Yes	Yes	99.84%	91.42%	No
ONE Gas Inc.	OGS	Yes	BBB+	Yes	Yes	100.00%	100.00%	No
South Jersey Industries, Inc.	SJI	Yes	BBB	Yes	Yes	97.52%	100.00%	No
Spire, Inc.	SR	Yes	A-	Yes	Yes	97.04%	100.00%	No

Notes:
[1] Source: Bloomberg Professional as of October 31, 2021
[2] Source: Bloomberg Professional as of October 31, 2021
[3] Source: Yahoo! Finance and Zacks
[4] Source: Yahoo! Finance, Value Line Investment Survey, and Zacks
[5] Source: Form 10-K's for 2020, 2019, and 2018
[6] Source: Form 10-K's for 2020, 2019, and 2018
[7] Source: SNL Financial News Releases

30-DAY CONSTANT GROWTH DCF – SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$90.73	2.76%	2.86%	7.00%	8.00%	7.50%	7.50%	9.85%	10.36%	10.87%
New Jersey Resources Corporation	NJR	$1.45	$36.72	3.95%	4.05%	2.00%	6.00%	7.10%	5.03%	5.99%	9.08%	11.19%
NiSource Inc.	NI	$0.88	$24.48	3.59%	3.71%	9.50%	3.52%	6.20%	6.41%	7.18%	10.12%	13.27%
Northwest Natural Gas Company	NWN	$1.93	$46.74	4.13%	4.24%	5.50%	5.70%	5.00%	5.40%	9.23%	9.64%	9.95%
ONE Gas Inc.	OGS	$2.32	$66.57	3.49%	3.57%	6.50%	2.90%	5.00%	4.80%	6.44%	8.37%	10.10%
South Jersey Industries, Inc.	SJI	$1.21	$22.31	5.42%	5.63%	11.50%	5.20%	5.60%	7.43%	10.77%	13.06%	17.24%
Spire, Inc.	SR	$2.60	$63.18	4.12%	4.27%	10.00%	7.31%	5.50%	7.60%	9.73%	11.88%	14.32%
Mean				3.92%	4.05%	7.43%	5.52%	5.99%	6.31%	8.45%	10.36%	12.42%
Median				3.95%	4.05%	7.00%	5.70%	5.60%	6.41%	9.23%	10.12%	11.19%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF – SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$95.60	2.62%	2.71%	7.00%	8.00%	7.50%	7.50%	9.71%	10.21%	10.72%
New Jersey Resources Corporation	NJR	$1.45	$37.88	3.83%	3.92%	2.00%	6.00%	7.10%	5.03%	5.87%	8.96%	11.06%
NiSource Inc.	NI	$0.88	$24.87	3.54%	3.65%	9.50%	3.52%	6.20%	6.41%	7.12%	10.06%	13.21%
Northwest Natural Gas Company	NWN	$1.93	$50.19	3.85%	3.95%	5.50%	5.70%	5.00%	5.40%	8.94%	9.35%	9.65%
ONE Gas Inc.	OGS	$2.32	$70.64	3.28%	3.36%	6.50%	2.90%	5.00%	4.80%	6.23%	8.16%	9.89%
South Jersey Industries, Inc.	SJI	$1.21	$24.22	5.00%	5.18%	11.50%	5.20%	5.60%	7.43%	10.33%	12.61%	16.78%
Spire, Inc.	SR	$2.60	$67.61	3.85%	3.99%	10.00%	7.31%	5.50%	7.60%	9.45%	11.60%	14.04%
Mean				3.71%	3.82%	7.43%	5.52%	5.99%	6.31%	8.23%	10.14%	12.19%
Median				3.83%	3.92%	7.00%	5.70%	5.60%	6.41%	8.94%	10.06%	11.06%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF -- SOUTHWEST GAS PROXY GROUP

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line Earnings Growth	[6] Yahoo! Finance Earnings Growth	[7] Zacks Earnings Growth	[8] Average Growth Rate	[9] Low ROE	[10] Mean ROE	[11] High ROE
Atmos Energy Corporation	ATO	$2.50	$96.56	2.59%	2.69%	7.00%	8.00%	7.50%	7.50%	9.68%	10.19%	10.69%
New Jersey Resources Corporation	NJR	$1.45	$39.73	3.65%	3.74%	2.00%	6.00%	7.10%	5.03%	5.69%	8.77%	10.88%
NiSource Inc.	NI	$0.88	$24.70	3.56%	3.68%	9.50%	3.52%	6.20%	6.41%	7.15%	10.08%	13.23%
Northwest Natural Gas Company	NWN	$1.93	$51.59	3.74%	3.84%	5.50%	5.70%	5.00%	5.40%	8.83%	9.24%	9.55%
ONE Gas Inc.	OGS	$2.32	$73.19	3.17%	3.25%	6.50%	2.90%	5.00%	4.80%	6.12%	8.05%	9.77%
South Jersey Industries, Inc.	SJI	$1.21	$24.81	4.88%	5.06%	11.50%	5.20%	5.60%	7.43%	10.20%	12.49%	16.66%
Spire, Inc.	SR	$2.60	$70.45	3.69%	3.83%	10.00%	7.31%	5.50%	7.60%	9.29%	11.43%	13.88%
Mean				3.61%	3.73%	7.43%	5.52%	5.99%	6.31%	8.14%	10.04%	12.09%
Median				3.65%	3.74%	7.00%	5.70%	5.60%	6.41%	8.83%	10.08%	10.88%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-day average as of October 31, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.13%	0.80	12.64%	10.51%	10.53%	11.06%
New Jersey Resources Corporation	NJR	2.13%	1.00	12.64%	10.51%	12.64%	12.64%
NiSource Inc.	NI	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
Northwest Natural Gas Company	NWN	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
ONE Gas Inc.	OGS	2.13%	0.80	12.64%	10.51%	10.53%	11.06%
South Jersey Industries, Inc.	SJI	2.13%	1.05	12.64%	10.51%	13.16%	13.03%
Spire, Inc.	SR	2.13%	0.85	12.64%	10.51%	11.06%	11.45%
Mean						11.43%	11.73%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.50%	0.80	12.64%	10.14%	10.61%	11.12%
New Jersey Resources Corporation	NJR	2.50%	1.00	12.64%	10.14%	12.64%	12.64%
NiSource Inc.	NI	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
Northwest Natural Gas Company	NWN	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
ONE Gas Inc.	OGS	2.50%	0.80	12.64%	10.14%	10.61%	11.12%
South Jersey Industries, Inc.	SJI	2.50%	1.05	12.64%	10.14%	13.14%	13.02%
Spire, Inc.	SR	2.50%	0.85	12.64%	10.14%	11.12%	11.50%
Mean						11.48%	11.77%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2023 - 2027)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm − Rf)	CAPM ROE (K)	ECAPM ROE (K)
Atmos Energy Corporation	ATO	3.50%	0.80	12.64%	9.14%	10.81%	11.27%
New Jersey Resources Corporation	NJR	3.50%	1.00	12.64%	9.14%	12.64%	12.64%
NiSource Inc.	NI	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
Northwest Natural Gas Company	NWN	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
ONE Gas Inc.	OGS	3.50%	0.80	12.64%	9.14%	10.81%	11.27%
South Jersey Industries, Inc.	SJI	3.50%	1.05	12.64%	9.14%	13.09%	12.98%
Spire, Inc.	SR	3.50%	0.85	12.64%	9.14%	11.27%	11.61%
Mean						11.59%	11.85%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[2] Source: Value Line
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.13%	0.75	12.64%	10.51%	10.02%	10.67%
New Jersey Resources Corporation	NJR	2.13%	0.83	12.64%	10.51%	10.87%	11.31%
NiSource Inc.	NI	2.13%	0.81	12.64%	10.51%	10.62%	11.13%
Northwest Natural Gas Company	NWN	2.13%	0.72	12.64%	10.51%	9.74%	10.46%
ONE Gas Inc.	OGS	2.13%	0.83	12.64%	10.51%	10.87%	11.31%
South Jersey Industries, Inc.	SJI	2.13%	0.84	12.64%	10.51%	10.94%	11.36%
Spire, Inc.	SR	2.13%	0.77	12.64%	10.51%	10.18%	10.79%
Mean						10.46%	11.01%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm - Rf) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	2.50%	0.75	12.64%	10.14%	10.11%	10.74%
New Jersey Resources Corporation	NJR	2.50%	0.83	12.64%	10.14%	10.93%	11.36%
NiSource Inc.	NI	2.50%	0.81	12.64%	10.14%	10.69%	11.18%
Northwest Natural Gas Company	NWN	2.50%	0.72	12.64%	10.14%	9.84%	10.54%
ONE Gas Inc.	OGS	2.50%	0.83	12.64%	10.14%	10.93%	11.36%
South Jersey Industries, Inc.	SJI	2.50%	0.84	12.64%	10.14%	11.00%	11.41%
Spire, Inc.	SR	2.50%	0.77	12.64%	10.14%	10.26%	10.86%
Mean						10.54%	11.06%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$K = Rf + \beta \times (Rm - Rf)$
$K = Rf + 0.25 \times (Rm) + 0.75 \times \beta \times (Rm - Rf)$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2023 - 2027)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm − Rf)	[5] CAPM ROE (K)	[6] ECAPM ROE (K)
Atmos Energy Corporation	ATO	3.50%	0.75	12.64%	9.14%	10.36%	10.93%
New Jersey Resources Corporation	NJR	3.50%	0.83	12.64%	9.14%	11.10%	11.48%
NiSource Inc.	NI	3.50%	0.81	12.64%	9.14%	10.89%	11.32%
Northwest Natural Gas Company	NWN	3.50%	0.72	12.64%	9.14%	10.12%	10.75%
ONE Gas Inc.	OGS	3.50%	0.83	12.64%	9.14%	11.10%	11.48%
South Jersey Industries, Inc.	SJI	3.50%	0.84	12.64%	9.14%	11.16%	11.53%
Spire, Inc.	SR	3.50%	0.77	12.64%	9.14%	10.50%	11.03%
Mean						10.75%	11.22%

Notes:
[1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[2] Source: Bloomberg Professional, as of October 31, 2021
[3] Source: Exhibit No._(AEB-7)
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM AVERAGE BETA

CAPM: $K = R_f + \beta (R_m - R_f)$ / ECAPM: $K = Rf + 0.25(Rm - Rf) + 0.75\beta (Rm - Rf)$

	[4]	[5]	[6]	[7]	[8]	[9]
	Risk-Free Rate (R_f)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	CAPM (K)	ECAPM (K)
Current 30-day average of 30-year U.S. Treasury bond yield [1]	2.13%	0.717	12.64%	10.51%	9.66%	10.41%
Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023) [2]	2.50%	0.717	12.64%	10.14%	9.77%	10.49%
Projected 30-year U.S. Treasury bond yield (2023 - 2027) [3]	3.50%	0.717	12.64%	9.14%	10.05%	10.70%
				Average:	9.83%	10.53%

Notes:
[1] Source: Bloomberg Professional, as of October 31, 2021
[2] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[3] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[4] See Notes [1], [2], and [3]
[5] Source: Exhibit No._(AEB-6)
[6] Source: Exhibit No._(AEB-7)
[7] Equals [6] – [4]
[8] Equals [4] + [5] x [7]
[9] Equals [4] + 0.25 x ([7]) + 0.75 x ([5] x [7])

HISTORICAL BETA - 2011 - 2020

Company	Ticker	[1] 12/31/2011	[2] 12/31/2012	[3] 12/31/2013	[4] 12/31/2014	[5] 12/31/2015	[6] 12/31/2016	[7] 12/31/2017	[8] 12/31/2018	[9] 12/31/2019	[10] 12/31/2020	[11] Average
Atmos Energy Corporation	ATO	0.70	0.70	0.80	0.80	0.80	0.70	0.70	0.60	0.60	0.80	0.72
New Jersey Resources Corporation	NJR	0.65	0.65	0.70	0.80	0.80	0.80	0.80	0.70	0.70	0.95	0.76
NiSource Inc.	NI	0.85	0.80	0.85	0.85	NMF	NMF	0.60	0.50	0.55	0.85	0.73
Northwest Natural Gas Company	NWN	0.60	0.55	0.65	0.70	0.65	0.65	0.70	0.60	0.60	0.80	0.65
ONE Gas Inc.	OGS	N/A	N/A	N/A	N/A	N/A	N/A	0.70	0.65	0.65	0.80	0.70
South Jersey Industries, Inc.	SJI	0.65	0.65	0.70	0.80	0.80	0.80	0.85	0.80	0.80	1.05	0.79
Spire, Inc.	SR	0.60	0.55	0.65	0.70	0.70	0.70	0.70	0.65	0.65	0.85	0.68
Mean		0.68	0.65	0.73	0.78	0.75	0.73	0.72	0.64	0.65	0.87	0.72

Notes:
[1] Value Line, dated December 9, 2011.
[2] Value Line, dated December 7, 2012.
[3] Value Line, dated December 6, 2013.
[4] Value Line, dated December 5, 2014.
[5] Value Line, dated December 4, 2015.
[6] Value Line, dated December 2, 2016.
[7] Value Line, dated December 1, 2017.
[8] Value Line, dated November 30, 2018.
[9] Value Line, dated November 29, 2019.
[10] Value Line, dated November 27, 2020.
[11] Average ([1] - [10])

MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimate of the S&P 500 Dividend Yield	1.75%
[2] Estimate of the S&P 500 Growth Rate	10.79%
[3] S&P 500 Estimated Required Market Return	12.64%

Notes:
[1] Sum of [6]
[2] Sum of [8]
[3] Equals ([1] x (1 + 0.5 x [2])) + [2]

STANDARD & POOR'S 500 INDEX

		[4]	[5]	[6]	[7]	[8]
Name	Ticker	Weight in Index	Current Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	0.11%	4.87%	0.01%	8.00%	0.01%
American Express Co	AXP	0.50%	0.99%	0.00%	8.50%	0.04%
Verizon Communications Inc	VZ	0.81%	4.83%	0.04%	3.50%	0.03%
Broadcom Inc	AVGO		2.71%	n/a	27.00%	n/a
Boeing Co/The	BA		n/a	n/a	0.00%	n/a
Caterpillar Inc	CAT	0.41%	2.18%	0.01%	9.00%	0.04%
JPMorgan Chase & Co	JPM	1.87%	2.35%	0.04%	7.50%	0.14%
Chevron Corp	CVX		4.68%	n/a	23.50%	n/a
Coca-Cola Co/The	KO	0.90%	2.98%	0.03%	7.00%	0.06%
AbbVie Inc	ABBV	0.75%	4.92%	0.04%	6.50%	0.05%
Walt Disney Co/The	DIS		n/a	n/a	14.00%	n/a
FleetCor Technologies Inc	FLT		n/a	n/a	11.00%	n/a
Extra Space Storage Inc	EXR	0.10%	2.53%	0.00%	5.00%	0.00%
Exxon Mobil Corp	XOM		5.46%	n/a	0.00%	n/a
Phillips 66	PSX	0.12%	4.92%	0.01%	20.00%	0.02%
General Electric Co	GE	0.42%	0.31%	0.00%	15.00%	0.06%
HP Inc	HPQ	0.13%	2.56%	0.00%	12.50%	0.02%
Home Depot Inc/The	HD	1.45%	1.78%	0.03%	8.50%	0.12%
Monolithic Power Systems Inc	MPWR		0.46%	n/a	20.50%	n/a
International Business Machines Corp	IBM	0.41%	5.24%	0.02%	1.50%	0.01%
Johnson & Johnson	JNJ	1.58%	2.60%	0.04%	10.00%	0.16%
McDonald's Corp	MCD	0.68%	2.25%	0.02%	10.50%	0.07%
Merck & Co Inc	MRK	0.82%	2.95%	0.02%	7.50%	0.06%
3M Co	MMM	0.38%	3.31%	0.01%	6.00%	0.02%
American Water Works Co Inc	AWK	0.12%	1.38%	0.00%	8.50%	0.01%
Bank of America Corp	BAC	1.44%	1.76%	0.03%	7.50%	0.11%
Baker Hughes Co	BKR	0.08%	2.87%	0.00%	6.00%	0.00%
Pfizer Inc	PFE	0.90%	3.57%	0.03%	8.00%	0.07%
Procter & Gamble Co/The	PG	1.28%	2.43%	0.03%	7.00%	0.09%
AT&T Inc	T	0.67%	8.23%	0.05%	2.50%	0.02%
Travelers Cos Inc/The	TRV	0.15%	2.19%	0.00%	8.00%	0.01%
Raytheon Technologies Corp	RTX	0.49%	2.30%	0.01%	1.00%	0.00%
Analog Devices Inc	ADI	0.34%	1.59%	0.01%	11.00%	0.04%
Walmart Inc	WMT	1.54%	1.47%	0.02%	7.50%	0.12%
Cisco Systems Inc/Delaware	CSCO	0.87%	2.64%	0.02%	7.00%	0.06%
Intel Corp	INTC	0.74%	2.84%	0.02%	7.00%	0.05%
General Motors Co	GM		n/a	n/a	11.00%	n/a
Microsoft Corp	MSFT	9.19%	0.75%	0.07%	15.00%	1.38%
Dollar General Corp	DG	0.19%	0.76%	0.00%	10.50%	0.02%
Cigna Corp	CI	0.27%	1.87%	0.01%	10.00%	0.03%
Kinder Morgan Inc	KMI	0.14%	6.45%	0.01%	19.00%	0.03%
Citigroup Inc	C	0.51%	2.95%	0.01%	7.00%	0.04%
American International Group Inc	AIG		2.17%	n/a	31.50%	n/a
Altria Group Inc	MO	0.30%	8.16%	0.02%	6.00%	0.02%
HCA Healthcare Inc	HCA	0.30%	0.77%	0.00%	12.00%	0.04%
Under Armour Inc	UAA		n/a	n/a	33.00%	n/a
International Paper Co	IP	0.07%	3.72%	0.00%	12.00%	0.01%
Hewlett Packard Enterprise Co	HPE	0.07%	3.28%	0.00%	6.50%	0.00%
Abbott Laboratories	ABT	0.84%	1.40%	0.01%	11.50%	0.10%
Aflac Inc	AFL	0.13%	2.46%	0.00%	11.00%	0.01%
Air Products and Chemicals Inc	APD	0.24%	2.00%	0.00%	12.50%	0.03%
Royal Caribbean Cruises Ltd	RCL		n/a	n/a	0.00%	n/a
Hess Corp	HES		1.21%	n/a	0.00%	n/a
Archer-Daniels-Midland Co	ADM	0.13%	2.30%	0.00%	9.50%	0.01%
Automatic Data Processing Inc	ADP	0.35%	1.66%	0.01%	8.50%	0.03%
Verisk Analytics Inc	VRSK	0.13%	0.55%	0.00%	8.00%	0.01%
AutoZone Inc	AZO		n/a	n/a	15.00%	n/a
Avery Dennison Corp	AVY	0.07%	1.25%	0.00%	9.00%	0.01%
Enphase Energy Inc	ENPH		n/a	n/a	40.00%	n/a
MSCI Inc	MSCI	0.20%	0.63%	0.00%	16.00%	0.03%
Ball Corp	BLL		0.87%	n/a	21.00%	n/a
Carrier Global Corp	CARR		n/a	n/a	0.00%	n/a
Bank of New York Mellon Corp/The	BK		0.92%	n/a	0.00%	n/a
Otis Worldwide Corp	OTIS	0.18%	2.30%	0.00%	5.00%	0.01%

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
Baxter International Inc	BAX		1.20%	n/a	0.00%	n/a
Becton Dickinson and Co	BDX	0.15%	1.42%	0.00%	8.50%	0.01%
Berkshire Hathaway Inc	BRK/B	0.25%	1.39%	0.00%	7.50%	0.02%
Best Buy Co Inc	BBY		n/a	n/a	0.00%	n/a
Boston Scientific Corp	BSX	0.11%	2.29%	0.00%	8.50%	0.01%
Bristol-Myers Squibb Co	BMY		n/a	n/a	17.50%	n/a
Fortune Brands Home & Security Inc	FBHS	0.48%	3.36%	0.02%	12.50%	0.06%
Brown-Forman Corp	BF/B	0.05%	1.03%	0.00%	11.00%	0.01%
Cabot Oil & Gas Corp	COG	0.08%	1.06%	0.00%	13.00%	0.01%
Campbell Soup Co	CPB		2.06%	n/a	0.00%	n/a
Kansas City Southern	KSU	0.04%	3.70%	0.00%	5.50%	0.00%
Hilton Worldwide Holdings Inc	HLT	0.10%	0.70%	0.00%	10.50%	0.01%
Carnival Corp	CCL		n/a	n/a	0.00%	n/a
Qorvo Inc	QRVO		n/a	n/a	0.00%	n/a
Lumen Technologies Inc	LUMN		n/a	n/a	27.00%	n/a
UDR Inc	UDR	0.05%	8.43%	0.00%	2.50%	0.00%
Clorox Co/The	CLX	0.06%	2.61%	0.00%	6.00%	0.00%
Paycom Software Inc	PAYC	0.07%	2.85%	0.00%	5.00%	0.00%
CMS Energy Corp	CMS		n/a	n/a	19.50%	n/a
Newell Brands Inc	NWL	0.06%	2.88%	0.00%	6.00%	0.00%
Colgate-Palmolive Co	CL		4.02%	n/a	0.00%	n/a
Comerica Inc	CMA	0.24%	2.36%	0.01%	4.50%	0.01%
IPG Photonics Corp	IPGP	0.04%	3.20%	0.00%	2.50%	0.00%
Conagra Brands Inc	CAG		n/a	n/a	17.00%	n/a
Consolidated Edison Inc	ED	0.06%	3.88%	0.00%	4.50%	0.00%
Corning Inc	GLW	0.10%	4.11%	0.00%	4.00%	0.00%
Cummins Inc	CMI	0.11%	2.70%	0.00%	20.00%	0.02%
Caesars Entertainment Inc	CZR	0.13%	2.42%	0.00%	7.00%	0.01%
Danaher Corp	DHR		n/a	n/a	0.00%	n/a
Target Corp	TGT		0.27%	n/a	21.00%	n/a
Deere & Co	DE	0.47%	1.39%	0.01%	15.00%	0.07%
Dominion Energy Inc	D	0.39%	1.23%	0.00%	17.00%	0.07%
Dover Corp	DOV	0.23%	3.32%	0.01%	12.00%	0.03%
Alliant Energy Corp	LNT	0.09%	1.18%	0.00%	7.00%	0.01%
Duke Energy Corp	DUK	0.05%	2.85%	0.00%	5.50%	0.00%
Regency Centers Corp	REG	0.29%	3.86%	0.01%	7.00%	0.02%
Eaton Corp PLC	ETN	0.04%	3.38%	0.00%	16.00%	0.01%
Ecolab Inc	ECL	0.24%	1.85%	0.00%	9.00%	0.02%
PerkinElmer Inc	PKI	0.23%	0.86%	0.00%	6.00%	0.01%
Emerson Electric Co	EMR	0.08%	0.16%	0.00%	11.00%	0.01%
EOG Resources Inc	EOG	0.21%	2.08%	0.00%	10.50%	0.02%
Aon PLC	AON	0.20%	1.78%	0.00%	12.50%	0.02%
Entergy Corp	ETR	0.26%	0.64%	0.00%	7.00%	0.02%
Equifax Inc	EFX	0.08%	3.92%	0.00%	3.00%	0.00%
IQVIA Holdings Inc	IQV	0.12%	0.56%	0.00%	10.50%	0.01%
Gartner Inc	IT		n/a	n/a	14.00%	n/a
FedEx Corp	FDX		n/a	n/a	18.50%	n/a
FMC Corp	FMC	0.23%	1.27%	0.00%	12.00%	0.03%
Ford Motor Co	F	0.04%	2.11%	0.00%	9.50%	0.00%
NextEra Energy Inc	NEE	0.07%	0.65%	0.00%	9.50%	0.01%
Franklin Resources Inc	BEN		2.34%	n/a	47.50%	n/a
Freeport-McMoRan Inc	FCX	0.62%	1.80%	0.01%	10.50%	0.06%
Gap Inc/The	GPS	0.06%	3.56%	0.00%	8.50%	0.00%
Dexcom Inc	DXCM		0.80%	n/a	37.50%	n/a
General Dynamics Corp	GD		2.12%	n/a	27.00%	n/a
General Mills Inc	GIS		n/a	n/a	0.00%	n/a
Genuine Parts Co	GPC	0.21%	2.35%	0.00%	5.00%	0.01%
Atmos Energy Corp	ATO	0.14%	3.30%	0.00%	3.50%	0.00%
WW Grainger Inc	GWW	0.07%	2.49%	0.00%	7.00%	0.00%
Halliburton Co	HAL	0.04%	2.71%	0.00%	7.00%	0.00%
L3Harris Technologies Inc	LHX	0.09%	1.40%	0.00%	5.50%	0.00%
Healthpeak Properties Inc	PEAK	0.08%	0.72%	0.00%	9.00%	0.01%
Catalent Inc	CTLT		1.77%	n/a	0.00%	n/a
Fortive Corp	FTV		3.38%	n/a	-12.00%	n/a
Hershey Co/The	HSY		n/a	n/a	21.00%	n/a
Synchrony Financial	SYF	0.10%	0.37%	0.00%	6.00%	0.01%
Hormel Foods Corp	HRL	0.09%	2.06%	0.00%	6.00%	0.01%
Arthur J Gallagher & Co	AJG	0.09%	1.89%	0.00%	9.50%	0.01%
Mondelez International Inc	MDLZ	0.08%	2.32%	0.00%	9.00%	0.01%
CenterPoint Energy Inc	CNP	0.13%	1.15%	0.00%	13.50%	0.02%
Humana Inc	HUM	0.31%	2.30%	0.01%	8.00%	0.03%
Willis Towers Watson PLC	WLTW	0.06%	2.61%	0.00%	9.50%	0.01%
Illinois Tool Works Inc	ITW	0.22%	0.60%	0.00%	12.00%	0.03%
CDW Corp/DE	CDW	0.11%	1.32%	0.00%	8.00%	0.01%
Trane Technologies PLC	TT	0.26%	2.14%	0.01%	11.00%	0.03%
Interpublic Group of Cos Inc/The	IPG	0.09%	0.86%	0.00%	10.00%	0.01%
International Flavors & Fragrances Inc	IFF		1.30%	n/a	0.00%	n/a
Jacobs Engineering Group Inc	J	0.05%	2.95%	0.00%	12.00%	0.01%
Generac Holdings Inc	GNRC	0.14%	2.14%	0.00%	7.50%	0.01%

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
NXP Semiconductors NV	NXPI	0.07%	0.60%	0.00%	15.00%	0.01%
Hanesbrands Inc	HBI		n/a	n/a	23.50%	n/a
Kellogg Co	K	0.20%	1.12%	0.00%	11.00%	0.02%
Broadridge Financial Solutions Inc	BR	0.02%	3.52%	0.00%	6.00%	0.00%
Perrigo Co PLC	PRGO	0.08%	3.78%	0.00%	3.50%	0.00%
Kimberly-Clark Corp	KMB	0.08%	1.43%	0.00%	8.50%	0.01%
Kimco Realty Corp	KIM	0.16%	3.52%	0.01%	5.50%	0.01%
Oracle Corp	ORCL	0.05%	3.01%	0.00%	10.50%	0.01%
Kroger Co/The	KR	0.97%	1.33%	0.01%	10.00%	0.10%
Leggett & Platt Inc	LEG	0.11%	2.10%	0.00%	6.00%	0.01%
Lennar Corp	LEN	0.02%	3.59%	0.00%	10.00%	0.00%
Eli Lilly & Co	LLY	0.10%	1.00%	0.00%	12.00%	0.01%
Bath & Body Works Inc	BBWI	0.90%	1.33%	0.01%	11.00%	0.10%
Charter Communications Inc	CHTR		0.87%	n/a	26.00%	n/a
Lincoln National Corp	LNC		n/a	n/a	27.50%	n/a
Loews Corp	L	0.05%	2.33%	0.00%	9.00%	0.00%
Lowe's Cos Inc	LOW	0.05%	0.45%	0.00%	12.50%	0.01%
IDEX Corp	IEX	0.60%	1.37%	0.01%	14.50%	0.09%
Marsh & McLennan Cos Inc	MMC	0.06%	0.97%	0.00%	8.00%	0.00%
Masco Corp	MAS	0.31%	1.28%	0.00%	12.00%	0.04%
S&P Global Inc	SPGI	0.06%	1.43%	0.00%	9.50%	0.01%
Medtronic PLC	MDT	0.42%	0.65%	0.00%	10.50%	0.04%
Viatris Inc	VTRS	0.60%	2.10%	0.01%	9.00%	0.05%
CVS Health Corp	CVS		3.30%	n/a	0.00%	n/a
DuPont de Nemours Inc	DD	0.43%	2.24%	0.01%	6.00%	0.03%
Micron Technology Inc	MU		1.72%	n/a	0.00%	n/a
Motorola Solutions Inc	MSI	0.29%	0.58%	0.00%	11.50%	0.03%
Cboe Global Markets Inc	CBOE	0.16%	1.14%	0.00%	7.00%	0.01%
Laboratory Corp of America Holdings	LH	0.05%	1.46%	0.00%	12.00%	0.01%
Newmont Corp	NEM		n/a	n/a	5.50%	n/a
NIKE Inc	NKE	0.16%	4.07%	0.01%	14.00%	0.02%
NiSource Inc	NI		0.66%	n/a	27.00%	n/a
Norfolk Southern Corp	NSC	0.04%	3.57%	0.00%	9.50%	0.00%
Principal Financial Group Inc	PFG	0.26%	1.49%	0.00%	10.00%	0.03%
Eversource Energy	ES	0.07%	3.82%	0.00%	6.00%	0.00%
Northrop Grumman Corp	NOC	0.11%	2.84%	0.00%	6.50%	0.01%
Wells Fargo & Co	WFC	0.21%	1.76%	0.00%	7.00%	0.01%
Nucor Corp	NUE	0.75%	1.56%	0.01%	5.50%	0.04%
PVH Corp	PVH	0.12%	1.45%	0.00%	8.00%	0.01%
Occidental Petroleum Corp	OXY		n/a	n/a	13.50%	n/a
Omnicom Group Inc	OMC		0.12%	n/a	36.50%	n/a
ONEOK Inc	OKE	0.05%	4.11%	0.00%	6.00%	0.00%
Raymond James Financial Inc	RJF	0.10%	5.88%	0.01%	9.50%	0.01%
Parker-Hannifin Corp	PH	0.07%	1.05%	0.00%	6.50%	0.00%
Rollins Inc	ROL	0.14%	1.39%	0.00%	14.00%	0.02%
PPL Corp	PPL	0.06%	1.14%	0.00%	11.50%	0.01%
ConocoPhillips	COP		5.76%	n/a	0.00%	n/a
PulteGroup Inc	PHM	0.37%	2.47%	0.01%	13.50%	0.05%
Pinnacle West Capital Corp	PNW	0.04%	1.16%	0.00%	12.50%	0.01%
PNC Financial Services Group Inc/The	PNC	0.03%	5.15%	0.00%	0.00%	0.00%
PPG Industries Inc	PPG	0.33%	2.37%	0.01%	11.50%	0.04%
Progressive Corp/The	PGR	0.14%	1.47%	0.00%	3.00%	0.00%
Public Service Enterprise Group Inc	PEG	0.20%	0.42%	0.00%	5.00%	0.01%
Robert Half International Inc	RHI	0.12%	3.20%	0.00%	3.50%	0.00%
Edison International	EIX	0.05%	1.34%	0.00%	7.50%	0.00%
Schlumberger NV	SLB		4.21%	n/a	0.00%	n/a
Charles Schwab Corp/The	SCHW	0.17%	1.55%	0.00%	8.50%	0.01%
Sherwin-Williams Co/The	SHW	0.55%	0.88%	0.00%	7.00%	0.04%
West Pharmaceutical Services Inc	WST	0.31%	0.69%	0.00%	10.50%	0.03%
J M Smucker Co/The	SJM	0.12%	0.17%	0.00%	17.00%	0.02%
Snap-on Inc	SNA	0.05%	3.22%	0.00%	4.00%	0.00%
AMETEK Inc	AME	0.04%	2.42%	0.00%	4.50%	0.00%
Southern Co/The	SO	0.11%	0.60%	0.00%	9.00%	0.01%
Truist Financial Corp	TFC	0.24%	4.24%	0.01%	6.00%	0.01%
Southwest Airlines Co	LUV	0.31%	3.03%	0.01%	7.00%	0.02%
W R Berkley Corp	WRB		n/a	n/a	34.50%	n/a
Stanley Black & Decker Inc	SWK	0.05%	0.65%	0.00%	14.50%	0.01%
Public Storage	PSA	0.11%	1.76%	0.00%	6.00%	0.01%
Arista Networks Inc	ANET	0.21%	2.41%	0.01%	4.00%	0.01%
Sysco Corp	SYY		n/a	n/a	4.50%	n/a
Corteva Inc	CTVA	0.15%	2.44%	0.00%	17.00%	0.02%
Texas Instruments Inc	TXN		1.30%	n/a	0.00%	n/a
Textron Inc	TXT	0.64%	2.45%	0.02%	9.00%	0.06%
Thermo Fisher Scientific Inc	TMO	0.06%	0.11%	0.00%	8.50%	0.01%
TJX Cos Inc/The	TJX	0.92%	0.16%	0.00%	14.50%	0.13%
Globe Life Inc	GL	0.29%	1.59%	0.00%	20.00%	0.06%
Johnson Controls International plc	JCI	0.03%	0.89%	0.00%	8.00%	0.00%
Ulta Beauty Inc	ULTA	0.19%	1.47%	0.00%	10.00%	0.02%
Union Pacific Corp	UNP		n/a	n/a	15.50%	n/a

STANDARD & POOR'S 500 INDEX

Name	Ticker	[4] Weight in Index	[5] Current Dividend Yield	[6] Cap-Weighted Dividend Yield	[7] Value Line Long-Term Growth Est.	[8] Cap-Weighted Long-Term Growth Est.
Keysight Technologies Inc	KEYS	0.57%	1.77%	0.01%	10.00%	0.06%
UnitedHealth Group Inc	UNH		n/a	n/a	17.00%	n/a
Unum Group	UNM	1.60%	1.26%	0.02%	12.00%	0.19%
Marathon Oil Corp	MRO		1.47%	n/a	0.00%	n/a
Bio-Rad Laboratories Inc	BIO		n/a	n/a	11.50%	n/a
Ventas Inc	VTR	0.08%	3.37%	0.00%	4.50%	0.00%
VF Corp	VFC	0.11%	2.74%	0.00%	9.50%	0.01%
Vornado Realty Trust	VNO		4.97%	n/a	-19.00%	n/a
Vulcan Materials Co	VMC	0.09%	0.78%	0.00%	10.00%	0.01%
Weyerhaeuser Co	WY		1.90%	n/a	22.00%	n/a
Whirlpool Corp	WHR	0.05%	2.66%	0.00%	9.50%	0.00%
Williams Cos Inc/The	WMB	0.13%	5.84%	0.01%	10.50%	0.01%
WEC Energy Group Inc	WEC	0.10%	3.01%	0.00%	6.50%	0.01%
Adobe Inc	ADBE		n/a	n/a	15.50%	n/a
AES Corp/The	AES		2.40%	n/a	24.00%	n/a
Amgen Inc	AMGN	0.43%	3.40%	0.01%	5.50%	0.02%
Apple Inc	AAPL	9.07%	0.59%	0.05%	17.00%	1.54%
Autodesk Inc	ADSK		n/a	n/a	18.00%	n/a
Cintas Corp	CTAS	0.17%	0.88%	0.00%	12.50%	0.02%
Comcast Corp	CMCSA	0.87%	1.94%	0.02%	11.00%	0.10%
Molson Coors Beverage Co	TAP		3.08%	n/a	41.00%	n/a
KLA Corp	KLAC	0.21%	1.13%	0.00%	18.00%	0.04%
Marriott International Inc/MD	MAR		n/a	n/a	17.50%	n/a
McCormick & Co Inc/MD	MKC	0.07%	1.70%	0.00%	6.00%	0.00%
PACCAR Inc	PCAR	0.11%	1.52%	0.00%	5.50%	0.01%
Costco Wholesale Corp	COST	0.80%	0.64%	0.01%	10.50%	0.08%
First Republic Bank/CA	FRC	0.14%	0.41%	0.00%	13.50%	0.02%
Stryker Corp	SYK	0.37%	0.95%	0.00%	11.00%	0.04%
Tyson Foods Inc	TSN	0.09%	2.23%	0.00%	6.00%	0.01%
Lamb Weston Holdings Inc	LW	0.03%	1.67%	0.00%	6.00%	0.00%
Applied Materials Inc	AMAT	0.46%	0.70%	0.00%	16.50%	0.08%
American Airlines Group Inc	AAL		n/a	n/a	0.00%	n/a
Cardinal Health Inc	CAH	0.05%	4.11%	0.00%	12.00%	0.01%
Cerner Corp	CERN	0.08%	1.18%	0.00%	11.00%	0.01%
Cincinnati Financial Corp	CINF	0.07%	2.08%	0.00%	13.50%	0.01%
ViacomCBS Inc	VIAC	0.08%	2.65%	0.00%	7.00%	0.01%
DR Horton Inc	DHI	0.12%	0.90%	0.00%	15.50%	0.02%
Electronic Arts Inc	EA	0.15%	0.48%	0.00%	12.50%	0.02%
Expeditors International of Washington Inc	EXPD	0.08%	0.94%	0.00%	10.00%	0.01%
Fastenal Co	FAST	0.12%	1.96%	0.00%	9.00%	0.01%
M&T Bank Corp	MTB	0.07%	2.99%	0.00%	8.00%	0.01%
Xcel Energy Inc	XEL	0.13%	2.83%	0.00%	6.00%	0.01%
Fiserv Inc	FISV		n/a	n/a	13.00%	n/a
Fifth Third Bancorp	FITB	0.11%	2.76%	0.00%	8.00%	0.01%
Gilead Sciences Inc	GILD	0.30%	4.38%	0.01%	3.50%	0.01%
Hasbro Inc	HAS	0.05%	2.84%	0.00%	11.50%	0.01%
Huntington Bancshares Inc/OH	HBAN	0.08%	3.94%	0.00%	8.50%	0.01%
Welltower Inc	WELL		3.03%	n/a	-1.50%	n/a
Biogen Inc	BIIB		n/a	n/a	7.00%	n/a
Northern Trust Corp	NTRS	0.09%	2.28%	0.00%	7.00%	0.01%
Packaging Corp of America	PKG	0.05%	2.91%	0.00%	5.00%	0.00%
Paychex Inc	PAYX	0.16%	2.14%	0.00%	8.00%	0.01%
People's United Financial Inc	PBCT	0.03%	4.26%	0.00%	4.00%	0.00%
QUALCOMM Inc	QCOM	0.55%	2.04%	0.01%	14.00%	0.08%
Roper Technologies Inc	ROP	0.19%	0.46%	0.00%	8.00%	0.02%
Ross Stores Inc	ROST	0.15%	1.01%	0.00%	14.00%	0.02%
IDEXX Laboratories Inc	IDXX		n/a	n/a	14.50%	n/a
Starbucks Corp	SBUX	0.46%	1.85%	0.01%	16.00%	0.07%
KeyCorp	KEY	0.08%	3.18%	0.00%	9.50%	0.01%
Fox Corp	FOXA		1.21%	n/a	0.00%	n/a
Fox Corp	FOX		1.30%	n/a	0.00%	n/a
State Street Corp	STT	0.13%	2.31%	0.00%	7.50%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH		n/a	n/a	0.00%	n/a
US Bancorp	USB	0.33%	3.05%	0.01%	6.50%	0.02%
A O Smith Corp	AOS	0.04%	1.53%	0.00%	10.00%	0.00%
NortonLifeLock Inc	NLOK	0.05%	1.96%	0.00%	11.00%	0.01%
T Rowe Price Group Inc	TROW	0.18%	1.99%	0.00%	12.00%	0.02%
Waste Management Inc	WM	0.25%	1.44%	0.00%	7.50%	0.02%
Constellation Brands Inc	STZ	0.13%	1.40%	0.00%	7.00%	0.01%
Xilinx Inc	XLNX	0.16%	0.82%	0.00%	8.00%	0.01%
DENTSPLY SIRONA Inc	XRAY	0.05%	0.77%	0.00%	5.50%	0.00%
Zions Bancorp NA	ZION	0.04%	2.41%	0.00%	7.50%	0.00%
Alaska Air Group Inc	ALK		n/a	n/a	0.00%	n/a
Invesco Ltd	IVZ	0.04%	2.68%	0.00%	15.50%	0.01%
Linde PLC	LIN		1.33%	n/a	0.00%	n/a
Intuit Inc	INTU	0.63%	0.43%	0.00%	15.00%	0.09%
Morgan Stanley	MS	0.69%	2.72%	0.02%	8.50%	0.06%
Microchip Technology Inc	MCHP	0.15%	1.18%	0.00%	10.50%	0.02%
Chubb Ltd	CB	0.31%	1.64%	0.01%	12.50%	0.04%

STANDARD & POOR'S 500 INDEX

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Hologic Inc	HOLX		n/a	n/a	25.00%	n/a
Citizens Financial Group Inc	CFG	0.07%	3.29%	0.00%	8.50%	0.01%
O'Reilly Automotive Inc	ORLY		n/a	n/a	13.00%	n/a
Allstate Corp/The	ALL	0.13%	2.62%	0.00%	5.00%	0.01%
Equity Residential	EQR	0.12%	2.79%	0.00%	2.00%	0.00%
BorgWarner Inc	BWA	0.04%	1.51%	0.00%	9.50%	0.00%
Organon & Co	OGN		3.05%	n/a	0.00%	n/a
Host Hotels & Resorts Inc	HST		n/a	n/a	10.00%	n/a
Incyte Corp	INCY		n/a	n/a	0.00%	n/a
Simon Property Group Inc	SPG	0.18%	4.09%	0.01%	1.50%	0.00%
Eastman Chemical Co	EMN	0.05%	2.65%	0.00%	10.50%	0.01%
Twitter Inc	TWTR		n/a	n/a	39.00%	n/a
AvalonBay Communities Inc	AVB	0.12%	2.69%	0.00%	1.50%	0.00%
Prudential Financial Inc	PRU	0.16%	4.18%	0.01%	4.50%	0.01%
United Parcel Service Inc	UPS	0.57%	1.91%	0.01%	10.50%	0.06%
Walgreens Boots Alliance Inc	WBA	0.15%	4.06%	0.01%	7.50%	0.01%
STERIS PLC	STE	0.09%	0.74%	0.00%	10.00%	0.01%
McKesson Corp	MCK	0.12%	0.90%	0.00%	9.00%	0.01%
Lockheed Martin Corp	LMT	0.34%	3.37%	0.01%	7.50%	0.03%
AmerisourceBergen Corp	ABC	0.09%	1.44%	0.00%	6.50%	0.01%
Capital One Financial Corp	COF		1.59%	n/a	0.00%	n/a
Waters Corp	WAT		n/a	n/a	6.00%	n/a
Dollar Tree Inc	DLTR		n/a	n/a	8.50%	n/a
Darden Restaurants Inc	DRI	0.07%	3.05%	0.00%	19.00%	0.01%
Domino's Pizza Inc	DPZ		n/a	n/a	18.50%	n/a
NVR Inc	NVR	0.07%	0.77%	0.00%	15.00%	0.01%
NetApp Inc	NTAP		n/a	n/a	9.00%	n/a
Citrix Systems Inc	CTXS	0.07%	2.24%	0.00%	6.50%	0.00%
DXC Technology Co	DXC	0.04%	1.56%	0.00%	8.00%	0.00%
Old Dominion Freight Line Inc	ODFL		n/a	n/a	6.50%	n/a
DaVita Inc	DVA	0.15%	0.23%	0.00%	9.50%	0.01%
Hartford Financial Services Group Inc/The	HIG		n/a	n/a	16.00%	n/a
Iron Mountain Inc	IRM	0.09%	2.11%	0.00%	6.50%	0.01%
Estee Lauder Cos Inc/The	EL	0.05%	5.42%	0.00%	8.00%	0.00%
Cadence Design Systems Inc	CDNS	0.28%	0.65%	0.00%	11.50%	0.03%
Tyler Technologies Inc	TYL		n/a	n/a	12.00%	n/a
Universal Health Services Inc	UHS		n/a	n/a	14.00%	n/a
Skyworks Solutions Inc	SWKS	0.03%	0.64%	0.00%	11.00%	0.00%
NOV Inc	NOV	0.10%	1.34%	0.00%	13.50%	0.01%
Quest Diagnostics Inc	DGX	0.07%	1.69%	0.00%	7.50%	0.00%
Activision Blizzard Inc	ATVI	0.22%	0.60%	0.00%	13.00%	0.03%
Rockwell Automation Inc	ROK	0.14%	1.40%	0.00%	7.50%	0.01%
Kraft Heinz Co/The	KHC	0.16%	4.46%	0.01%	1.50%	0.00%
American Tower Corp	AMT	0.47%	1.86%	0.01%	9.50%	0.05%
Regeneron Pharmaceuticals Inc	REGN		n/a	n/a	12.50%	n/a
Amazon.com Inc	AMZN		n/a	n/a	30.00%	n/a
Jack Henry & Associates Inc	JKHY	0.05%	1.11%	0.00%	10.50%	0.00%
Ralph Lauren Corp	RL	0.02%	2.16%	0.00%	11.50%	0.00%
Boston Properties Inc	BXP		3.45%	n/a	-2.00%	n/a
Amphenol Corp	APH	0.17%	1.04%	0.00%	10.50%	0.02%
Howmet Aerospace Inc	HWM	0.05%	0.27%	0.00%	12.00%	0.01%
Pioneer Natural Resources Co	PXD	0.17%	1.20%	0.00%	20.00%	0.03%
Valero Energy Corp	VLO	0.12%	5.07%	0.01%	13.00%	0.02%
Synopsys Inc	SNPS		n/a	n/a	13.00%	n/a
Western Union Co/The	WU	0.03%	5.16%	0.00%	8.00%	0.00%
Etsy Inc	ETSY		n/a	n/a	29.00%	n/a
CH Robinson Worldwide Inc	CHRW	0.05%	2.10%	0.00%	8.00%	0.00%
Accenture PLC	ACN	0.87%	1.08%	0.01%	10.00%	0.09%
TransDigm Group Inc	TDG		n/a	n/a	11.00%	n/a
Yum! Brands Inc	YUM	0.14%	1.60%	0.00%	10.50%	0.01%
Prologis Inc	PLD	0.40%	1.74%	0.01%	8.50%	0.03%
FirstEnergy Corp	FE	0.08%	4.05%	0.00%	11.50%	0.01%
VeriSign Inc	VRSN		n/a	n/a	8.50%	n/a
Quanta Services Inc	PWR	0.06%	0.20%	0.00%	12.50%	0.01%
Henry Schein Inc	HSIC		n/a	n/a	6.50%	n/a
Ameren Corp	AEE	0.08%	2.61%	0.00%	6.50%	0.01%
ANSYS Inc	ANSS		n/a	n/a	8.00%	n/a
NVIDIA Corp	NVDA	2.36%	0.06%	0.00%	17.00%	0.40%
Sealed Air Corp	SEE	0.03%	1.35%	0.00%	13.50%	0.00%
Cognizant Technology Solutions Corp	CTSH	0.15%	1.23%	0.00%	7.00%	0.01%
SVB Financial Group	SIVB		n/a	n/a	5.00%	n/a
Intuitive Surgical Inc	ISRG		n/a	n/a	15.00%	n/a
Take-Two Interactive Software Inc	TTWO		n/a	n/a	12.00%	n/a
Republic Services Inc	RSG	0.16%	1.37%	0.00%	7.50%	0.01%
eBay Inc	EBAY	0.18%	0.94%	0.00%	16.50%	0.03%
Goldman Sachs Group Inc/The	GS	0.51%	1.94%	0.01%	7.00%	0.04%
SBA Communications Corp	SBAC		0.67%	n/a	45.00%	n/a
Sempra Energy	SRE	0.15%	3.45%	0.01%	10.00%	0.01%
Moody's Corp	MCO	0.28%	0.61%	0.00%	8.50%	0.02%

STANDARD & POOR'S 500 INDEX

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Booking Holdings Inc	BKNG		n/a	n/a	14.00%	n/a
F5 Networks Inc	FFIV		n/a	n/a	7.00%	n/a
Akamai Technologies Inc	AKAM		n/a	n/a	9.50%	n/a
Charles River Laboratories International Inc	CRL		n/a	n/a	7.00%	n/a
MarketAxess Holdings Inc	MKTX	0.06%	0.65%	0.00%	14.00%	0.01%
Devon Energy Corp	DVN		1.10%	n/a	0.00%	n/a
Bio-Techne Corp	TECH	0.08%	0.24%	0.00%	13.00%	0.01%
Alphabet Inc	GOOGL		n/a	n/a	0.00%	n/a
Teleflex Inc	TFX	0.06%	0.38%	0.00%	14.50%	0.01%
Allegion plc	ALLE	0.04%	1.12%	0.00%	9.50%	0.00%
Netflix Inc	NFLX		n/a	n/a	23.50%	n/a
Agilent Technologies Inc	A	0.18%	0.49%	0.00%	11.50%	0.02%
Trimble Inc	TRMB		n/a	n/a	14.00%	n/a
Anthem Inc	ANTM	0.39%	1.04%	0.00%	13.00%	0.05%
CME Group Inc	CME	0.29%	1.63%	0.00%	8.50%	0.02%
Juniper Networks Inc	JNPR	0.04%	2.71%	0.00%	7.00%	0.00%
BlackRock Inc	BLK	0.53%	1.75%	0.01%	11.00%	0.06%
DTE Energy Co	DTE	0.08%	3.12%	0.00%	2.00%	0.00%
Celanese Corp	CE	0.06%	1.68%	0.00%	6.50%	0.00%
Nasdaq Inc	NDAQ	0.13%	1.03%	0.00%	6.50%	0.01%
Philip Morris International Inc	PM	0.54%	5.29%	0.03%	7.00%	0.04%
Ingersoll Rand Inc	IR		0.15%	n/a	0.00%	n/a
salesforce.com Inc	CRM		n/a	n/a	20.00%	n/a
Huntington Ingalls Industries Inc	HII	0.03%	2.25%	0.00%	7.00%	0.00%
MetLife Inc	MET	0.20%	3.06%	0.01%	6.50%	0.01%
Under Armour Inc	UA		n/a	n/a	0.00%	n/a
Tapestry Inc	TPR	0.04%	2.57%	0.00%	10.00%	0.00%
CSX Corp	CSX	0.30%	1.03%	0.00%	11.50%	0.03%
Edwards Lifesciences Corp	EW		n/a	n/a	13.00%	n/a
Ameriprise Financial Inc	AMP	0.13%	1.50%	0.00%	13.50%	0.02%
Zebra Technologies Corp	ZBRA		n/a	n/a	12.50%	n/a
Zimmer Biomet Holdings Inc	ZBH	0.11%	0.67%	0.00%	8.50%	0.01%
CBRE Group Inc	CBRE		n/a	n/a	10.50%	n/a
Mastercard Inc	MA	1.21%	0.52%	0.01%	13.00%	0.16%
CarMax Inc	KMX		n/a	n/a	12.50%	n/a
Intercontinental Exchange Inc	ICE	0.29%	0.95%	0.00%	8.00%	0.02%
Fidelity National Information Services Inc	FIS		1.41%	n/a	28.00%	n/a
Chipotle Mexican Grill Inc	CMG		n/a	n/a	22.00%	n/a
Wynn Resorts Ltd	WYNN		n/a	n/a	27.00%	n/a
Live Nation Entertainment Inc	LYV		n/a	n/a	0.00%	n/a
Assurant Inc	AIZ	0.04%	1.64%	0.00%	15.50%	0.01%
NRG Energy Inc	NRG		3.26%	n/a	-1.50%	n/a
Monster Beverage Corp	MNST		n/a	n/a	11.50%	n/a
Regions Financial Corp	RF	0.08%	2.87%	0.00%	9.50%	0.01%
Mosaic Co/The	MOS		0.72%	n/a	33.50%	n/a
Expedia Group Inc	EXPE		n/a	n/a	0.00%	n/a
Evergy Inc	EVRG	0.05%	3.36%	0.00%	8.00%	0.00%
Discovery Inc	DISCA		n/a	n/a	13.50%	n/a
CF Industries Holdings Inc	CF	0.05%	2.11%	0.00%	19.50%	0.01%
APA Corp	APA		0.95%	n/a	0.00%	n/a
Leidos Holdings Inc	LDOS	0.05%	1.44%	0.00%	9.00%	0.00%
Alphabet Inc	GOOG		n/a	n/a	23.50%	n/a
Cooper Cos Inc/The	COO	0.08%	0.01%	0.00%	14.50%	0.01%
TE Connectivity Ltd	TEL	0.18%	1.37%	0.00%	9.00%	0.02%
Discover Financial Services	DFS	0.12%	1.76%	0.00%	16.00%	0.02%
Visa Inc	V	1.31%	0.71%	0.01%	12.00%	0.16%
Mid-America Apartment Communities Inc	MAA	0.09%	2.01%	0.00%	9.00%	0.01%
Xylem Inc/NY	XYL	0.09%	0.86%	0.00%	6.50%	0.01%
Marathon Petroleum Corp	MPC		3.52%	n/a	0.00%	n/a
Advanced Micro Devices Inc	AMD		n/a	n/a	29.00%	n/a
Tractor Supply Co	TSCO	0.09%	0.96%	0.00%	11.00%	0.01%
ResMed Inc	RMD	0.14%	0.64%	0.00%	8.50%	0.01%
Mettler-Toledo International Inc	MTD		n/a	n/a	12.00%	n/a
Copart Inc	CPRT		n/a	n/a	12.00%	n/a
Fortinet Inc	FTNT		n/a	n/a	21.00%	n/a
Albemarle Corp	ALB	0.11%	0.62%	0.00%	6.50%	0.01%
Moderna Inc	MRNA		n/a	n/a	0.00%	n/a
Essex Property Trust Inc	ESS		2.46%	n/a	-0.50%	n/a
Realty Income Corp	O	0.10%	3.96%	0.00%	6.50%	0.01%
Westrock Co	WRK	0.05%	2.08%	0.00%	8.00%	0.00%
IHS Markit Ltd	INFO	0.19%	0.61%	0.00%	10.50%	0.02%
Westinghouse Air Brake Technologies Corp	WAB	0.06%	0.53%	0.00%	9.50%	0.01%
Pool Corp	POOL	0.08%	0.62%	0.00%	17.00%	0.01%
Western Digital Corp	WDC		n/a	n/a	1.00%	n/a
PepsiCo Inc	PEP	0.82%	2.66%	0.02%	6.50%	0.05%
Diamondback Energy Inc	FANG		1.68%	n/a	0.00%	n/a
ServiceNow Inc	NOW		n/a	n/a	44.50%	n/a
Church & Dwight Co Inc	CHD	0.08%	1.16%	0.00%	8.00%	0.01%
Duke Realty Corp	DRE		1.99%	n/a	-1.00%	n/a

STANDARD & POOR'S 500 INDEX

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Federal Realty Investment Trust	FRT	0.03%	3.56%	0.00%	1.00%	0.00%
MGM Resorts International	MGM		0.02%	n/a	25.00%	n/a
American Electric Power Co Inc	AEP	0.16%	3.68%	0.01%	6.50%	0.01%
PTC Inc	PTC		n/a	n/a	0.00%	n/a
JB Hunt Transport Services Inc	JBHT	0.08%	0.61%	0.00%	8.00%	0.01%
Lam Research Corp	LRCX	0.29%	1.06%	0.00%	17.50%	0.05%
Mohawk Industries Inc	MHK		n/a	n/a	10.50%	n/a
Pentair PLC	PNR	0.05%	1.08%	0.00%	12.00%	0.01%
Vertex Pharmaceuticals Inc	VRTX		n/a	n/a	17.00%	n/a
Amcor PLC	AMCR	0.07%	3.89%	0.00%	15.00%	0.01%
Facebook Inc	FB		n/a	n/a	21.50%	n/a
T-Mobile US Inc	TMUS		n/a	n/a	8.50%	n/a
United Rentals Inc	URI		n/a	n/a	10.50%	n/a
Alexandria Real Estate Equities Inc	ARE	0.12%	2.19%	0.00%	12.00%	0.01%
Honeywell International Inc	HON	0.56%	1.79%	0.01%	10.00%	0.06%
ABIOMED Inc	ABMD		n/a	n/a	9.50%	n/a
Delta Air Lines Inc	DAL		n/a	n/a	49.00%	n/a
United Airlines Holdings Inc	UAL		n/a	n/a	0.00%	n/a
Seagate Technology Holdings PLC	STX	0.07%	3.14%	0.00%	4.00%	0.00%
News Corp	NWS		0.89%	n/a	0.00%	n/a
Centene Corp	CNC		n/a	n/a	9.50%	n/a
Martin Marietta Materials Inc	MLM	0.09%	0.62%	0.00%	7.00%	0.01%
Teradyne Inc	TER	0.08%	0.29%	0.00%	13.50%	0.01%
PayPal Holdings Inc	PYPL		n/a	n/a	16.00%	n/a
Tesla Inc	TSLA		n/a	n/a	0.00%	n/a
DISH Network Corp	DISH		n/a	n/a	2.50%	n/a
Penn National Gaming Inc	PENN		n/a	n/a	30.00%	n/a
Dow Inc	DOW		5.00%	n/a	0.00%	n/a
Everest Re Group Ltd	RE	0.04%	2.37%	0.00%	11.00%	0.00%
Teledyne Technologies Inc	TDY		n/a	n/a	14.50%	n/a
News Corp	NWSA		0.87%	n/a	0.00%	n/a
Exelon Corp	EXC	0.19%	2.88%	0.01%	5.50%	0.01%
Global Payments Inc	GPN	0.15%	0.70%	0.00%	16.50%	0.03%
Crown Castle International Corp	CCI	0.29%	3.26%	0.01%	8.50%	0.02%
Aptiv PLC	APTV		n/a	n/a	15.50%	n/a
Advance Auto Parts Inc	AAP	0.05%	1.77%	0.00%	11.00%	0.01%
Align Technology Inc	ALGN		n/a	n/a	17.00%	n/a
Illumina Inc	ILMN		n/a	n/a	14.00%	n/a
LKQ Corp	LKQ	0.06%	1.82%	0.00%	12.00%	0.01%
Nielsen Holdings PLC	NLSN		1.19%	n/a	0.00%	n/a
Garmin Ltd	GRMN	0.10%	1.87%	0.00%	10.00%	0.01%
Zoetis Inc	ZTS	0.38%	0.46%	0.00%	11.00%	0.04%
Digital Realty Trust Inc	DLR	0.17%	2.94%	0.00%	8.00%	0.01%
Equinix Inc	EQIX	0.28%	1.37%	0.00%	17.00%	0.05%
Las Vegas Sands Corp	LVS		n/a	n/a	17.00%	n/a
Discovery Inc	DISCK		n/a	n/a	0.00%	n/a

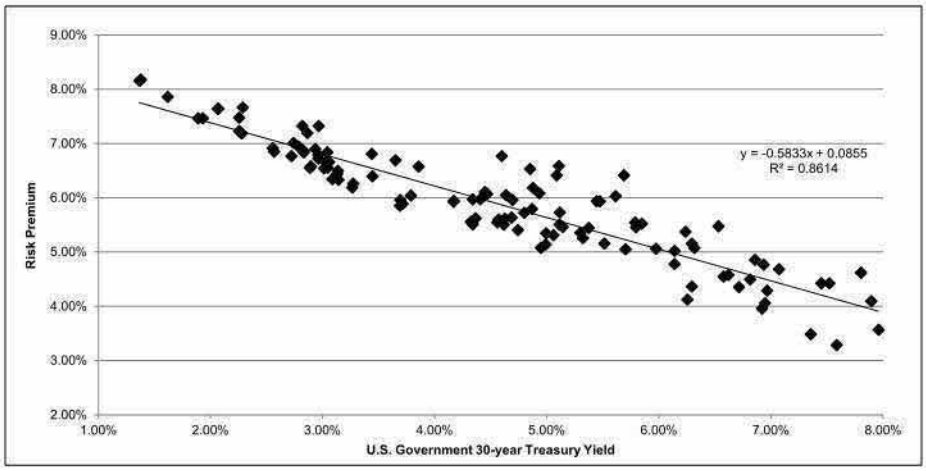
Notes:
[4] Source: Bloomberg Professional as of October 31, 2021
[5] Source: Bloomberg Professional as of October 31, 2021
[6] Equals [4] x [5]
[7] Source: Value Line
[8] Equals [4] x [7]

Risk Premium -- Natural Gas Utilities (US)

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.42%	7.80%	4.62%
1992.2	11.98%	7.89%	4.09%
1992.3	11.87%	7.45%	4.42%
1992.4	11.94%	7.52%	4.42%
1993.1	11.75%	7.07%	4.68%
1993.2	11.71%	6.86%	4.85%
1993.3	11.39%	6.31%	5.07%
1993.4	11.16%	6.14%	5.02%
1994.1	11.12%	6.57%	4.55%
1994.2	10.84%	7.35%	3.48%
1994.3	10.87%	7.58%	3.28%
1994.4	11.53%	7.96%	3.57%
1995.2	11.00%	6.94%	4.06%
1995.3	11.07%	6.71%	4.35%
1995.4	11.61%	6.23%	5.37%
1996.1	11.45%	6.29%	5.16%
1996.2	10.88%	6.92%	3.96%
1996.3	11.25%	6.96%	4.29%
1996.4	11.19%	6.62%	4.58%
1997.1	11.31%	6.81%	4.49%
1997.2	11.70%	6.93%	4.77%
1997.3	12.00%	6.53%	5.47%
1997.4	10.92%	6.14%	4.78%
1998.2	11.37%	5.85%	5.52%
1998.3	11.41%	5.47%	5.94%
1998.4	11.69%	5.10%	6.59%
1999.1	10.82%	5.37%	5.44%
1999.2	11.25%	5.79%	5.46%
1999.4	10.38%	6.25%	4.12%
2000.1	10.66%	6.29%	4.36%
2000.2	11.03%	5.97%	5.06%
2000.3	11.33%	5.79%	5.55%
2000.4	12.10%	5.69%	6.41%
2001.1	11.38%	5.44%	5.93%
2001.2	10.75%	5.70%	5.05%
2001.4	10.65%	5.30%	5.35%
2002.1	10.67%	5.51%	5.15%
2002.2	11.64%	5.61%	6.03%
2002.3	11.50%	5.08%	6.42%
2002.4	11.01%	4.93%	6.08%
2003.1	11.38%	4.85%	6.53%
2003.2	11.36%	4.60%	6.76%
2003.3	10.61%	5.11%	5.50%
2003.4	10.84%	5.11%	5.73%
2004.1	11.06%	4.88%	6.18%
2004.2	10.57%	5.32%	5.25%
2004.3	10.37%	5.06%	5.31%
2004.4	10.66%	4.86%	5.79%
2005.1	10.65%	4.69%	5.96%
2005.2	10.54%	4.47%	6.07%
2005.3	10.47%	4.44%	6.03%
2005.4	10.32%	4.68%	5.63%
2006.1	10.68%	4.63%	6.05%
2006.2	10.60%	5.14%	5.46%
2006.3	10.34%	4.99%	5.34%
2006.4	10.14%	4.74%	5.40%
2007.1	10.52%	4.80%	5.72%
2007.2	10.13%	4.99%	5.14%
2007.3	10.03%	4.95%	5.08%
2007.4	10.12%	4.61%	5.50%
2008.1	10.38%	4.41%	5.97%
2008.2	10.17%	4.57%	5.60%
2008.3	10.55%	4.44%	6.11%
2008.4	10.34%	3.65%	6.69%
2009.1	10.24%	3.44%	6.81%
2009.2	10.11%	4.17%	5.94%
2009.3	9.88%	4.32%	5.56%
2009.4	10.31%	4.34%	5.97%
2010.1	10.24%	4.62%	5.61%
2010.2	9.99%	4.36%	5.62%
2010.3	10.43%	3.86%	6.57%
2010.4	10.09%	4.17%	5.93%
2011.1	10.10%	4.56%	5.54%
2011.2	9.85%	4.34%	5.51%
2011.3	9.65%	3.69%	5.96%
2011.4	9.88%	3.04%	6.84%
2012.1	9.63%	3.14%	6.50%
2012.2	9.83%	2.93%	6.90%
2012.3	9.75%	2.74%	7.01%

Risk Premium -- Natural Gas Utilities (US)

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
2012.4	10.06%	2.86%	7.19%
2013.1	9.57%	3.13%	6.44%
2013.2	9.47%	3.14%	6.33%
2013.3	9.60%	3.71%	5.89%
2013.4	9.83%	3.79%	6.04%
2014.1	9.54%	3.69%	5.85%
2014.2	9.84%	3.44%	6.39%
2014.3	9.45%	3.26%	6.19%
2014.4	10.28%	2.96%	7.32%
2015.1	9.47%	2.55%	6.91%
2015.2	9.43%	2.88%	6.55%
2015.3	9.75%	2.96%	6.79%
2015.4	9.68%	2.96%	6.72%
2016.1	9.48%	2.72%	6.76%
2016.2	9.42%	2.57%	6.85%
2016.3	9.47%	2.28%	7.19%
2016.4	9.67%	2.83%	6.84%
2017.1	9.60%	3.04%	6.56%
2017.2	9.47%	2.90%	6.58%
2017.3	10.14%	2.82%	7.32%
2017.4	9.70%	2.82%	6.88%
2018.1	9.68%	3.02%	6.66%
2018.2	9.43%	3.09%	6.34%
2018.3	9.71%	3.06%	6.65%
2018.4	9.53%	3.27%	6.26%
2019.1	9.55%	3.01%	6.54%
2019.2	9.73%	2.78%	6.94%
2019.3	9.95%	2.29%	7.66%
2019.4	9.73%	2.25%	7.48%
2020.1	9.35%	1.89%	7.46%
2020.2	9.55%	1.38%	8.17%
2020.3	9.52%	1.37%	8.15%
2020.4	9.47%	1.62%	7.86%
2021.1	9.71%	2.07%	7.64%
2021.2	9.48%	2.25%	7.22%
2021.3	9.40%	1.93%	7.46%
2021.4	9.70%	2.06%	7.64%
AVERAGE	10.45%	4.54%	5.90%
MEDIAN	10.34%	4.61%	5.95%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.928096723
R Square	0.861363528
Adjusted R Square	0.860147418
Standard Error	0.003878396
Observations	116

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.010654134	0.010654134	708.2944371	9.803E-51
Residual	114	0.001714783	1.5042E-05		
Total	115	0.012368917			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.085522442	0.001059027	80.75564866	1.8754E-102	0.083424517	0.08762037	0.083424517	0.087620367
U.S. Govt. 30-year Treasury	-0.583296505	0.021917068	-26.6138016	9.803E-51	-0.626714048	-0.539879	-0.626714048	-0.539878962

	[7] U.S. Govt. 30-year Treasury	[8] Risk Premium	[9] ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	2.03%	7.37%	9.40%
Blue Chip Near-Term Projected Forecast (Q1 2021 - Q1 2023) [5]	2.50%	7.09%	9.59%
Blue Chip Long-Term Projected Forecast (2023-2027) [6]	3.50%	6.51%	10.01%
AVERAGE			9.67%

Notes:
[1] Source: Regulatory Research Associates, rate cases through October 31, 2021
[2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] Source: Bloomberg Professional, 30-day average as of October 31, 2021
[5] Source: Blue Chip Financial Forecasts, Vol. 40, No. 11, November 1, 2021, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.085522 + (-0.583297 x Column [7])
[9] Equals Column [7] + Column [8]

BUSINESS SEGMENT DATA FOR NISOURCE

NiSource Inc. - Operating Income ($000)											
Year	Total	Gas Distribution Operations	MA Incident / Impairment Charges	Gas Distribution Restated	Electric Operations	Corporate and Other	MA Incident / Impairment Charges	Corporate and Other Restated	Eliminations	Notes	Percent Gas Dist. / Total
2020	963,200	199,100	412,400	611,500	348,800	2,900	-	2,900	-	[1]	63.49%
2019	1,305,200	675,400	209,700	885,100	406,800	(191,500)	204,800	13,300	-	[1]	67.81%
2018	1,215,400	(254,100)	1,090,700	836,600	386,100	(7,300)	-	(7,300)	-	[1]	68.83%
3 yr. average											**66.71%**
2017	921,200	550,100	-	550,100	367,400	3,700	-	3,700	-	[2]	59.72%
2016	866,100	569,700	-	569,700	301,300	(4,900)	-	(4,900)	-	[2]	65.78%
2015	799,900	555,800	-	555,800	264,400	(20,300)	-	(20,300)	-	[3], [4]	69.48%
2014	789,100	537,000	-	537,000	282,700	(30,600)	-	(30,600)	-	[3]	68.05%
2013	702,000	445,400	-	445,400	265,500	(8,900)	-	(8,900)	-	[5]	63.45%
2012	641,700	391,300	-	391,300	250,800	(400)	-	(400)	-	[5]	60.98%
2011	554,400	376,400	-	376,400	208,400	(30,400)	-	(30,400)	-	[5]	67.89%
2010	515,200	319,500	-	319,500	219,800	(24,100)	-	(24,100)	-	[6]	62.01%

Notes:

[1] Source: NiSource -2020 Form 10-K pages 32, 34, 36, 71, and 113
[2] Source: NiSource - 2017 Form 10-K, pages 98-99
[3] Source: NiSource - 2015 Form 10-K, pages 102-103
[4] The calculation for 2010 through 2015 excludes the segment data for Columbia Pipeline Partners Group which separated from NiSource in July 2015.
[5] Source: NiSource - 2013 Form 10-K, pages 124-125
[6] Source: NiSource - 2012 10-K, pages 128-129

FLOTATION COST ADJUSTMENT

Company	Date [i]	[1] Shares Issued (000)	[2] Offering Price	[3] Under-writing Discount [ii]	[4] Offering Expense ($000)	[5] Net Proceeds Per Share	[6] Total Flotation Costs ($000)	[7] Gross Equity Issue Before Costs ($000)	[8] Net Proceeds ($000)	[9] Flotation Cost Percentage	
Southwest Gas Holdings, Inc.	11/27/2018	3,565	$ 75.50	$ 2.55	$ 600.00	$72.78	$9,684	$269,158	$259,474	3.598%	
Total							$ 9,684.0	$ 269,157.5	$ 259,473.5		
							WEIGHTED AVERAGE FLOTATION COSTS			3.598%	[10]

Notes:
[i] Offering Completion Date
[ii] Underwriting discount was calculated as the market price minus the offering price when not explicitly given in the prospectus.

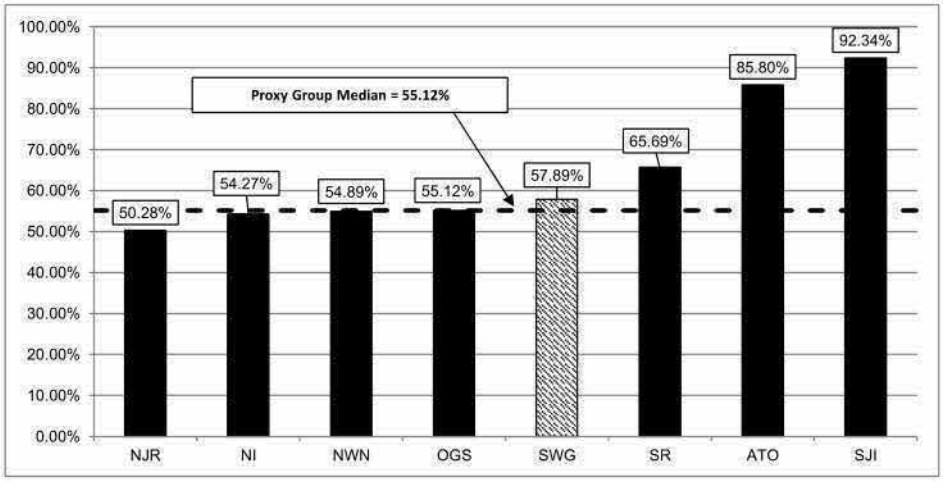
The flotation cost adjustment is derived by dividing the dividend yield by 1 − F (where F = flotation costs expressed in percentage terms), or by 0.9640, and adding that result to the constant growth rate to determine the cost of equity. Using the formulas shown previously in my testimony, the Constant Growth DCF calculation is modified as follows to accommodate an adjustment for flotation costs:

$$k = \frac{D \times (1 + 0.5g)}{P \times (1 - F)} + g$$

Company	Ticker	[11] Annualized Dividend	[12] Stock Price	[13] Dividend Yield	[14] Expected Dividend Yield	[15] Expected Dividend Yield Adjusted for Flotation Costs	[16] Value Line Earnings Growth	[17] Yahoo! Finance Earnings Growth	[18] Zacks Earnings Growth	[19] Average Earnings Growth	[20] ROE	[21] ROE Adjusted for Flotation Costs
Atmos Energy Corporation	ATO	$2.50	$90.73	2.76%	2.86%	2.97%	7.00%	8.00%	7.50%	7.50%	10.36%	10.47%
New Jersey Resources Corporation	NJR	$1.45	$36.72	3.95%	4.05%	4.20%	2.00%	6.00%	7.10%	5.03%	9.08%	9.23%
NiSource Inc.	NI	$0.88	$24.48	3.59%	3.71%	3.85%	9.50%	3.52%	6.20%	6.41%	10.12%	10.26%
Northwest Natural Gas Company	NWN	$1.93	$46.74	4.13%	4.24%	4.40%	5.50%	5.70%	5.00%	5.40%	9.64%	9.80%
ONE Gas Inc.	OGS	$2.32	$66.57	3.49%	3.57%	3.70%	6.50%	2.90%	5.00%	4.80%	8.37%	8.50%
South Jersey Industries, Inc.	SJI	$1.21	$22.31	5.42%	5.63%	5.84%	11.50%	5.20%	5.60%	7.43%	13.06%	13.27%
Spire, Inc.	SR	$2.60	$63.18	4.12%	4.27%	4.43%	10.00%	7.31%	5.50%	7.60%	11.88%	12.03%
Mean											10.36%	10.51%
Flotation Cost Adjustment											[12]	0.15%

Notes:
[1] Source: Company Prospectus
[2] Source: Company Prospectus
[3]-[4] Source: Company Prospectus
[5] Equals [8]/[1]
[6] Equals [4] + ([1] x [3])
[7] Equals [1] x [2]
[8] Equals [7] - [6]
[9] Equals [6] / [7]
[10] Equals average [6] / average [7]
[11] Source: Bloomberg Professional
[12] Source: Bloomberg Professional, equals 30-day average as of August 31, 2021
[13] Equals [11] / [12]
[14] Equals [13] x (1 + 0.5 x [19])
[15] Equals [14] / (1 − Flotation Cost)
[16] Source: Value Line
[17] Source: Yahoo! Finance
[18] Source: Zacks
[19] Equals Average ([16], [17], [18])
[20] Equals [14] + [19]
[21] Equals [15] + [19]
[22] Equals Average ([21]) − Average ([20])

2022-2026 CAPITAL EXPENDITURES AS A PERCENT OF 2020 NET PLANT



Projected CAPEX / 2020 Net Plant

Company		2022-2026
New Jersey Resources Corporation	NJR	50.28%
NiSource Inc.	NI	54.27%
Northwest Natural Gas Company	NWN	54.89%
ONE Gas Inc.	OGS	55.12%
Southwest Gas	SWG	57.89%
Spire, Inc.	SR	65.69%
Atmos Energy Corporation	ATO	85.80%
South Jersey Industries, Inc.	SJI	92.34%
Proxy Group Median		55.12%
Southwest Gas/Proxy Group		1.05

Notes:
Source: Exhibit No._(AEB-11), page 1, col. [7]

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]	[7]
						Non-Volumetric Rate Design				
Company	Operating Subsidiary	Jurisdiction	Service	Test Year	Rate Base	Revenue Decoupling	Formula-based rates	Straight Fixed-Variable Rate Design	Non-Volumetric Rate Design	Capital Cost Recovery Mechanism
Atmos Energy Corporation	Atmos Energy Corporation	Kansas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Atmos Energy Corporation	Kentucky	Gas	Fully Forecast	Average	Partial	No	No	Yes	Yes
	Atmos Energy Corporation	Louisiana	Gas	Historical	Year End	Partial	Yes	No	Yes	Yes
	Atmos Energy Corporation	Mississippi	Gas	Partially Forecast	Average	Partial	Yes	No	Yes	Yes
	Atmos Energy Corporation	Tennessee	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Atmos Energy Corporation	Texas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
New Jersey Resources Corporation	New Jersey Natural Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Full	No	No	Yes	Yes
NiSource Inc.	Northern Indiana Public Service C	Indiana	Electric	Fully Forecast	Year End	Partial	No	No	Yes	Yes
	Northern Indiana Public Service C	Indiana	Electric	Fully Forecast	Year End	No	No	No	No	Yes
	Columbia Gas of Kentucky Inc	Kentucky	Gas	Fully Forecast	Average	Partial	No	No	Yes	Yes
	Columbia Gas of Maryland Inc.	Maryland	Gas	Partially Forecast	Average	Partial	No	No	Yes	Yes
	Columbia Gas of Ohio Inc.	Ohio	Gas	Partially Forecast	Year End	No	No	Yes	Yes	Yes
	Columbia Gas of Pennsylvania Inc	Pennsylvania	Gas	Fully Forecast	Year End	Partial	No	No	Yes	Yes
	Columbia Gas of Virginia Inc.	Virginia	Gas	Historical	Average	Partial	No	No	Yes	Yes
Northwest Natural Gas Company	Northwest Natural Gas Co.	Oregon	Gas	Fully Forecast	Average	Partial	No	No	Yes	No
	Northwest Natural Gas Co.	Washington	Gas	Historical	Average	No	No	No	No	No
ONE Gas, Inc.	Kansas Gas Service Co.	Kansas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Oklahoma Natural Gas Co.	Oklahoma	Gas	Historical	Year End	Partial	No	No	Yes	No
	Texas Gas Service Co. Inc.	Texas	Gas	Historical	Year End	Partial	No	No	Yes	Yes
South Jersey Industries, Inc.	Elizabethtown Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Partial	No	No	Yes	Yes
	South Jersey Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Full	No	No	Yes	Yes
Spire, Inc.	Spire Alabama Inc.	Alabama	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Spire Gulf Inc.	Alabama	Gas	Fully Forecast	Average	Partial	Yes	No	Yes	No
	Spire Missouri Inc. - East	Missouri	Gas	Historical	Year End	Partial	No	No	Yes	Yes
	Spire Missouri Inc. - West	Missouri	Gas	Historical	Year End	No	No	No	No	Yes
Proxy Group Totals		Fully Forecast		9	Year End 15	Full 2	Yes 5	Yes 1	Yes 22	Yes 19
		Partially Forecast		6	Average 10	Partial 19	No 20	No 24	No 3	No 6
		Historical		10		No 4				
		Forecast		60.00%	Year End 60.00%	RDM 84.00%	FRP 20.00%	SFV 4.00%	NVRD 88.00%	CCRM 76.00%
Southwest Gas [8]		Arizona		Historical	Year-End	Full	No	No	Yes	Yes

Notes
[1] - [2] Source: S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 6/22/21, ATO LA Tariff, ATO MS Tariff, SR AL Tariff, and SR Gulf Tariff.
[3] Source: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit.
[4] Source: S&P Global Market Intelligence: Regulatory Commission Profiles
[5] Source: S&P Global Market Intelligence: Regulatory Commission Profiles
[6] Equals IF(AND([3]=No, [4]=No, [5]=No), No, Yes)
[7] Source: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit.
[8] Data provided by Southwest Gas.

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
RRA RANKINGS

		[1]	[2]
		RRA	
		Rank	Numeric Rank
Atmos Energy Corporation	Kansas	Below Average / 1	7.00
	Kentucky	Average / 1	4.00
	Louisiana	Average / 2	5.00
	Mississippi	Above Average / 3	3.00
	Tennessee	Above Average / 3	3.00
	Texas	Average / 3	6.00
New Jersey Industries	New Jersey	Below Average / 1	7.00
NiSource	Indiana	Average / 1	4.00
	Kentucky	Average / 1	4.00
	Maryland	Average / 3	6.00
	Ohio	Average / 3	6.00
	Pennsylvania	Above Average / 2	2.00
	Virginia	Average / 1	4.00
Northwest Natural Gas Company	Oregon	Average / 2	5.00
	Washington	Average / 3	6.00
ONE Gas, Inc.	Kansas	Below Average / 1	7.00
	Oklahoma	Average / 2	5.00
	Texas	Average / 3	6.00
South Jersey Industries, Inc.	New Jersey	Below Average / 1	7.00
Spire, Inc.	Alabama	Above Average / 1	1.00
	Missouri	Average / 3	6.00
Proxy Group Average		Average / 2	4.95
Southwest Gas	Arizona	Below Average / 1	7.00

Ranking Legend	
Description	**Value**
Below Average / 3	9
Below Average / 2	8
Below Average / 1	7
Average / 3	6
Average / 2	5
Average / 1	4
Above Average / 3	3
Above Average / 2	2
Above Average / 1	1

Notes
[1] Source: RRA Regulatory Focus – State Regulatory Evaluations, September 8, 2021
[2] AA/1= 1, AA/2= 2, AA/3= 3, A/1= 4, A/2= 5, A/3=6, BA/1= 7, BA/2= 8, BA/3= 9

COMPARISON OF SOUTHWEST GAS AND PROXY GROUP COMPANIES
S&P JURISDICTIONAL RANKINGS

		[1]	[2]
		RRA	
		Rank	Numeric Rank
Atmos Energy Corporation	Kansas	Highly Credit Supportive	2
	Kentucky	Most Credit Supportive	1
	Louisiana	Highly Credit Supportive	2
	Mississippi	More Credit Supportive	4
	Tennessee	Highly Credit Supportive	2
	Texas	Highly Credit Supportive	2
New Jersey Industries	New Jersey	More Credit Supportive	4
NiSource	Indiana	Highly Credit Supportive	2
	Kentucky	Most Credit Supportive	1
	Maryland	Very Credit Supportive	3
	Ohio	Very Credit Supportive	3
	Pennsylvania	Highly Credit Supportive	2
	Virginia	Highly Credit Supportive	2
Northwest Natural Gas Company	Oregon	Highly Credit Supportive	2
	Washington	Very Credit Supportive	3
ONE Gas, Inc.	Kansas	Highly Credit Supportive	2
	Oklahoma	More Credit Supportive	4
	Texas	Highly Credit Supportive	2
South Jersey Industries, Inc.	New Jersey	More Credit Supportive	4
Spire, Inc.	Alabama	Most Credit Supportive	1
	Missouri	Very Credit Supportive	3
Proxy Group Average		Very Credit Supportive / Highly Credit Supportive	2.43
Southwest Gas	Arizona	More Credit Supportive	4

Ranking Legend

Description	Value
Credit Supportive	5
More Credit Supportive	4
Very Credit Supportive	3
Highly Credit Supportive	2
Most Credit Supportive	1

Notes
[1] Source: Updates and Insights on Regulatory Jurisdictions Shaping Policies for North American Utilities, Standard and Poor's Ratings Services, June 29, 2021

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DOCKET NO.

MOODY'S INVESTORS SERVICE - ASSESSMENT OF REGULATORY RISK

	ATO	NJR	NI	NWN	OGS	SJI	SR	Average	SWX
Factor 1: Regulatory Framework									
Legislative and Judicial Underpinnings of Regulatory Framework	A	A	A	A	A	A	A		A
Consistency and Predictability of Regulation	Aa	Aa	A	A	A	Aa	A		A
Factor 2: Ability to Recover Costs and Earn Returns									
Timeliness of Recovery of Operating and Capital Costs	Aa	A	A	Aa	A	A	A		Baa
Sufficiency of Rates and Returns	A	A	A	A	Baa	A	A		Baa
Factor 1: Regulatory Framework									
Legislative and Judicial Underpinnings of Regulatory Framework	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Consistency and Predictability of Regulation	3.00	3.00	2.00	2.00	2.00	3.00	2.00	2.43	2.00
Factor 2: Ability to Recover Costs and Earn Returns									
Timeliness of Recovery of Operating and Capital Costs	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.29	1.00
Sufficiency of Rates and Returns	2.00	2.00	2.00	2.00	1.00	2.00	2.00	1.86	1.00
Average	2.50	2.25	2.00	2.25	1.75	2.25	2.00	2.14	1.50

Source: Moody's Investors Service Credit Opinions Publications

Scale	
Aaa	4
Aa	3
A	2
Baa	1

CAPITAL STRUCTURE ANALYSIS

COMMON EQUITY RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
New Jersey Resources Corporation	NJR	55.45%	58.87%	55.45%
NiSource Inc.	NI	54.43%	54.33%	54.43%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
One Gas Inc.	OGS	60.04%	63.28%	60.04%
South Jersey Industries, Inc.	SJI	54.73%	52.88%	54.73%
Spire Inc.	SR	58.51%	60.85%	58.51%
Proxy Group				
MEAN		55.56%	56.83%	55.56%
LOW		47.44%	49.19%	47.44%
HIGH		60.04%	63.28%	60.04%

COMMON EQUITY RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
New Jersey Natural Gas Company	NJR	55.45%	58.87%	55.45%
Columbia Gas of Kentucky, Inc.	NI	54.68%	54.23%	54.68%
Columbia Gas of Maryland, Inc.	NI	54.95%	52.38%	54.95%
Columbia Gas of Ohio, Inc.	NI	50.45%	53.00%	50.45%
Columbia Gas of Pennsylvania, Inc.	NI	55.68%	55.59%	55.68%
Columbia Gas of Virginia, Inc.	NI	43.69%	42.53%	43.69%
Northern Indiana Public Service Company LLC	NI	58.01%	56.43%	58.01%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
Kansas Gas Service Company, Inc.	OGS	60.33%	63.55%	60.33%
Oklahoma Natural Gas Company	OGS	59.85%	63.10%	59.85%
Texas Gas Service Company, Inc.	OGS	59.99%	63.23%	59.99%
South Jersey Gas Company	SJI	54.73%	52.88%	54.73%
Spire Alabama Inc.	SR	64.35%	66.82%	64.35%
Spire Gulf Inc.	SR	40.55%	37.18%	40.55%
Spire Mississippi Inc.	SR		100.00%	100.00%
Spire Missouri Inc.	SR	56.68%	59.05%	56.68%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

LONG-TERM DEBT RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
New Jersey Resources Corporation	NJR	44.55%	41.13%	44.55%
NiSource Inc.	NI	45.57%	45.67%	45.57%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
One Gas Inc.	OGS	39.96%	36.72%	39.96%
South Jersey Industries, Inc.	SJI	45.27%	47.12%	45.27%
Spire Inc.	SR	41.49%	39.15%	41.49%
Proxy Group				
MEAN		44.44%	43.17%	44.44%
LOW		39.96%	36.72%	39.96%
HIGH		52.56%	50.81%	52.56%

LONG-TERM DEBT RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
New Jersey Natural Gas Company	NJR	44.55%	41.13%	44.55%
Columbia Gas of Kentucky, Inc.	NI	45.32%	45.77%	45.32%
Columbia Gas of Maryland, Inc.	NI	45.05%	47.62%	45.05%
Columbia Gas of Ohio, Inc.	NI	49.55%	47.00%	49.55%
Columbia Gas of Pennsylvania, Inc.	NI	44.32%	44.41%	44.32%
Columbia Gas of Virginia, Inc.	NI	56.31%	57.47%	56.31%
Northern Indiana Public Service Company LLC	NI	41.99%	43.57%	41.99%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
Kansas Gas Service Company, Inc.	OGS	39.67%	36.45%	39.67%
Oklahoma Natural Gas Company	OGS	40.15%	36.90%	40.15%
Texas Gas Service Company, Inc.	OGS	40.01%	36.77%	40.01%
South Jersey Gas Company	SJI	45.27%	47.12%	45.27%
Spire Alabama Inc.	SR	35.65%	33.18%	35.65%
Spire Gulf Inc.	SR	59.45%	62.82%	59.45%
Spire Mississippi Inc.	SR		0.00%	0.00%
Spire Missouri Inc.	SR	43.32%	40.95%	43.32%

Notes:
[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

PREFERRED EQUITY RATIO [1]

Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
New Jersey Resources Corporation	NJR	0.00%	0.00%	0.00%
NiSource Inc.	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
One Gas Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Industries, Inc.	SJI	0.00%	0.00%	0.00%
Spire Inc.	SR	0.00%	0.00%	0.00%
Proxy Group				
MEAN		0.00%	0.00%	0.00%
LOW		0.00%	0.00%	0.00%
HIGH		0.00%	0.00%	0.00%

PREFERRED EQUITY RATIO - UTILITY OPERATING COMPANIES

Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
New Jersey Natural Gas Company	NJR	0.00%	0.00%	0.00%
Columbia Gas of Kentucky, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Maryland, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Ohio, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Pennsylvania, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Virginia, Inc.	NI	0.00%	0.00%	0.00%
Northern Indiana Public Service Company LLC	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
Kansas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
Oklahoma Natural Gas Company	OGS	0.00%	0.00%	0.00%
Texas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Gas Company	SJI	0.00%	0.00%	0.00%
Spire Alabama Inc.	SR	0.00%	0.00%	0.00%
Spire Gulf Inc.	SR	0.00%	0.00%	0.00%
Spire Mississippi Inc.	SR		0.00%	0.00%
Spire Missouri Inc.	SR	0.00%	0.00%	0.00%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas operating subsidiaries where data was unable to be obtained for 2019 and 2020 were removed from the analysis.

Estimates of Return on Fair Value Increment

Scenario 1: Real Risk Free Rate -- Projected Estimate

Step 1

Consumer Price Index (YoY % Change) [1]	
2023-2027	2.20%
2028-2032	2.20%
Average	2.20%
Consumer Price Index (All-Urban) [2]	
2022	2.68%
2032	3.34%
Compound Annual Growth Rate	2.20%
GDP Chain-type Price Index (2012=1.000) [2]	
2022	1.16%
2032	1.45%
Compound Annual Growth Rate	2.28%
Average Inflation Forecast	**2.23%**

Step 2

Nominal U.S. Treasury Bond Yield, 30-year [1]	
2023-2027	3.50%
2028-2032	3.90%
	3.70%
Real Risk-Free Rate [3]	**1.44%**

Notes:

[1] Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14

[2] Energy Information Administration, Annual Energy Outlook 2021, Table 20

[3] Equals (3.70% + 1) / (1 + 2.23%) − 1

Estimates of Return on Fair Value Increment

Scenario 2: Real Risk Free Rate -- Projected Estimate

Nominal U.S. Treasury Bond Yield, 30-year [1]		
Projection period:	2023-2027	3.50%
Projection period:	2028-2032	3.90%
		3.70%
180-day average yield on 30-year U.S. Treasury Bonds [2]		2.08%
180-day average yield on 30-year U.S. Treasury Inflation Protected Securities [2]		-0.13%
		2.21%
Real Risk-Free Rate [3]		**1.49%**

Notes:

[1] Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyieldYear&year=2021

As of August 31, 2021

[3] Equals [1]-[2]

Estimates of Return on Fair Value Increment

Scenario 3: Real Risk Free Rate -- Normalized Risk-Free Rate

Nominal Risk Free Rate [1]	2.50%
180-day average yield on 30-year U.S. Treasury Bonds [2]	2.08%
180-day average yield on 30-year U.S. Treasury Inflation Protected Securities [2]	-0.13%
	2.21%
Real Risk-Free Rate [3]	**0.29%**

Notes:

[1] Duff and Phelps 2020 Valuation Handbook

[2] Source: https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyieldYear&year=2021

As of August 31, 2021

[3] Equals [1]-[2]

Estimates of Return on Fair Value Increment

Real Risk-Free Rate Estimates	
Scenario 1	1.44%
Scenario 2	1.49%
Scenario 3	0.29%
Mean	1.07%

FVI Cost Rate Recommendations

Bulkley recommended rate [1]	1.07%
Southwest Gas requested rate	**0.00%**

Notes:
[1] Equals the mean of the three scenarios

FAIR VALUE RATE OF RETURN
ARIZONA STAFF METHODOLOGY

	Amount ($M)	Weighting	Weighted Amount ($M)	
Original Cost Rate Base (OCRB)	$ 2,642,068	50.00%	$ 1,321,034	[1]
Replacement Cost New, Depreciated Rate Base (RCND)	$ 4,186,764	50.00%	$ 2,093,382	[2]
Fair Value Rate Base (FVRB)			$ 3,414,416	[3]
Appreciation Above OCRB			$ 772,348	[4]

Capital		Amount ($M)	Percent	Cost Rate		Weighted Cost Rate
Long-Term Debt	49.00%	$ 1,294,613.3	37.92%	4.15%	[5]	1.57%
Common Equity	51.00%	1,347,454.6	39.46%	9.90%	[6]	3.91%
Capital Financing OCRB		$ 2,642,067.9	77.38%			5.48%
Appreciation Above OCRB Not Recognized on Utility's Books		772,348.3	22.62%	0.00%	[7]	0.00%
Total		$ 3,414,416.2	100.00%			5.48%

[1] Schedule B-1
[2] Schedule B-1
[3] Equals [1] + [2]
[4] Equals [3] − OCRB
[5] Schedule D-1
[6] Equals the recommended ROE on OCRB
[7] Equals Southwest Gas' requested FVI cost rate.

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Schedules

Vol. 3 of 3

December 3, 2021

SOUTHWEST GAS CORPORATION
ARIZONA
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29	Summary of Revenues at Present and Proposed Rates Total System	H-1	1	Lyons	29
30	Summary of Revenues at Present and Proposed Rates GCU		2	Lyons	30
31	Summary of Margin at Present and Proposed Rates Total System		3	Lyons	31
32	Summary of Margin at Present and Proposed Rates GCU		4	Lyons	32
33	Summary of Present and Proposed Revenues				33
34	By Rate Component Total System	H-2	1-4	Lyons	34
35	By Rate Component GCU		5	Lyons	35
36	At Present Rates (Excluding GCU)		6-9	Lyons	36
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40	Summary of Present and Proposed Rates (Excluding GCU)	H-3	1-3	Lyons	40
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SCHEDULE A

SOUTHWEST GAS CORPORATION
ARIZONA
INCREASE IN GROSS REVENUE REQUIREMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Original Cost	Reproduction Cost New Less Depreciation	Fair Value	Line No.
	(a)	(b)	(c)	(d)	(e) [(c) + (d)] / 2	
1	Adjusted Rate Base	Sch B-1, Sh 1, Ln 15	$ 2,642,067,938	$ 4,186,764,441	$ 3,414,416,189	1
2	Adjusted Operating Income	Sch C-1, Sh 1, Ln 19(e)	119,106,029	119,106,029	119,106,029	2
3	Current Rate of Return	Ln 2 / Ln 1	4.51%	2.84%	3.49%	3
4	Required Operating Income	Sch A-1, Sh 2, Ln 19(g)	$ 187,124,462	$ 187,124,462	$ 187,124,462	4
5	Required Rate of Return	Ln 4 / Ln 1	7.08%	4.47%	5.48%	5
6	Operating Income Deficiency	Ln 4 - Ln 2	$ 68,018,433	$ 68,018,433	$ 68,018,433	6
7	Gross Revenue Conversion Factor	Sch C-3, Sh 1, Ln 8(c)	1.3339	1.3339	1.3339	7
8	Increase in Gross Revenue Requirements	Ln 6 * Ln 7	90,730,183	90,730,183	$ 90,730,183	8

Note: Spread of revenue increase by customer classification is shown on Schedule A-1, Sheet 3.

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF THE OVERALL RESULTS OF OPERATIONS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Deficiency	Adjusted for Deficiency	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			Sch C-1, Sh 1, Col (c)	Sch C-1, Sh 1, Col (d)	(c) + (d)		(e) + (f)	
1	Operating Revenue		$ 722,593,622	$ (143,408,188)	$ 579,185,433	$ 90,730,183	$ 669,915,616	1
2	Gas Cost		157,575,309	(157,575,309)	0	0	0	2
3	Operating Margin	Ln 1 - Ln 2	$ 565,018,312	$ 14,167,121	$ 579,185,433	$ 90,730,183	$ 669,915,616	3
	Operating Expenses							
4	Other Gas Costs		$ 1,306,683	$ 28,691	$ 1,335,375	$ 0	$ 1,335,375	4
5	Storage		1,973,882	27,219	2,001,101	0	2,001,101	5
6	Distribution		109,198,435	2,126,260	111,324,695	0	111,324,695	6
7	Customer Accounts		28,049,178	(1,077,005)	26,972,173	194,660	27,166,834	7
8	Customer Service & Info.		188,705	(20,780)	167,925	0	167,925	8
9	Sales		3,425	(3,628)	(203)	0	(203)	9
	Administrative & General							
10	Direct		4,455,155	810,190	5,265,344	0	5,265,344	10
11	System Allocable		93,755,791	(2,895,888)	90,859,903	0	90,859,903	11
	Depreciation & Amortization							
12	Direct		112,464,317	7,427,002	119,891,319	0	119,891,319	12
13	System Allocable		13,602,014	3,051,686	16,653,700	0	16,653,700	13
14	Regulatory Amortizations		2,620,521	1,695,436	4,315,957	0	4,315,957	14
15	Taxes Other Than Income		51,219,448	18,088,148	69,307,596	0	69,307,596	15
16	Interest on Customer Deposits		803,794	(766,669)	37,125	0	37,125	16
17	Income Taxes		23,660,630	(11,713,236)	11,947,394	22,517,090	34,464,483	17
18	Total Operating Expenses	Sum Lns 4-17	$ 443,301,978	$ 16,777,427	$ 460,079,404	$ 22,711,750	$ 482,791,154	18
19	Net Operating Income	Ln 3 - Ln 18	$ 121,716,335	$ (2,610,306)	$ 119,106,029	$ 68,018,433	$ 187,124,462	19
	Rate Base							
	Gross Plant in Service							
20	Direct	Sch B-1	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	$ 1,268,522,852	$ 5,943,147,875	20
21	System Allocable	Sch B-1	292,288,904	(13,944,432)	278,344,472	7,048,873	285,393,345	21
22	Total Gross Plant in Service	Ln 20 + Ln 21	$ 4,783,540,551	$ 169,428,943	$ 4,952,969,495	$ 1,275,571,725	$ 6,228,541,219	22
	Accumulated Depreciation							
23	Direct	Sch B-1	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	$ 437,059,287	$ 1,971,783,582	23
24	System Allocable	Sch B-1	150,488,680	(9,299,788)	141,188,892	1,780,360	142,969,252	24
25	Total Accumulated Depreciati	Ln 23 + Ln 24	$ 1,679,021,624	$ (3,108,437)	$ 1,675,913,187	$ 438,839,647	$ 2,114,752,833	25
26	Net Plant in Service	Ln 22 - Ln 25	$ 3,104,518,927	$ 172,537,381	$ 3,277,056,308	$ 836,732,078	$ 4,113,788,386	26
	Other Rate Base							
	Allowance for Working Capital							
27	Cash Working Capital	Sch B-1, Sh 2, Ln 8	$ (16,619,324)	$ 0	$ (16,619,324)	$ 0	$ (16,619,324)	27
28	Materials and Supplies	Sch B-1, Sh 2, Ln 9	30,847,268	0	30,847,268	0	30,847,268	28
29	Prepayments	Sch B-1, Sh 2, Ln 10	14,121,283	0	14,121,283	0	14,121,283	29
30	Customer Deposits	Sch B-1, Sh 2, Ln 11	(33,750,043)	0	(33,750,043)	0	(33,750,043)	30
31	Customer Advances	Sch B-1, Sh 2, Ln 12	(59,445,400)	0	(59,445,400)	0	(59,445,400)	31
32	Deferred Taxes	Sch B-1, Sh 2, Ln 13	(568,880,614)	(1,261,540)	(570,142,154)	(64,383,826)	(634,525,981)	32
33	Total Other Rate Base	Sum Lns 27-32	$ (633,726,830)	$ (1,261,540)	$ (634,988,370)	$ (64,383,826)	$ (699,372,197)	33
34	Total Rate Base	Ln 26 + Ln 33	$ 2,470,792,097	$ 171,275,840	$ 2,642,067,938	$ 772,348,252	$ 3,414,416,189	34
35	Rate of Return	Ln 19 / Ln 34	4.93%		4.51%		5.48%	35

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SPREAD OF REVENUE INCREASE BY CUSTOMER CLASS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Present Schedule Number	Increase/(Decrease) [1] Dollars	Increase/(Decrease) [1] Percent	Line No.
	(a)	(b)	(c)	(d)	
	Residential Service				
1	Single-Family Residential Gas Service	G-5	$ 65,653,790	13.22%	1
2	Multi-Family Residential Gas Service	G-6	2,055,520	16.15%	2
3	Single-Family Low Income Residential Gas Service	G-10	2,419,908	12.49%	3
4	Multi-Family Low Income Residential Gas Service	G-11	183,323	15.71%	4
5	Special Residential Gas Service for Air Conditioning	G-15	9,196	14.08%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	81,580	6.87%	6
	General Gas Service				
7	Small	G-25(S)	1,340,506	12.06%	7
8	Medium	G-25(M)	6,591,637	13.25%	8
9	Large-1	G-25(L1)	5,520,715	6.28%	9
10	Large-2	G-25(L2)	1,779,545	7.78%	10
11	Transportation Eligible	G-25(TE)	3,741,450	8.85%	11
12	Optional Gas Service	G-30	0	0.00%	12
13	Air Conditioning Gas Service	G-40	6,661	4.70%	13
14	Street Lighting Gas Service	G-45	2,140	19.02%	14
	Gas Service for Compression on Customer's Premises				
15	Residential	G-55 (R)	293	2.89%	15
16	Small	G-55 (S)	278	3.03%	16
17	Large	G-55 (L)	386,221	5.67%	17
18	Electric Generation Gas Service	G-60	332,881	10.76%	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0.00%	
20	Small Essential Agriculture User Gas Service	G-75	129,121	5.06%	20
21	Natural Gas Engine Gas Service	G-80	259,999	2.20%	21
22	Total Sales and Full Margin Transportation		$ 90,494,764	11.67%	22
23	Potential Bypass/Standby Gas Service	B-1	0	0.00%	23
24	Other Operating Revenue		0	0.00%	24
25	Total Arizona Revenue		$ 90,494,764	11.47%	25

[1] Schedule H-1, Sheet 1, includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY RESULTS OF OPERATIONS

Line No.	Description	Prior Years		Test Year		Projected Year		Line No.
		Year Ended 2019	Year Ended 2020	Actual 08/31/21	Adjusted 08/31/21	Present Rates 08/31/22	Proposed Rates 08/31/22	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
		Sch E-2, Sh 1	Sch E-2, Sh 1	Sch E-2, Sh 1	Sch A-1, Sh 2 Sch C-1, Sh 16	Sch A-1, Sh 2 Sch F-1, Sh 1	Sch A-1, Sh 2 Sch F-1, Sh 1	
1	Operating Revenues	$ 635,764,607	$ 603,406,659	$ 722,593,620	$ 736,760,742	$ 733,328,970	$ 827,490,925	1
2	Operating Expenses and Taxes	518,160,685	492,428,775	600,877,287	617,654,713	613,647,351	640,366,464	2
3	Net Operating Income	$ 117,603,922	$ 110,977,884	$ 121,716,333	$ 119,106,029	$ 119,681,619	$ 187,124,462	3
4	Other Income and Deductions	0	0	0	0	0	0	4
5	Interest Expense	52,165,576	55,794,384	50,243,557	53,726,452	50,243,557	53,726,452	5
6	Net Income	$ 65,438,346	$ 55,183,500	$ 71,472,776	$ 65,379,577	$ 69,438,062	$ 133,398,010	6

SCHEDULE A-2
SHEET 1 OF 2

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY RESULTS OF OPERATIONS [1]

Line No.	Description	Prior Years Year Ended 2019	Prior Years Year Ended 2020	Test Year 12 Months Ended 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-2, Sh 2	Sch E-2, Sh 2	Sch E-2, Sh 2	
1	Gross Revenues	$ 1,368,939,322	$ 1,350,585,255	$ 1,426,586,982	1
2	Revenue Deductions & Operating Expenses	1,133,568,149	1,102,717,806	1,159,762,501	2
3	Operating Income	$ 235,371,174	$ 247,867,450	$ 266,824,481	3
4	Other Income and (Deductions)	23,444,854	12,658,846	20,639,306	4
5	Income Before Interest Deductions	$ 258,816,028	$ 260,526,295	$ 287,463,788	5
6	Interest Expense	$ 100,203,047	$ 104,610,314	$ 99,049,167	6
7	Allowance for Debt Funds Used During Construction	(4,557,906)	(3,202,278)	(1,986,649)	7
8	Net Interest Expense	$ 95,645,141	$ 101,408,036	$ 97,062,517	8
9	Net Income	$ 163,170,886	$ 159,118,260	$ 190,401,270	9
10	Preferred and Preference Dividend Requirements	0	0	0	10
11	Net Income Applicable to Common Stock	$ 163,170,886	$ 159,118,260	$ 190,401,270	11
12	Weighted Average Shares of Common Stock Outstanding	54,245,358	55,997,806	57,888,515	12
13	Earnings per Common Share	$ 3.01	$ 2.84	$ 3.29	13
14	Dividends Paid per Common Share	2.16	2.26	2.33	14
15	Dividend Pay-Out Ratio	71.64%	79.36%	70.84%	15
16	Return on Average Invested Capital	8.31%	7.24%	7.80%	16
17	Return on Year-End Invested Capital	7.78%	6.93%	7.36%	17
18	Return on Average Common Equity	8.31%	7.24%	7.80%	18
19	Return on Year-End Common Equity	7.78%	6.93%	7.36%	19
20	Times Bond Interest Earned-Before Income Taxes	3.90	3.73	4.25	20
21	Times Total Interest and Preferred Dividend Earned - After Income Taxes	2.71	2.57	2.96	21

[1] In this proceeding, the Company is requesting rate relief for the Arizona rate jurisdiction of its system only. Projections for the total Company's financial position are not compiled or available.

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY OF CAPITAL STRUCTURE

Line No.	Description	Prior Years At 12/31/2019	Prior Years At 12/31/2020	Test Year At 08/31/2021	Projected At 08/31/2022 [1]	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Capital Amounts					
1	Short-Term Debt	$ 194,000,000	$ 57,000,000	$ 250,000,000	$ -	1
2	Long-Term Debt[2]	2,116,333,121	2,438,205,444	2,576,234,865	2,964,245,608	2
3	Total Debt	2,310,333,121	2,495,205,444	2,826,234,865	2,964,245,608	3
4	Preferred Equity	-	-	-	-	4
5	Common Equity[3]	2,060,303,652	2,294,602,422	2,504,476,216	2,896,476,216	5
6	Total Capital	$ 4,370,636,773	$ 4,789,807,866	$ 5,330,711,081	$ 5,860,721,824	6
	Capitalization Ratios					
7	Short-Term Debt	4.44%	1.19%	4.69%	0.00%	7
8	Long-Term Debt	48.42%	50.90%	48.33%	50.58%	8
9	Total Debt	52.86%	52.09%	53.02%	50.58%	9
10	Preferred Equity	0.00%	0.00%	0.00%	0.00%	10
11	Common Equity	47.14%	47.91%	46.98%	49.42%	11
12	Total	100.00%	100.00%	100.00%	100.00%	12
	Weighted Cost of Capital					
13	Short-Term Debt	0.12%	0.03%	0.05%	0.00%	13
14	Long-Term Debt	2.16%	1.93%	1.88%	1.80%	14
15	Preferred Equity	0.00%	0.00%	0.00%	0.00%	15
16	Common Equity	4.48%	4.55%	4.65%	4.89%	16
17	Total Weighted Cost of Capital	6.76%	6.51%	6.58%	6.69%	17

[1] Estimated
[2] Includes current maturities of long-term debt
[3] Common equity does not reflect accumulated other comprehensive income balances

SCHEDULE A-3
SHEET 1 OF 1

SOUTHWEST GAS CORPORATION
ARIZONA
HISTORICAL AND PROJECTED
CONSTRUCTION EXPENDITURES, PLANT PLACED IN SERVICE, AND GROSS PLANT

Line No.	Description	Actual Year Ended 2019	Actual Year Ended 2020	Actual Test Year Ended 8/31/2021	Projected Year Ending 8/31/2022	Projected Year Ending 8/31/2023	Projected Year Ending 8/30/2024	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
		Company Records	Company Records	Company Records	Company Records	Company Records	Company Records	
	Construction Expenditures							
1	Arizona Direct	$ 476,026,507	$ 312,242,045	$ 248,316,924	$ 319,307,105	$ 288,570,896	$ 342,650,680	1
2	System Allocable [1]	20,729,899	24,713,363	81,031,108	27,918,101	37,654,617	37,946,486	2
3	Total Construction Expenditures	$ 496,756,406	$ 336,955,407	$ 329,348,031	$ 347,225,206	$ 326,225,513	$ 380,597,166	3
	Net Plant Placed in Service							
4	Arizona Direct	$ 965,722,838	$ 263,201,755	$ 108,454,342	$ 279,307,105	$ 248,570,896	$ 302,650,680	4
5	System Allocable [1]	27,619,243	22,582,097	69,121,107	22,292,149	32,028,665	32,320,534	5
6	Total Net Plant Placed in Service	$ 993,342,082	$ 285,783,852	$ 177,575,450	$ 301,599,254	$ 280,599,561	$ 334,971,214	6
	Gross Utility Plant in Service							
7	Arizona Direct	$ 4,119,595,550	$ 4,382,797,305	$ 4,491,251,647	$ 4,770,558,752	$ 5,019,129,648	$ 5,321,780,328	7
8	System Allocable [1]	200,585,700	223,167,796	292,288,904	314,581,053	346,609,718	378,930,252	8
9	Total Gross Utility Plant in Service	$ 4,320,181,250	$ 4,605,965,101	$ 4,783,540,551	$ 5,085,139,806	$ 5,365,739,366	$ 5,700,710,581	9

[1] After 4-Factor allocation to AZ. Schedule C-1,Sheet 17, Ln 9(c)

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY STATEMENT OF CASH FLOWS
CHANGES IN FINANCIAL POSITION
($ THOUSANDS)

Line No.	Description	Prior Years		Test Year	Projected Year Year Ended 1/31/20		Line No.
		Year Ended 2019	Year Ended 2020	12 Months Ended 8/31/2021	At Present Rates	At Proposed Rates	
	(a)	(b)	(c)	(d)	(e)	(f)	
		Sch E-3, Sh 1	Sch E-3, Sh 1	Sch E-3, Sh 1	Sch F-2, Sh 1	Sch F-2, Sh 1	
1	Cash Flows from Operating Activities	$ 367,360	$ 425,903	$ 43,043	$ 52,791	$ 120,809	1
2	Cash Flows from Investing Activities	(759,380)	(679,254)	(580,395)	(305,289)	(305,289)	2
3	Cash Flows from Financing Activities	400,575	253,932	517,310	353,000	353,000	3
4	Increase (Decrease) in Cash and Cash Equivalents	$ 8,555	$ 581	$ (20,042)	$ 100,502	$ 168,521	4

SCHEDULE A-5
SHEET 1 OF 1

SCHEDULE B-1

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF ADJUSTED ORIGINAL COST AND RCND RATE BASE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Adjusted Original Cost Rate Base	Adjusted RCND Rate Base	Fair Value [1] Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Sch B-1, Sh 2, Col (e)	Net Plant: Sch B-3, Sh 1, Col (e)	[(c) + (d)] / 2	
	Gross Plant in Service					
1	Direct		$ 4,674,625,023	$ 7,211,670,727	$ 5,943,147,875	1
2	System Allocable		278,344,472	292,442,218	285,393,345	2
3	Total Gross Plant in Service	Ln 1 + Ln 2	$ 4,952,969,495	$ 7,504,112,944	$ 6,228,541,219	3
	Accumulated Depreciation					
4	Direct		$ 1,534,724,294	$ 2,408,842,869	$ 1,971,783,582	4
5	System Allocable		141,188,892	144,749,611	142,969,252	5
6	Total Accumulated Depreciation	Ln 4 + Ln 5	$ 1,675,913,187	$ 2,553,592,480	$ 2,114,752,833	6
7	Net Plant in Service	Ln 3 - Ln 6	$ 3,277,056,308	$ 4,950,520,464	$ 4,113,788,386	7
	Other Rate Base					
	Allowance for Working Capital					
8	Cash Working Capital		$ (16,619,324)	$ (16,619,324)	$ (16,619,324)	8
9	Materials and Supplies		30,847,268	30,847,268	30,847,268	9
10	Prepayments		14,121,283	14,121,283	14,121,283	10
11	Customer Deposits		(33,750,043)	(33,750,043)	(33,750,043)	11
12	Customer Advances		(59,445,400)	(59,445,400)	(59,445,400)	12
13	Deferred Taxes		(570,142,154)	(698,909,807)	(634,525,981)	13
14	Total Other Rate Base	Sum Lns 8-13	$ (634,988,370)	$ (763,756,023)	$ (699,372,197)	14
15	Total Rate Base	Ln 7 + Ln 14	$ 2,642,067,938	$ 4,186,764,441	$ 3,414,416,189	15
			Sch A-1, Sh 1, Ln 1(c)	Sch A-1, Sh 1, Ln 1(d)	Sch A-1, Sh 1, Ln 1(e)	

[1] 50/50 weighting of original cost rate base and reproduction cost new less depreciation (RCND) rate base.

SOUTHWEST GAS CORPORATION
ARIZONA
RECORDED RATE BASE, AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded at 8/31/2021	Adjustments	Adjusted at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
	Gross Plant in Service					
1	Direct	Sch B-2, Sh 1, Ln 5	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	1
2	System Allocable	Sch B-2, Sh 1, Ln 21	292,288,904	(13,944,432)	278,344,472	2
3	Total Gross Plant in Service	Ln 1 + Ln 2	$ 4,783,540,551	$ 169,428,943	$ 4,952,969,495	3
	Accumulated Depreciation					
4	Direct	Sch B-2, Sh 1, Ln 10	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	4
5	System Allocable	Sch B-2, Sh 1, Ln 22	150,488,680	(9,299,788)	141,188,892	5
6	Total Accumulated Depreciation	Ln 4 + Ln 5	$ 1,679,021,624	$ (3,108,437)	$ 1,675,913,187	6
7	Net Plant in Service	Ln 3 - Ln 6	$ 3,104,518,927	$ 172,537,381	$ 3,277,056,308	7
	Other Rate Base					
	Allowance for Working Capital					
8	Cash Working Capital	Sch B-5, Sh 1	$ (16,619,324)	$ 0	$ (16,619,324)	8
9	Materials and Supplies	Sch B-5, Sh 1	30,847,268	0	30,847,268	9
10	Prepayments	Sch B-5, Sh 1	14,121,283	0	14,121,283	10
11	Customer Deposits	Sch B-6, Sh 1	(33,750,043)	0	(33,750,043)	11
12	Customer Advances	Sch B-6, Sh 2	(59,445,400)	0	(59,445,400)	12
13	Deferred Taxes	Sch B-6, Sh 3	(568,880,614)	(1,261,540)	(570,142,154)	13
14	Total Other Rate Base	Sum Lns 8-13	$ (633,726,830)	$ (1,261,540)	$ (634,988,370)	14
15	Total Rate Base	Ln 7 + Ln 14	$ 2,470,792,098	$ 171,275,840	$ 2,642,067,938	15
			Sch A-1, Sh 2, Col (c)		Sch B-1, Sh 1, Col (c)	

SCHEDULE B-2

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF ORIGINAL COST OF GAS PLANT BY FUNCTION
AT AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded at 8/31/2021	Adjustments	Adjusted at 8/31/2021	Allocation of System Allocable Plant	Adjusted after Allocation at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, 3, 5, 7 Col (c)	WP B-2, Sh 1, 3, 5, 7 Col (d)	(c) + (d)	Lns 12-17(e) * Ln 20	(e) + (f)	
	Direct Gross Plant in Service (GPIS)							
1	Intangible Plant		$ 4,618,980	$ 42,522	$ 4,661,502	$ 221,471,045	$ 226,132,547	1
2	Storage Plant		75,025,126	1,929,350	76,954,475	0	76,954,475	2
3	Distribution Plant		4,213,201,374	156,015,466	4,369,216,840	0	4,369,216,840	3
4	General Plant		198,406,168	25,386,038	223,792,206	56,873,426	280,665,632	4
5	Total Direct Gross Plant in Service	Sum Lns 1-4	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	$ 278,344,472	$ 4,952,969,495	5
	Direct Accumulated Depreciation							
6	Intangible Plant		$ 3,198,029	$ 0	$ 3,198,029	$ 129,966,315	$ 133,164,344	6
7	Storage Plant		5,705,215	45,822	5,751,038	0	5,751,038	7
8	Distribution Plant		1,453,228,121	5,121,805	1,458,349,926	0	1,458,349,926	8
9	General Plant		66,401,579	1,023,724	67,425,302	11,222,577	78,647,879	9
10	Total Direct Accumulated Depreciation	Sum Lns 6-9	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	$ 141,188,892	$ 1,675,913,187	10
11	Total Direct Net Plant in Service	Ln 5 - Ln 10	$ 2,962,718,704	$ 177,182,025	$ 3,139,900,728	$ 137,155,580	$ 3,277,056,308	11
			Sch B-1, Sh 2, Col (c)	Sch B-1, Sh 2, Col (d)			Sch B-1, Sh 2, Col (e)	
	System Allocable GPIS							
12	Intangible Plant		$ 371,144,066	$ 22,515,607	$ 393,659,673			12
13	General Plant		148,392,717	(47,301,513)	101,091,203			13
14	Total System Allocable GPIS	Ln 12 + Ln 13	$ 519,536,782	$ (24,785,906)	$ 494,750,876			14
	System Allocable Accumulated Depreciation							
15	Intangible Plant		$ 230,010,063	$ 1,002,064	$ 231,012,127			15
16	General Plant		37,480,094	(17,532,222)	19,947,871			16
17	Total Sys. Alloc. Accumulated Depreciation	Ln 15 + Ln 16	$ 267,490,156	$ (16,530,158)	$ 250,959,998			17
18	Total System Allocable Net Plant in Service	Ln 14 - Ln 17	$ 252,046,626	$ (8,255,748)	$ 243,790,878			18
20	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%			20
21	Sys. Alloc. GPIS Allocated to AZ	Ln 14 * Ln 20	$ 292,288,904	$ (13,944,432)	$ 278,344,472			21
22	Sys. Alloc. Accum. Depreciation Allocated to AZ	Ln 17 * Ln 20	150,488,680	(9,299,788)	141,188,892			22
23	System Allocable Net Plant Allocated to AZ	Ln 21 - Ln 22	$ 141,800,224	$ (4,644,644)	$ 137,155,580			23

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY-OWNED VEHICLES
RATE BASE
ADJUSTMENT NO. 6

Line No.	Description	Reference	Remove Company-Owned Vehicles: Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Amortization Expense [1]	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c) + (d) + (e)	(g)	
1	Arizona	Company Records	$ (229,604)	$ 150,114	$ 1,463	$ (78,027)	$ (32,994)	1
2	System Allocable	Company Records	$ (1,690,665)	$ 985,201	$ 12,161	$ (693,303)	$ (175,322)	2
3	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * Ln 3	(1,619,802)	$ 943,907	$ 11,652	$ (664,244)	$ (167,973)	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%	56.26%	56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5	$ (911,293)	$ 531,037	$ 6,555	$ (373,700)	$ (94,501)	6
7	Total Adjustment	Ln 1 + Ln 6	$ (1,140,897)	$ 681,151	$ 8,019	$ (451,727) Sch C-2, Sh 1, Col (g)	$ (127,495)	7

Explanation:
To remove rate base related to company-owned vehicles used by Directors and above.

[1] Removed automatically in the Company's depreciation and annualization adjustment as a result of the adjustment to rate base.

SOUTHWEST GAS CORPORATION
ARIZONA
REMOVAL OF CORPORATE AIRCRAFT RATE BASE
ADJUSTMENT NO. 8

Line No.	Description	Reference	Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	System Allocable - Aircraft						
1	Aircraft 392.21	Company Records	$ (8,221,361)	$ 3,340,911	$	$ (4,880,450)	1
2	Airplane Hanger 390.1	Company Records	(944,271)	549,061		(395,210)	2
3	Deferred Taxes	Company Records			1,846,011	1,846,011	3
4	Total Adjustment	Sum Lns 1-3	$ (9,165,632)	$ 3,889,972	$ 1,846,011	$ (3,429,649)	4
5	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	5
6	Adjustment after MMF Allocation		$ (8,781,459)	$ 3,726,925	$ 1,768,636	$ (3,285,897)	6
7	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	7
8	Adjustment Allocated to AZ	Ln 6 * Ln 7	$ (4,940,407)	$ 2,096,750	$ 995,026	$ (1,848,630)	8

Explanation

To remove assets related to the company owned corporate aircraft

SOUTHWEST GAS CORPORATION
ARIZONA
CORPORATE HEADQUARTERS
RATE BASE
ADJUSTMENT NO. 17

Line No.	Description	Reference	Remove Corporate Headquarters No Longer In-Use Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c) + (d) + (e)	
1	Remove Spring Mountain [1]						1
2	389.00 Land & Land Rights	Company Records	$ (4,216,706)	$ 0	$ 0.00	$ (4,216,706)	2
3	390.10 Structures & Improvements	Company Records	(37,004,287)	8,292,146	0	(28,712,141)	3
4	390.20 Leasehold Improvements	Company Records	(1,241,835)	1,061,241	0	(180,595)	4
5	390.21 Leaseholds, Fully Amortized	Company Records	(543,423)	543,143	0	(280)	5
6	Deferred Taxes	Company Records	0	0	1,129,600	1,129,600	6
7	Total	Sum Lns 2-6	(43,006,251)	9,896,530	1,129,600	(31,980,122)	7
8	Less: MMF Allocation		4.19%	4.19%	4.19%	4.19%	8
9	Adjustment after MMF Allocation		(41,203,665)	$ 9,481,722	$ 1,082,253	$ (30,639,690)	9
10	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%	56.26%	10
11	Adjustment Allocated to AZ	Ln 3 * Ln 6	$ (23,180,984)	$ 5,334,371	$ 608,871	$ (17,237,743)	11
12							12
13							13
14	Allocate 11% of 8360 S Durango to Centuri		$				14
15	389.00 Land & Land Rights	Company Records	3,810,216	$ 0	$	$ 3,810,216	15
16	390.10 Structures & Improvements	Company Records	36,924,619	875,738	39,348	37,839,706	16
17	Total	Sum Lns 15-16	40,734,836	875,738	39,348	41,649,922	17
18	Adjustment	11%	(4,480,832)	96,331	4,328	(4,380,172)	18
19	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	19
20	Adjustment after MMF Allocation		(4,293,020)	$ 92,294	$ 4,147	$ (4,196,580)	20
21	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	21
22	Adjustment Allocated to AZ	Ln 10 * Ln 13	$ (2,415,232)	$ 51,924	$ 2,333	$ (2,360,976)	22
	Total Adjustment	Ln 1 + Ln 7	$ (25,596,217) Sch C-2, Sh 1, Col (g)	$ 5,386,295 Sch C-2, Sh 1, Col (g)	$ 611,204	$ (19,598,718)	

Explanation:
[1] To remove the rate base associated with Spring Mountain campus because it is no longer used and useful.
[2] To remove 11% of rate base associated with 8360 S Durango (Southwest Gas Holdings) for allocation to Centuri.

SOUTHWEST GAS CORPORATION
ARIZONA
POST-TEST YEAR PLANT
ADJUSTMENT NO. 19

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
	Distribution Plant				
1	Land and Land Rights	n/a	374.1	$ 0	1
2	Mains	WP B-2, Adj. 19, Sh 2, Col (h)	376	93,817,414	2
3	Measuring and Reg. Stations	WP B-2, Adj. 19, Sh 2, Col (i)	378	5,229,491	3
4	Services	WP B-2, Adj. 19, Sh 2, Col (j)	380	51,122,724	4
5	Industrial Measuring and Reg. Sta.	n/a	385	31,162	5
6	Total Distribution Plant	Sum Lns 1-5		$ 150,200,790	6
7					7
8	Storage Plant				8
9	Compressor Equipment	WP B-2, Adj. 19, Sh 2, Col (f)	363.3	1,929,350	9
10	Total Storage Plant			1,929,350	10
11					11
12	Structures and Improv - Co. Owned	WP B-2, Adj. 19, Sh 2, Col (l)	390.1	$ 10,380,000	12
13	Office Furniture and Fixtures	WP B-2, Adj. 19, Sh 2, Col (n)	391	800,000	13
14	Computer Software and Hardware	WP B-2, Adj. 19, Sh 2, Col (o)	391.1	0	14
15	Transportation Equipment - Light	n/a	392.11	7,895,681	15
16	Stores Equipment	n/a	393	2,969,255	16
17	Tool, Shop, and Garage Equip.	WP B-2, Adj. 19, Sh 2, Col (r)	394	1,299,669	17
18	Communication Equipment	n/a	397	1,708,700	18
19	Misc. Equipment	WP B-2, Adj. 19, Sh 2, Col (u)	398	150,000	19
20	Total General Plant	Sum Lns 12-19		$ 25,203,305	20
21					21
22	Total Arizona	Ln 6 + Ln 20		$ 177,333,445	22
				Sch C-2, Sh 2, Col (j)	

Explanation: to include direct Arizona non-revenue producing plant projects with an in-service date by August 31, 2021

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
POST-TEST YEAR PLANT
ADJUSTMENT NO. 19

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
	Intangible Plant				
1	Miscellaneous Intangible	WP B-2, Adj. 19, Sh 5, Col (e)	303	$ 22,515,607	1
2	Total Intangible Plant	Ln 1		$ 22,515,607	2
	General Plant				
3	Land and Land Rights	WP B-2, Adj. 19, Sh 6, Col (d)	389.0	$ 0	3
4	Structures and Improv - Co. Owned	WP B-2, Adj. 19, Sh 6, Col (e)	390.1	10,470,421	4
5	Structures and Improv - Leasehold	WP B-2, Adj. 19, Sh 6, Col (f)	390.2	0	5
6	Office Furniture and Fixtures	WP B-2, Adj. 19, Sh 6, Col (g)	391	0	6
7	Computer Software and Hardware	WP B-2, Adj. 19, Sh 6, Col (h)	391.1	1,266,013	7
8	Transportation Equip - Light	WP B-2, Adj. 19, Sh 6, Col (i)	392.11	0	8
9	Laboratory Equipment	WP B-2, Adj. 19, Sh 6, Col (j)	395	0	9
10	Communication Equipment	WP B-2, Adj. 19, Sh 6, Col (k)	397	488,624	10
11	Miscellaneous Equipment	WP B-2, Adj. 19, Sh 6, Col (l)	398	393,773	11
12	Total General Plant	Sum Lns 3-11		$ 12,618,831	12
13	Total System Allocable Plant	Ln 2 + Ln 12		$ 35,134,438	13
14	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	14
15	Amount Allocated to AZ	Ln 13 * Ln 14		$ 19,766,467	15
				Sch C-2, Sh 2, Col (j)	

Explanation: to include estimated System Allocable general plant additions
with an in-service date by August 31, 2021 and Account 303 additions through August 31, 2021.

SOUTHWEST GAS CORPORATION
ARIZONA
GRAHAM COUNTY UTILITIES (GCU)
RATE BASE
ADJUSTMENT NO. 20

Line No.	Description	Reference	Account Number	Estimated Amount	Line No.
	(a)		(b)	(c)	
1	**Distribution Plant**				1
2	Organizational Costs	Company Records	301.00	$ 42,522	2
3					3
4	Land & Land Rights	Company Records	374.00	1,416	4
5	Distribution Mains	Company Records	376.00	2,488,029	5
6	Services	Company Records	380.00	1,329,652	6
7	Meters & Regulators	Company Records	381.00	1,995,578	7
8	Structures & Improvements	Company Records	390.00	8,259	8
9	**Total Distribution Plant**	Sum Lns 4-8		$ 5,822,935	9
					0
10	**General Plant**				10
11	Office Equipment	Company Records	391.00	2,750	11
12	Shop & Garage Equipment	Company Records	394.00	283,018	12
13	Power Equipment	Company Records	396.20	118,310	13
14	**Total General Plant**	Sum Lns 11-13		$ 404,078	14
	Accumulated Depreciation				
15	Distribution Plant	Company Records	108.60	3,450,459	15
16	General Plant	Company Records	108.70	275,332	16
17	**Total Accumulated Depreciation**	Sum Lns 15-16		$ 3,725,791	17
18					18
	Total Net Utility Plant	Ln 14 + Ln 9 +Ln 2 - Ln 17		**$ 2,543,744**	
19					19
20				Sch C-2, Sh 2, Col (k)	20

Explanation:
To add in assets related to the Graham County Utility acquistion in Docket No. G-01551A-21-0092

SOUTHWEST GAS CORPORATION
ARIZONA
REMITTANCE PROCESSING AND PRINT TO MAIL ASSETS
ADJUSTMENT NO. 23

Line No.	Description	Reference	Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	System Allocable						
1	Remittance Processing -391	Company Records	$ (400,691)	$ 227,848	$	$ (172,843)	1
2	Remittance Processing -391.1	Company Records	(231,084)	210,885		(20,199)	2
3	Print to Mail Assets - 391	Company Records	(3,358,611)	3,095,337		(263,274)	3
4	Print to Mail Assets - 393	Company Records	(28,869)	27,059		(1,810)	4
5	Print to Mail Assets - 394	Company Records	(3,144)	2,685		(459)	5
6	Deferred Taxes	Company Records			240,814	240,814	6
7	Total Adjustment	Sum Lns 1-3	$ (4,022,399)	$ 3,563,814	$ 240,814	$ (217,771)	7
8	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	8
	Adjustment Allocated to AZ	Ln 6 * Ln 7	$ (2,262,982)	$ 2,004,985	$ 135,481	$ (122,517)	

To remove the rate base associated with Remittance Processing and Print to Mail functions.

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES ADJUSTMENT
ADJUSTMENT NO. 24

Line No.	Description	Reference	AZ Direct	System Allocable	Line No.
	(a)	(b)	(c)	(d)	
			Company Records	Company Records	
	Tie Deferred Taxes to Recorded Plant at End of Test Year				
1	Deferred Tax Liability - State	Account 282	$ 322,127	$ 280,021	1
2	Deferred Tax Liability - Federal	Account 282	1,747,523	1,519,099	2
3	Excess Deferred Income Taxes	Account 254	0	0	3
4	Subtotal	Sum Lns 1 - 3	$ 2,069,649	$ 1,799,120	4
5	Company-Owned Vehicles - Adjustment No. 6				5
6	Deferred Tax Liability - State	Account 282	$ (228)	$ (1,893)	6
7	Deferred Tax Liability - Federal	Account 282	(1,236)	(10,269)	7
8	Excess Deferred Income Taxes	Account 254	0	0	8
9	Subtotal	Sum Lns 6 - 8	$ (1,463)	$ (12,161)	9
10	Corporate Aircraft - Adjustment No. 8				10
11	Deferred Tax Liability - State	Account 282	$	$ (190,146)	11
12	Deferred Tax Liability - Federal	Account 282		(1,031,534)	12
13	Excess Deferred Income Taxes	Account 254	0	(624,331)	13
14	Subtotal	Sum Lns 11 - 13	$ 0	$ (1,846,011)	14
15	Corporate Headquarters - Adjustment No. 17				15
16	Deferred Tax Liability - State	Account 282	$ 0	$ (131,195)	16
17	Deferred Tax Liability - Federal	Account 282	0	(711,729)	17
18	Excess Deferred Income Taxes	Account 254	0	(291,003)	18
19	Subtotal	Sum Lns 16 - 18	$ 0	$ (1,133,927)	19
20	Remittance Processing and Print to Mail Assets				
21	Deferred Tax Liability - State	Account 282	0	$ (15,768)	
22	Deferred Tax Liability - Federal	Account 282	0	(85,542)	
23	Excess Deferred Income Taxes	Account 254	0	(139,504)	
24		Sum Lns 21 - 23	0	$ (240,814)	
25	Total Deferred Tax Adjustments Excluding Corporate Headquarters				25
26	Deferred Tax Liability - State	Ln 1 + Ln 6	$ 321,899	$ (58,982)	26
27	Deferred Tax Liability - Federal	Ln 2 + Ln 7	1,746,287	(319,975)	27
28	Excess Deferred Income Taxes	Ln 3 + Ln 8	0	(1,054,837)	28
29	Total	Sum Lns 26 - 28	$ 2,068,186	$ (1,433,793)	29
			Sch B-6, Sh 4	Sch B-6, Sh 4	

SCHEDULE B-3

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF REPRODUCTION COST NEW LESS DEPRECIATION (RCND) OF GAS PLANT BY FUNCTION
AT AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	RCND 8/31/2021	Adjustments	Adjusted at 8/31/2021	Allocation of System Allocable Plant	Adjusted after Allocation at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
				Sch B-2, Sh 1, Col (d)	(c) + (d)	Lns 12-17(e) * Ln 19	(e) + (f)	
	Direct Gross Plant in Service (GPIS)							
1	Intangible Plant	Sch B-4, Sh 41	$ 4,618,980	$ 42,522	$ 4,661,502	$ 221,471,045	$ 226,132,547	1
2	Storage Plant	Sch B-4, Sh 41	77,222,700	1,929,350	79,152,050	0	79,152,050	2
3	Distribution Plant	Sch B-4, Sh 2-26	6,711,475,589	156,015,466	6,867,491,055	0	6,867,491,055	3
4	General Plant	Sch B-4, Sh 2-26	234,980,082	25,386,038	260,366,120	70,971,172	331,337,292	4
5	Total Direct Gross Plant in Service	Sum Lns 1-4	$ 7,028,297,351	$ 183,373,376	$ 7,211,670,727	$ 292,442,218	$ 7,504,112,944	5
	Direct Accumulated Depreciation							
6	Intangible Plant	Sch B-4, Sh 41	$ 3,198,029	$ 0	$ 3,198,029	$ 129,966,315	$ 133,164,344	6
7	Storage Plant	Sch B-4, Sh 41	5,872,327	45,822	5,918,149	0	5,918,149	7
8	Distribution Plant	Ln 3 * Sch B-4, Sh 41, Ln 13(b)	2,314,939,210	5,121,805	2,320,061,014	0	2,320,061,014	8
9	General Plant	Ln 4 * Sch B-4, Sh 41, Ln 14(b)	78,641,952	1,023,724	79,665,676	14,783,296	94,448,972	9
10	Total Direct Accumulated Depreciation	Sum Lns 6-9	$ 2,402,651,518	$ 6,191,351	$ 2,408,842,869	$ 144,749,611	$ 2,553,592,480	10
11	Total Direct Net Plant in Service	Ln 5 - Ln 10	$ 4,625,645,833	$ 177,182,025	$ 4,802,827,858	$ 147,692,607	$ 4,950,520,464	11
					Sch B-1, Sh 1, Col (d)			
	System Allocable GPIS							
12	Intangible Plant	Sch B-4, Sh 41	$ 371,144,066	$ 22,515,607	$ 393,659,673			12
13	General Plant	Sch B-4, Sh 27-40	173,451,135	(47,301,513)	126,149,622			13
14	Total System Allocable GPIS	Ln 12 + Ln 13	$ 544,595,201	$ (24,785,906)	$ 519,809,295			14
	System Allocable Accumulated Depreciation							
15	Intangible Plant	Sch B-4, Sh 41	$ 230,010,063	$ 1,002,064	$ 231,012,127			15
16	General Plant	Ln 13 * Sch B-4, Sh 41, Ln 14(c)	43,809,190	(17,532,222)	26,276,967			16
17	Total Sys. Alloc. Accumulated Depreciation	Ln 15 + Ln 16	$ 273,819,253	$ (16,530,158)	$ 257,289,094			17
18	Total System Allocable Net Plant in Service	Ln 14 - Ln 17	$ 270,775,948	$ (8,255,748)	$ 262,520,200			18
19	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%			19
20	Sys. Alloc. GPIS Allocated to AZ	Ln 14 * Ln 19	$ 306,386,650	$ (13,944,432)	$ 292,442,218			20
21	Sys. Alloc. Accum. Depreciation Allocated to AZ	Ln 17 * Ln 19	154,049,399	(9,299,788)	144,749,611			21
22	System Allocable Net Plant Allocated to AZ	Ln 20 - Ln 21	$ 152,337,251	$ (4,644,644)	$ 147,692,607			22
					Sch B-1, Sh 1, Col (d)			

SCHEDULE B-4

SOUTHWEST GAS CORPORATION
ARIZONA
HANDY - WHITMAN INDEX OF PUBLIC UTILITY CONSTRUCTION COSTS
PLATEAU DIVISION - GAS UTILITY

Line No.	Year	FERC Account Number 360 374 389	375 390	378 385 386 387	397 398	391 395	392 393 394 396	376 Steel	376 Plastic	380 Steel	380 Plastic	381	382	383	384	Storage Plant	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)		
1	1930	1	19	24	15	11	22	19	0	16	0	27	22	37	21	14	1
2	1931	1	17	24	15	11	20	18	0	15	0	26	22	36	21	13	2
3	1932	1	16	23	15	11	19	18	0	15	0	25	22	34	21	12	3
4	1933	1	17	22	15	11	19	17	0	14	0	25	21	34	19	12	4
5	1934	1	19	22	15	11	20	18	0	15	0	25	21	34	19	14	5
6	1935	1	18	22	15	11	21	19	0	15	0	25	20	34	20	14	6
7	1936	1	19	22	15	12	21	18	0	16	0	25	20	34	20	14	7
8	1937	1	20	24	17	13	23	20	0	17	0	26	22	35	22	15	8
9	1938	1	20	24	17	13	23	20	0	17	0	26	22	37	23	16	9
10	1939	1	20	24	17	13	23	20	0	17	0	26	22	40	22	16	10
11	1940	1	20	26	17	13	24	20	0	18	0	26	22	48	22	16	11
12	1941	1	22	26	18	13	25	20	0	18	0	26	22	48	23	17	12
13	1942	1	23	26	19	15	28	21	0	19	0	26	22	48	23	18	13
14	1943	1	23	26	19	15	29	21	0	19	0	26	22	48	23	19	14
15	1944	1	24	26	19	15	29	21	0	19	0	26	23	48	23	19	15
16	1945	1	24	26	19	16	29	22	0	19	0	26	23	48	24	19	16
17	1946	1	27	29	21	20	34	24	0	22	0	33	25	53	25	21	17
18	1947	1	32	34	24	23	37	27	0	25	0	41	29	63	28	26	18
19	1948	1	36	37	26	26	39	31	0	28	0	42	32	64	31	30	19
20	1949	1	37	39	28	26	40	33	0	30	0	45	34	68	34	30	20
21	1950	1	39	40	30	27	42	35	0	32	0	48	35	69	34	31	21
22	1951	1	42	44	31	29	45	37	0	33	0	55	38	74	36	34	22
23	1952	1	44	45	33	31	46	39	0	35	0	55	39	74	38	36	23
24	1953	1	44	46	34	33	49	41	0	37	45	55	40	74	40	38	24
25	1954	1	46	47	36	34	49	44	0	39	46	55	43	74	42	40	25
26	1955	1	48	49	37	36	51	46	0	41	47	56	44	74	44	44	26
27	1956	1	52	54	39	39	55	48	0	45	49	63	50	74	49	47	27
28	1957	1	55	57	41	41	59	52	0	48	52	66	55	76	53	50	28
29	1958	1	57	60	42	42	62	54	0	50	54	71	57	80	55	51	29
30	1959	1	58	62	45	45	64	57	0	53	56	71	60	80	58	52	30
31	1960	1	59	64	46	46	65	58	0	54	57	71	62	80	60	54	31
32	1961	1	58	64	49	51	67	61	0	58	59	73	63	81	61	56	32
33	1962	1	59	66	51	53	67	63	71	60	61	79	64	82	62	56	33
34	1963	1	60	67	52	55	68	64	72	60	62	79	65	82	63	58	34
35	1964	1	61	68	54	57	70	66	73	63	64	79	65	82	64	60	35
36	1965	1	64	68	57	60	71	68	74	64	65	79	66	80	64	61	36
37	1966	1	65	70	58	62	73	69	76	66	68	86	67	80	66	63	37
38	1967	1	67	72	62	66	76	73	79	69	71	88	69	80	68	64	38
39	1968	1	71	73	64	70	80	75	81	72	74	88	71	81	70	66	39
40	1969	1	75	76	69	74	84	80	84	77	78	89	75	83	74	72	40
41	1970	1	79	83	78	81	88	84	87	84	84	94	83	92	82	79	41
42	1971	1	87	90	88	87	93	90	92	90	89	100	88	98	88	89	42
43	1972	1	93	97	95	94	95	96	96	95	95	100	96	100	96	96	43
44	1973	1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	44
45	1974	1	118	116	109	109	117	117	112	113	111	111	120	106	120	109	45
46	1975	1	133	135	122	123	141	133	130	129	127	128	135	125	134	129	46
47	1976	1	138	148	131	130	153	142	137	138	134	131	145	132	144	145	47
48	1977	1	148	158	142	141	164	155	147	149	144	136	157	136	156	157	48
49	1978	1	161	173	151	151	178	171	158	161	155	139	175	144	174	172	49
50	1979	1	177	187	160	164	197	187	174	176	170	143	191	171	189	188	50
51	1980	1	194	203	170	178	222	200	193	192	184	149	201	201	199	206	51
52	1981	1	204	224	185	186	246	219	209	208	197	158	223	210	220	230	52
53	1982	1	207	246	206	203	263	239	224	226	218	158	246	217	243	245	53
54	1983	1	215	246	218	209	269	246	232	232	227	146	254	221	252	256	54
55	1984	1	224	248	220	212	273	251	236	237	230	147	260	230	258	259	55
56	1985	1	226	243	214	211	276	245	235	234	226	158	249	237	247	259	56
57	1986	1	231	243	215	218	280	233	238	233	230	166	232	236	232	261	57
58	1987	1	232	250	216	226	286	241	245	241	236	165	240	243	239	264	58
59	1988	1	233	267	215	219	295	258	256	246	240	170	263	247	260	263	59
60	1989	1	232	278	214	213	281	270	273	251	247	177	280	253	277	266	60
61	1990	1	237	276	220	228	298	276	281	262	256	185	282	269	279	273	61
62	1991	1	233	279	225	242	320	283	288	272	265	190	287	283	283	280	62
63	1992	1	238	288	232	249	316	286	290	278	269	192	289	294	286	283	63
64	1993	1	250	298	236	260	324	294	297	285	277	191	296	297	293	290	64
65	1994	1	261	310	239	257	331	315	302	293	281	189	325	303	320	297	65
66	1995	1	265	313	247	246	333	317	305	292	279	190	329	302	324	297	66
67	1996	1	276	323	254	250	336	319	313	296	287	192	331	303	327	307	67
68	1997	1	282	332	257	251	351	327	319	301	292	196	341	303	337	311	68
69	1998	1	286	335	265	253	380	330	324	305	296	196	344	307	340	315	69
70	1999	1	286	342	275	262	385	340	330	313	304	191	355	306	351	321	70
71	2000	1	295	352	285	267	389	356	336	323	312	202	376	305	371	326	71
72	2001	1	303	357	299	280	391	361	344	330	322	209	381	311	377	336	72
73	2002	1	311	364	309	290	396	367	351	338	333	202	387	319	384	344	73
74	2003	1	318	364	317	293	402	382	356	346	339	193	406	317	401	349	74
75	2004	1	342	420	326	298	414	461	367	379	347	183	510	323	497	383	75
76	2005	1	352	476	335	303	435	559	386	422	362	185	632	339	610	400	76
77	2006	1	362	494	342	303	455	593	404	439	372	193	689	356	661	409	77
78	2007	1	377	495	350	310	467	558	427	432	387	218	634	377	613	379	78
79	2008	1	399	535	365	335	479	623	441	465	403	246	789	392	755	360	79
80	2009	1	387	550	372	351	501	637	473	484	430	257	701	400	678	372	80
81	2010	1	396	531	402	374	501	637	458	494	436	255	741	414	716	384	81
82	2011	1	407	614	413	378	511	706	469	524	449	254	825	430	794	390	82
83	2012	1	419	671	423	405	533	809	492	576	468	266	935	438	894	405	83
84	2013	1	429	644	427	405	550	793	495	574	471	272	909	443	872	412	84
85	2014	1	437	664	433	426	558	788	496	582	480	342	908	454	872	418	85
86	2015	1	443	661	445	429	566	775	502	580	486	372	871	469	838	425	86
87	2016	1	442	650	449	442	572	736	509	572	495	388	838	481	810	424	87
88	2017	1	460	680	473	449	577	785	513	594	503	442	913	487	879	427	88
89	2018	1	481	712	481	468	578	828	520	618	514	476	991	533	951	438	89
90	2019	1	492	745	485	470	605	876	536	642	523	511	997	565	956	452	90
91	2020	1	498	773	506	500	617	952	553	684	543	490	1091	559	1043	466	91
92	2021	1	496	767	506	500	617	945	555	684	543	490	1091	559	1043	467	92

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 360.0 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2015	$ 1,702,773	1	1.00	$ 1,702,773	1
2	2016	69,900	1	1.00	69,900	2
3	2017	0	1	1.00	0	
4	2018	0	1	1.00	0	
5	2019	0	1	1.00	0	
6	2020	0	1	1.00	0	
7	2021	0	1	1.00	0	
8	Total	$ 1,772,673			$ 1,772,673	3

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 361 - Structures & Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 14,907,302	452	1.03	$ 15,354,521	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 14,907,302			$ 15,354,521	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 362 - Gas Holders

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 32,984,650	452	1.03	$ 33,974,190	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 32,984,650			$ 33,974,190	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.20 - Vaporizing Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 9,108,497	452	1.03	$ 9,381,752	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 9,108,497			$ 9,381,752	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.30 - Compressor Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 7,785,900	452	1.03	$ 8,019,477	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 7,785,900			$ 8,019,477	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.50 - Other Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 8,466,104	452	1.03	$ 8,720,087	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 8,466,104			$ 8,720,087	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 374.1 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	9,746	1	1.00	9,746	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	0	1	1.00	0	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	254	1	1.00	254	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	0	1	1.00	0	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	0	1	1.00	0	55
56	1985	331,290	1	1.00	331,290	56
57	1986	0	1	1.00	0	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	0	1	1.00	0	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	2,500	1	1.00	2,500	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	0	1	1.00	0	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	0	1	1.00	0	78
79	2008	0	1	1.00	0	79
80	2009	12,113	1	1.00	12,113	80
81	2010	10,139	1	1.00	10,139	81
82	2011	22,262	1	1.00	22,262	82
83	2012	17,362	1	1.00	17,362	83
84	2013	0	1	1.00	0	84
85	2014	0	1	1.00	0	85
86	2015	0	1	1.00	0	86
87	2016	0	1	1.00	0	87
88	2017	0	1	1.00	0	88
89	2018	0	1	1.00	0	89
90	2019	0	1	1.00	0	90
91	2020	0	1	1.00	0	
92	2021	325,000	1	1.00	325,000	
93	Total	$ 730,666			$ 730,666	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 374.2 - Rights of Way

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	111	1	1.00	111	11
12	1941	14	1	1.00	14	12
13	1942	0	1	1.00	0	13
14	1943	160	1	1.00	160	14
15	1944	0	1	1.00	0	15
16	1945	2	1	1.00	2	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	952	1	1.00	952	19
20	1949	139	1	1.00	139	20
21	1950	101	1	1.00	101	21
22	1951	667	1	1.00	667	22
23	1952	183	1	1.00	183	23
24	1953	124	1	1.00	124	24
25	1954	104	1	1.00	104	25
26	1955	121	1	1.00	121	26
27	1956	116	1	1.00	116	27
28	1957	138	1	1.00	138	28
29	1958	146	1	1.00	146	29
30	1959	75	1	1.00	75	30
31	1960	164	1	1.00	164	31
32	1961	178	1	1.00	178	32
33	1962	896	1	1.00	896	33
34	1963	2,944	1	1.00	2,944	34
35	1964	2,322	1	1.00	2,322	35
36	1965	849	1	1.00	849	36
37	1966	1,145	1	1.00	1,145	37
38	1967	664	1	1.00	664	38
39	1968	896	1	1.00	896	39
40	1969	4,059	1	1.00	4,059	40
41	1970	20,184	1	1.00	20,184	41
42	1971	18,376	1	1.00	18,376	42
43	1972	11,259	1	1.00	11,259	43
44	1973	16,606	1	1.00	16,606	44
45	1974	29,634	1	1.00	29,634	45
46	1975	8,365	1	1.00	8,365	46
47	1976	15,469	1	1.00	15,469	47
48	1977	13,306	1	1.00	13,306	48
49	1978	12,233	1	1.00	12,233	49
50	1979	5,998	1	1.00	5,998	50
51	1980	3,835	1	1.00	3,835	51
52	1981	69,501	1	1.00	69,501	52
53	1982	21,828	1	1.00	21,828	53
54	1983	13,467	1	1.00	13,467	54
55	1984	5,304	1	1.00	5,304	55
56	1985	56,285	1	1.00	56,285	56
57	1986	20,552	1	1.00	20,552	57
58	1987	8,770	1	1.00	8,770	58
59	1988	3,206	1	1.00	3,206	59
60	1989	3,127	1	1.00	3,127	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	2,250	1	1.00	2,250	64
65	1994	6,025	1	1.00	6,025	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	44,591	1	1.00	44,591	68
69	1998	1,768	1	1.00	1,768	69
70	1999	0	1	1.00	0	70
71	2000	39,620	1	1.00	39,620	71
72	2001	15,864	1	1.00	15,864	72
73	2002	36,423	1	1.00	36,423	73
74	2003	12,148	1	1.00	12,148	74
75	2004	104,102	1	1.00	104,102	75
76	2005	78,132	1	1.00	78,132	76
77	2006	284,871	1	1.00	284,871	77
78	2007	745,071	1	1.00	745,071	78
79	2008	196,021	1	1.00	196,021	79
80	2009	14,416	1	1.00	14,416	80
81	2010	155,388	1	1.00	155,388	81
82	2011	18,196	1	1.00	18,196	82
83	2012	37,200	1	1.00	37,200	83
84	2013	31,066	1	1.00	31,066	84
85	2014	192,215	1	1.00	192,215	85
86	2015	167,804	1	1.00	167,804	86
87	2016	148,089	1	1.00	148,089	87
88	2017	526,016	1	1.00	526,016	88
89	2018	80,584	1	1.00	80,584	89
90	2019	52,421	1	1.00	52,421	90
91	2020	296,599	1	1.00	296,599	91
92	2021	39,245	1	1.00	39,245	92
93	Total	$ 3,700,700			$ 3,700,700	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 375 - Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	197	20	24.80	4,886	8
9	1938	94	20	24.80	2,331	9
10	1939	1,659	20	24.80	41,143	10
11	1940	373	20	24.80	9,250	11
12	1941	2,797	22	22.55	63,072	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	5,437	24	20.67	112,383	16
17	1946	2,032	27	18.37	37,328	17
18	1947	895	32	15.50	13,873	18
19	1948	4,989	36	13.78	68,748	19
20	1949	6,441	37	13.41	86,374	20
21	1950	8,724	39	12.72	110,969	21
22	1951	21,212	42	11.81	250,514	22
23	1952	1,568	44	11.27	17,671	23
24	1953	4,318	44	11.27	48,664	24
25	1954	2,625	46	10.78	28,298	25
26	1955	959	48	10.33	9,906	26
27	1956	4,816	52	9.54	45,945	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	394	64	7.75	3,054	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	23,733	100	4.96	117,716	44
45	1974	8,122	118	4.20	34,112	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	437	148	3.35	1,464	48
49	1978	674	161	3.08	2,076	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	0	232	2.14	0	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	2,068	237	2.09	4,323	61
62	1991	2,033	233	2.13	4,330	62
63	1992	0	238	2.08	0	63
64	1993	0	250	1.98	0	64
65	1994	0	261	1.90	0	65
66	1995	3,960	265	1.87	7,405	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	0	342	1.45	0	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	0	377	1.32	0	78
79	2008	0	399	1.24	0	79
80	2009	0	387	1.28	0	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	0	419	1.18	0	83
84	2013	0	429	1.16	0	84
85	2014	0	437	1.14	0	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	0	460	1.08	0	88
89	2018	0	481	1.03	0	89
90	2019	0	492	1.01	0	90
91	2020	0	498	1.00	0	91
92	2021	0	496	1.00	0	92
93	Total	$ 110,557			$ 1,125,835	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 376 - Mains - Steel

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 60,790	19	49.74	$ 3,023,695	1
2	1931	2,440	18	52.50	128,100	2
3	1932	0	18	52.50	0	3
4	1933	0	17	55.59	0	4
5	1934	2,208	18	52.50	115,920	5
6	1935	7,454	19	49.74	370,762	6
7	1936	2	18	52.50	105	7
8	1937	13,831	20	47.25	653,515	8
9	1938	19,657	20	47.25	928,793	9
10	1939	0	20	47.25	0	10
11	1940	91	20	47.25	4,300	11
12	1941	26,161	20	47.25	1,236,107	12
13	1942	15,792	21	45.00	710,640	13
14	1943	19,170	21	45.00	862,650	14
15	1944	11,552	21	45.00	519,840	15
16	1945	43,932	22	42.95	1,886,879	16
17	1946	753	24	39.38	29,653	17
18	1947	175,044	27	35.00	6,126,540	18
19	1948	569,433	31	30.48	17,356,318	19
20	1949	447,076	33	28.64	12,804,257	20
21	1950	564,410	35	27.00	15,239,070	21
22	1951	579,961	37	25.54	14,812,204	22
23	1952	544,284	39	24.23	13,188,001	23
24	1953	305,313	41	23.05	7,037,465	24
25	1954	504,939	44	21.48	10,846,090	25
26	1955	2,341,031	46	20.54	48,084,777	26
27	1956	869,398	48	19.69	17,118,447	27
28	1957	679,755	52	18.17	12,351,148	28
29	1958	1,312,030	54	17.50	22,960,525	29
30	1959	1,318,697	57	16.58	21,863,996	30
31	1960	1,353,297	58	16.29	22,045,208	31
32	1961	1,232,365	61	15.49	19,089,334	32
33	1962	1,302,643	63	15.00	19,539,645	33
34	1963	802,921	64	14.77	11,859,143	34
35	1964	1,276,881	66	14.32	18,284,936	35
36	1965	1,564,991	68	13.90	21,753,375	36
37	1966	1,321,980	69	13.70	18,111,126	37
38	1967	839,771	73	12.95	10,875,034	38
39	1968	581,698	75	12.60	7,329,395	39
40	1969	1,304,743	80	11.81	15,409,015	40
41	1970	750,606	84	11.25	8,444,318	41
42	1971	1,718,631	90	10.50	18,045,626	42
43	1972	2,889,541	96	9.84	28,433,083	43
44	1973	2,346,503	100	9.45	22,174,453	44
45	1974	2,461,868	117	8.08	19,891,893	45
46	1975	1,270,941	133	7.11	9,036,391	46
47	1976	556,530	142	6.65	3,700,925	47
48	1977	1,107,144	155	6.10	6,753,578	48
49	1978	1,081,715	171	5.53	5,981,884	49
50	1979	912,185	187	5.05	4,606,534	50
51	1980	1,220,149	200	4.73	5,771,305	51
52	1981	2,805,377	219	4.32	12,119,229	52
53	1982	1,441,775	239	3.95	5,695,011	53
54	1983	2,042,088	246	3.84	7,841,618	54
55	1984	2,164,416	251	3.76	8,138,204	55
56	1985	1,664,787	245	3.86	6,426,078	56
57	1986	2,714,878	233	4.06	11,022,405	57
58	1987	2,426,814	241	3.92	9,513,111	58
59	1988	1,947,092	258	3.66	7,126,357	59
60	1989	1,657,001	270	3.50	5,799,504	60
61	1990	1,664,303	276	3.42	5,691,916	61
62	1991	3,830,829	283	3.34	12,794,969	62
63	1992	4,639,431	286	3.30	15,310,122	63
64	1993	4,846,871	294	3.21	15,558,456	64
65	1994	5,991,105	315	3.00	17,973,315	65
66	1995	6,955,972	317	2.98	20,728,797	66
67	1996	6,373,164	319	2.96	18,864,565	67
68	1997	6,550,358	327	2.89	18,930,535	68
69	1998	6,704,322	330	2.86	19,174,361	69
70	1999	6,180,879	340	2.78	17,182,844	70
71	2000	8,641,819	356	2.65	22,900,820	71
72	2001	11,978,277	361	2.62	31,383,086	72
73	2002	13,532,092	367	2.57	34,777,476	73
74	2003	12,852,956	382	2.47	31,746,801	74
75	2004	21,459,313	461	2.05	43,991,592	75
76	2005	27,565,598	559	1.69	46,585,861	76
77	2006	15,694,051	593	1.59	24,953,541	77
78	2007	29,288,820	558	1.70	49,790,994	78
79	2008	13,490,642	623	1.52	20,505,776	79
80	2009	13,406,277	637	1.48	19,841,290	80
81	2010	18,278,235	637	1.48	27,051,788	81
82	2011	51,038,948	706	1.34	68,392,190	82
83	2012	42,829,529	809	1.17	50,110,549	83
84	2013	21,846,906	793	1.19	25,997,818	84
85	2014	41,299,977	788	1.20	49,559,972	85
86	2015	45,123,269	775	1.22	55,050,388	86
87	2016	27,927,345	736	1.28	35,747,002	87
88	2017	69,620,733	785	1.20	83,544,880	88
89	2018	110,845,514	828	1.14	126,363,886	89
90	2019	96,497,350	876	1.08	104,217,138	90
91	2020	28,630,960	952	0.99	28,344,650	91
92	2021	9,279,479	945	1.00	9,279,479	92
93	Total	$ 842,061,859			$ 1,753,424,372	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 376 - Mains - Plastic

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	0	0.00	$ 0	1
2	1931	0	0	0.00	0	2
3	1932	0	0	0.00	0	3
4	1933	0	0	0.00	0	4
5	1934	0	0	0.00	0	5
6	1935	0	0	0.00	0	6
7	1936	0	0	0.00	0	7
8	1937	0	0	0.00	0	8
9	1938	0	0	0.00	0	9
10	1939	0	0	0.00	0	10
11	1940	0	0	0.00	0	11
12	1941	188	0	0.00	0	12
13	1942	0	0	0.00	0	13
14	1943	0	0	0.00	0	14
15	1944	0	0	0.00	0	15
16	1945	0	0	0.00	0	16
17	1946	8,678	0	0.00	0	17
18	1947	0	0	0.00	0	18
19	1948	0	0	0.00	0	19
20	1949	0	0	0.00	0	20
21	1950	0	0	0.00	0	21
22	1951	9	0	0.00	0	22
23	1952	0	0	0.00	0	23
24	1953	64	0	0.00	0	24
25	1954	0	0	0.00	0	25
26	1955	265	0	0.00	0	26
27	1956	4,564	0	0.00	0	27
28	1957	7,776	0	0.00	0	28
29	1958	13,487	0	0.00	0	29
30	1959	9,006	0	0.00	0	30
31	1960	21,408	0	0.00	0	31
32	1961	80,521	0	0.00	0	32
33	1962	272,925	71	7.82	2,134,274	33
34	1963	284,437	72	7.71	2,193,009	34
35	1964	336,254	73	7.60	2,555,530	35
36	1965	206,628	74	7.50	1,549,710	36
37	1966	725,101	76	7.30	5,293,237	37
38	1967	838,769	79	7.03	5,896,546	38
39	1968	365,671	81	6.85	2,504,846	39
40	1969	767,977	84	6.61	5,076,328	40
41	1970	480,020	87	6.38	3,062,528	41
42	1971	1,080,297	92	6.03	6,514,191	42
43	1972	1,615,531	96	5.78	9,337,769	43
44	1973	922,673	100	5.55	5,120,835	44
45	1974	1,185,072	112	4.96	5,877,957	45
46	1975	750,403	130	4.27	3,204,221	46
47	1976	301,334	137	4.05	1,220,403	47
48	1977	406,715	147	3.78	1,537,383	48
49	1978	168,805	158	3.51	592,506	49
50	1979	522,401	174	3.19	1,666,459	50
51	1980	858,383	193	2.88	2,472,143	51
52	1981	1,348,657	209	2.66	3,587,428	52
53	1982	1,122,995	224	2.48	2,785,028	53
54	1983	3,310,833	232	2.39	7,912,891	54
55	1984	5,365,101	236	2.35	12,607,987	55
56	1985	4,076,960	235	2.36	9,621,626	56
57	1986	14,940,308	238	2.33	34,810,918	57
58	1987	15,839,807	245	2.27	35,956,362	58
59	1988	18,588,724	256	2.17	40,337,531	59
60	1989	14,032,416	273	2.03	28,485,804	60
61	1990	19,270,550	281	1.98	38,155,689	61
62	1991	6,137,262	288	1.93	11,844,916	62
63	1992	7,848,583	290	1.91	14,990,794	63
64	1993	21,381,988	297	1.87	39,984,318	64
65	1994	25,175,604	302	1.84	46,323,111	65
66	1995	31,049,844	305	1.82	56,510,716	66
67	1996	30,932,914	313	1.77	54,751,258	67
68	1997	27,072,205	319	1.74	47,105,637	68
69	1998	31,724,635	324	1.71	54,249,126	69
70	1999	39,867,447	330	1.68	66,977,311	70
71	2000	41,989,261	336	1.65	69,282,281	71
72	2001	44,148,593	344	1.61	71,079,235	72
73	2002	46,770,987	351	1.58	73,898,159	73
74	2003	40,095,624	356	1.56	62,549,173	74
75	2004	47,658,100	367	1.51	71,963,731	75
76	2005	35,217,667	386	1.44	50,713,440	76
77	2006	40,967,445	404	1.37	56,125,400	77
78	2007	38,588,945	427	1.30	50,165,629	78
79	2008	34,186,400	441	1.26	43,074,864	79
80	2009	24,714,564	473	1.17	28,916,040	80
81	2010	42,018,048	458	1.21	50,841,838	81
82	2011	66,995,222	469	1.18	79,054,362	82
83	2012	41,745,705	492	1.13	47,172,647	83
84	2013	65,644,101	495	1.12	73,521,393	84
85	2014	83,238,685	496	1.12	93,227,327	85
86	2015	90,840,644	502	1.11	100,833,115	86
87	2016	79,938,872	509	1.09	87,133,370	87
88	2017	92,092,861	513	1.08	99,460,290	88
89	2018	115,009,610	520	1.07	123,060,283	89
90	2019	145,973,303	536	1.04	151,812,235	90
91	2020	116,802,722	553	1.00	116,802,722	
92	2021	33,467,076	555	1.00	33,467,076	
93	Total	$ 1,699,426,630			$ 2,308,962,936	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 378 - Measuring and Regulating Equipment - Gen.

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	624	54	14.20	8,861	27
28	1957	0	57	13.46	0	28
29	1958	1,705	60	12.78	21,790	29
30	1959	8,044	62	12.37	99,504	30
31	1960	415	64	11.98	4,972	31
32	1961	1,226	64	11.98	14,687	32
33	1962	297	66	11.62	3,451	33
34	1963	329	67	11.45	3,767	34
35	1964	3,436	68	11.28	38,758	35
36	1965	7,891	68	11.28	89,010	36
37	1966	14,447	70	10.96	158,339	37
38	1967	861	72	10.65	9,170	38
39	1968	5,822	73	10.51	61,189	39
40	1969	7,948	76	10.09	80,195	40
41	1970	6,059	83	9.24	55,985	41
42	1971	20,140	90	8.52	171,593	42
43	1972	96,771	97	7.91	765,459	43
44	1973	2,273	100	7.67	17,434	44
45	1974	19,880	116	6.61	131,407	45
46	1975	8,724	135	5.68	49,552	46
47	1976	0	148	5.18	0	47
48	1977	1,092	158	4.85	5,296	48
49	1978	41,852	173	4.43	185,404	49
50	1979	19,178	187	4.10	78,630	50
51	1980	38,905	203	3.78	147,061	51
52	1981	7,960	224	3.42	27,223	52
53	1982	57,805	246	3.12	180,352	53
54	1983	39,211	246	3.12	122,338	54
55	1984	34,975	248	3.09	108,073	55
56	1985	6,979	243	3.16	22,054	56
57	1986	96,722	243	3.16	305,642	57
58	1987	61,078	250	3.07	187,509	58
59	1988	150,704	267	2.87	432,520	59
60	1989	33,037	278	2.76	91,182	60
61	1990	122,292	276	2.78	339,972	61
62	1991	76,255	279	2.75	209,701	62
63	1992	214,899	288	2.66	571,631	63
64	1993	309,542	298	2.57	795,523	64
65	1994	597,474	310	2.47	1,475,761	65
66	1995	592,229	313	2.45	1,450,961	66
67	1996	915,045	323	2.37	2,168,657	67
68	1997	408,692	332	2.31	944,079	68
69	1998	1,729,601	335	2.29	3,960,786	69
70	1999	3,594,142	342	2.24	8,050,878	70
71	2000	794,905	352	2.18	1,732,893	71
72	2001	1,340,915	357	2.15	2,882,967	72
73	2002	2,737,341	364	2.11	5,775,790	73
74	2003	1,301,783	364	2.11	2,746,762	74
75	2004	2,094,735	420	1.83	3,833,365	75
76	2005	1,792,756	476	1.61	2,886,337	76
77	2006	3,435,008	494	1.55	5,324,262	77
78	2007	5,357,661	495	1.55	8,304,375	78
79	2008	2,561,898	535	1.43	3,663,514	79
80	2009	4,158,447	550	1.40	5,821,826	80
81	2010	9,384,854	531	1.45	13,608,038	81
82	2011	5,066,962	614	1.25	6,333,703	82
83	2012	4,025,610	671	1.14	4,589,195	83
84	2013	2,936,149	644	1.19	3,494,017	84
85	2014	3,205,669	664	1.16	3,718,576	85
86	2015	11,748,221	661	1.16	13,627,936	86
87	2016	2,345,164	650	1.18	2,767,294	87
88	2017	3,448,127	680	1.13	3,896,384	88
89	2018	5,970,707	712	1.08	6,448,364	89
90	2019	5,868,941	745	1.03	6,045,009	90
91	2020	5,712,392	773	0.99	5,655,268	
92	2021	143,753	767	1.00	143,753	
93	Total	$ 94,788,559			$ 136,945,984	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 380 - Services - Steel

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 6,562	16	42.72	$ 280,329	1
2	1931	0	15	45.57	0	2
3	1932	85	15	45.57	3,873	3
4	1933	0	14	48.82	0	4
5	1934	3	15	45.57	137	5
6	1935	0	15	45.57	0	6
7	1936	0	16	42.72	0	7
8	1937	0	17	40.21	0	8
9	1938	9	17	40.21	362	9
10	1939	144	17	40.21	5,790	10
11	1940	41	18	37.97	1,557	11
12	1941	3,990	18	37.97	151,500	12
13	1942	10,087	19	35.97	362,829	13
14	1943	679	19	35.97	24,424	14
15	1944	14,494	19	35.97	521,349	15
16	1945	29,113	19	35.97	1,047,195	16
17	1946	61,409	22	31.07	1,907,978	17
18	1947	116,834	25	27.34	3,194,242	18
19	1948	206,176	28	24.41	5,032,756	19
20	1949	29,730	30	22.78	677,249	20
21	1950	250,788	32	21.36	5,356,832	21
22	1951	353,147	33	20.71	7,313,674	22
23	1952	427,303	35	19.53	8,345,228	23
24	1953	292,881	37	18.47	5,409,512	24
25	1954	290,037	39	17.53	5,084,349	25
26	1955	880,107	41	16.67	14,671,384	26
27	1956	502,554	45	15.19	7,633,795	27
28	1957	530,910	48	14.24	7,560,158	28
29	1958	481,948	50	13.67	6,588,229	29
30	1959	181,195	53	12.90	2,337,416	30
31	1960	7,911	54	12.66	100,153	31
32	1961	22,959	58	11.78	270,457	32
33	1962	23,681	60	11.39	269,727	33
34	1963	16,395	60	11.39	186,739	34
35	1964	7,117	63	10.85	77,219	35
36	1965	32,574	64	10.68	347,890	36
37	1966	7,342	66	10.36	76,063	37
38	1967	1,485	69	9.91	14,716	38
39	1968	5,279	72	9.49	50,098	39
40	1969	1,473	77	8.88	13,080	40
41	1970	8,413	84	8.14	68,482	41
42	1971	5,325	90	7.59	40,417	42
43	1972	29,853	95	7.19	214,643	43
44	1973	17,710	100	6.84	121,136	44
45	1974	50,422	113	6.05	305,053	45
46	1975	5,293	129	5.30	28,053	46
47	1976	3,508	138	4.95	17,365	47
48	1977	9,257	149	4.59	42,490	48
49	1978	2,792	161	4.25	11,866	49
50	1979	87,368	176	3.88	338,988	50
51	1980	193,831	192	3.56	690,038	51
52	1981	211,163	208	3.29	694,726	52
53	1982	15,581	226	3.02	47,055	53
54	1983	345,963	232	2.95	1,020,591	54
55	1984	182,779	237	2.88	526,404	55
56	1985	17,909	234	2.92	52,294	56
57	1986	137,218	233	2.93	402,049	57
58	1987	9,176	241	2.84	26,060	58
59	1988	10,788	246	2.78	29,991	59
60	1989	1,000	251	2.72	2,720	60
61	1990	80,559	262	2.61	210,259	61
62	1991	78,810	272	2.51	197,813	62
63	1992	71,446	278	2.46	175,757	63
64	1993	1,015,238	285	2.40	2,436,571	64
65	1994	371,449	293	2.33	865,476	65
66	1995	603,621	292	2.34	1,412,473	66
67	1996	176,682	296	2.31	408,135	67
68	1997	242,387	301	2.27	550,218	68
69	1998	415,551	305	2.24	930,834	69
70	1999	218,029	313	2.18	475,303	70
71	2000	170,108	323	2.12	360,629	71
72	2001	200,670	330	2.07	415,387	72
73	2002	274,328	338	2.02	554,143	73
74	2003	238,827	346	1.98	472,877	74
75	2004	379,330	379	1.80	682,794	75
76	2005	163,708	422	1.62	265,207	76
77	2006	78,510	439	1.56	122,476	77
78	2007	307,884	432	1.58	486,457	78
79	2008	205,023	465	1.47	301,384	79
80	2009	271,850	484	1.41	383,309	80
81	2010	121,258	494	1.39	168,549	81
82	2011	149,734	524	1.31	196,152	82
83	2012	140,176	576	1.19	166,809	83
84	2013	221,869	574	1.19	264,024	84
85	2014	264,425	582	1.18	312,022	85
86	2015	116,108	580	1.18	137,007	86
87	2016	524,796	572	1.20	629,755	87
88	2017	426,453	594	1.15	490,421	88
89	2018	1,395,080	618	1.11	1,548,539	89
90	2019	2,857,914	642	1.07	3,057,968	90
91	2020	807,504	684	1.00	807,504	
92	2021	2,524,337	684	1.00	2,524,337	
94	Total	$ 21,255,455			$ 111,609,299	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 380 - Services - Plastic

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 1	0	0.00	$ 0	1
2	1931	0	0	0.00	0	2
3	1932	0	0	0.00	0	3
4	1933	0	0	0.00	0	4
5	1934	0	0	0.00	0	5
6	1935	92	0	0.00	0	6
7	1936	2	0	0.00	0	7
8	1937	77	0	0.00	0	8
9	1938	57	0	0.00	0	9
10	1939	1	0	0.00	0	10
11	1940	343	0	0.00	0	11
12	1941	0	0	0.00	0	12
13	1942	11	0	0.00	0	13
14	1943	0	0	0.00	0	14
15	1944	1	0	0.00	0	15
16	1945	0	0	0.00	0	16
17	1946	0	0	0.00	0	17
18	1947	5	0	0.00	0	18
19	1948	127	0	0.00	0	19
20	1949	12,199	0	0.00	0	20
21	1950	0	0	0.00	0	21
22	1951	329	0	0.00	0	22
23	1952	0	0	0.00	0	23
24	1953	7,411	45	12.07	89,451	24
25	1954	17,627	46	11.80	207,999	25
26	1955	85,609	47	11.55	988,784	26
27	1956	59,429	49	11.08	658,473	27
28	1957	133,978	52	10.44	1,398,730	28
29	1958	168,970	54	10.06	1,699,838	29
30	1959	418,601	56	9.70	4,060,430	30
31	1960	159,226	57	9.53	1,517,424	31
32	1961	195,068	59	9.20	1,794,626	32
33	1962	360,558	61	8.90	3,208,966	33
34	1963	377,085	62	8.76	3,303,265	34
35	1964	321,234	64	8.48	2,724,064	35
36	1965	352,651	65	8.35	2,944,636	36
37	1966	286,535	68	7.99	2,289,415	37
38	1967	322,025	71	7.65	2,463,491	38
39	1968	203,994	74	7.34	1,497,316	39
40	1969	3,374	78	6.96	23,483	40
41	1970	55,905	84	6.46	361,146	41
42	1971	104,308	89	6.10	636,279	42
43	1972	219,860	95	5.72	1,257,599	43
44	1973	102,529	100	5.43	556,732	44
45	1974	598,493	111	4.89	2,926,631	45
46	1975	140,144	127	4.28	599,816	46
47	1976	140,811	134	4.05	570,285	47
48	1977	78,938	144	3.77	297,596	48
49	1978	5,356	155	3.50	18,746	49
50	1979	723,980	170	3.19	2,309,496	50
51	1980	1,037,950	184	2.95	3,061,953	51
52	1981	1,389,555	197	2.76	3,835,172	52
53	1982	761,575	218	2.49	1,896,322	53
54	1983	12,967,957	227	2.39	30,993,417	54
55	1984	13,729,442	230	2.36	32,401,483	55
56	1985	6,940,868	226	2.40	16,658,083	56
57	1986	14,442,989	230	2.36	34,085,454	57
58	1987	13,921,276	236	2.30	32,018,935	58
59	1988	12,989,904	240	2.26	29,357,183	59
60	1989	9,482,084	247	2.20	20,860,585	60
61	1990	13,702,474	256	2.12	29,049,245	61
62	1991	5,758,922	265	2.05	11,805,790	62
63	1992	9,439,102	269	2.02	19,066,986	63
64	1993	12,480,069	277	1.96	24,460,935	64
65	1994	19,430,182	281	1.93	37,500,251	65
66	1995	21,751,533	279	1.95	42,415,489	66
67	1996	26,695,368	287	1.89	50,454,246	67
68	1997	23,612,671	292	1.86	43,919,568	68
69	1998	24,642,387	296	1.83	45,095,568	69
70	1999	31,146,253	304	1.79	55,751,793	70
71	2000	28,417,733	312	1.74	49,446,855	71
72	2001	29,574,255	322	1.69	49,980,491	72
73	2002	30,438,092	333	1.63	49,614,090	73
74	2003	29,679,440	339	1.60	47,487,104	74
75	2004	29,716,905	347	1.56	46,358,372	75
76	2005	27,522,023	362	1.50	41,283,035	76
77	2006	36,179,123	372	1.46	52,821,520	77
78	2007	29,338,380	387	1.40	41,073,732	78
79	2008	28,368,382	403	1.35	38,297,316	79
80	2009	20,710,119	430	1.26	26,094,750	80
81	2010	25,872,512	436	1.25	32,340,640	81
82	2011	20,278,937	449	1.21	24,537,514	82
83	2012	25,033,641	468	1.16	29,039,024	83
84	2013	26,759,857	471	1.15	30,773,836	84
85	2014	30,739,703	480	1.13	34,735,864	85
86	2015	38,847,834	486	1.12	43,509,574	86
87	2016	49,790,679	495	1.10	54,769,747	87
88	2017	71,346,393	503	1.08	77,054,104	88
89	2018	86,385,378	514	1.06	91,568,501	89
90	2019	99,226,902	523	1.04	103,195,978	90
91	2020	101,291,137	543	1.00	101,291,137	
92	2021	51,628,915	543	1.00	51,628,915	
93	Total	$ 1,199,125,845			$ 1,721,995,274	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 381 - Meters, Regulators, and Installations

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 36,644	27	18.15	$ 665,089	1
2	1931	61	26	18.85	1,150	2
3	1932	82	25	19.60	1,607	3
4	1933	61	25	19.60	1,196	4
5	1934	82	25	19.60	1,607	5
6	1935	80	25	19.60	1,568	6
7	1936	69,776	25	19.60	1,367,610	7
8	1937	10,495	26	18.85	197,831	8
9	1938	4,951	26	18.85	93,326	9
10	1939	2,085	26	18.85	39,302	10
11	1940	3,653	26	18.85	68,859	11
12	1941	9,829	26	18.85	185,277	12
13	1942	10,625	26	18.85	200,281	13
14	1943	10,701	26	18.85	201,714	14
15	1944	5,244	26	18.85	98,849	15
16	1945	5,793	26	18.85	109,198	16
17	1946	17,128	33	14.85	254,351	17
18	1947	33,155	41	11.95	396,202	18
19	1948	69,579	42	11.67	811,987	19
20	1949	56,256	45	10.89	612,628	20
21	1950	41,260	48	10.21	421,265	21
22	1951	76,133	55	8.91	678,345	22
23	1952	42,873	55	8.91	381,998	23
24	1953	63,194	55	8.91	563,059	24
25	1954	30,930	55	8.91	275,586	25
26	1955	31,874	56	8.75	278,898	26
27	1956	56,716	63	7.78	441,250	27
28	1957	49,067	66	7.42	364,077	28
29	1958	74,595	71	6.90	514,706	29
30	1959	79,055	71	6.90	545,480	30
31	1960	86,310	71	6.90	595,539	31
32	1961	80,403	73	6.71	539,504	32
33	1962	79,548	79	6.20	493,198	33
34	1963	73,998	79	6.20	458,788	34
35	1964	70,661	79	6.20	438,098	35
36	1965	54,118	79	6.20	335,532	36
37	1966	30,639	86	5.70	174,642	37
38	1967	78,088	88	5.57	434,950	38
39	1968	94,225	88	5.57	524,833	39
40	1969	81,744	89	5.51	450,409	40
41	1970	136,437	94	5.21	710,837	41
42	1971	190,471	100	4.90	933,308	42
43	1972	204,530	100	4.90	1,002,197	43
44	1973	302,089	100	4.90	1,480,236	44
45	1974	307,791	111	4.41	1,357,358	45
46	1975	269,093	128	3.83	1,030,626	46
47	1976	207,806	131	3.74	777,194	47
48	1977	235,146	136	3.60	846,526	48
49	1978	194,961	139	3.53	688,212	49
50	1979	206,105	143	3.43	706,940	50
51	1980	719,459	149	3.29	2,367,020	51
52	1981	515,214	158	3.10	1,597,163	52
53	1982	648,866	158	3.10	2,011,485	53
54	1983	1,068,377	146	3.36	3,589,747	54
55	1984	884,640	147	3.33	2,945,851	55
56	1985	1,053,544	158	3.10	3,265,986	56
57	1986	523,604	166	2.95	1,544,632	57
58	1987	876,922	165	2.97	2,604,458	58
59	1988	1,725,926	170	2.88	4,970,667	59
60	1989	1,592,950	177	2.77	4,412,472	60
61	1990	1,267,248	185	2.65	3,358,207	61
62	1991	2,371,412	190	2.58	6,118,243	62
63	1992	1,251,702	192	2.55	3,191,840	63
64	1993	150,025	191	2.57	385,564	64
65	1994	3,722,222	189	2.59	9,640,555	65
66	1995	4,093,781	190	2.58	10,561,955	66
67	1996	4,029,512	192	2.55	10,275,256	67
68	1997	3,201,276	196	2.50	8,003,190	68
69	1998	1,504,995	196	2.50	3,762,488	69
70	1999	8,686,689	191	2.57	22,324,791	70
71	2000	6,270,072	202	2.43	15,236,275	71
72	2001	7,320,988	209	2.34	17,131,112	72
73	2002	8,681,680	202	2.43	21,096,482	73
74	2003	9,159,347	193	2.54	23,264,741	74
75	2004	12,938,510	183	2.68	34,675,207	75
76	2005	11,659,762	185	2.65	30,898,369	76
77	2006	27,690,124	193	2.55	70,609,816	77
78	2007	23,369,788	218	2.25	52,582,023	78
79	2008	11,955,060	246	2.00	23,910,120	79
80	2009	4,864,469	257	1.91	9,291,136	80
81	2010	3,191,603	255	1.93	6,159,794	81
82	2011	3,670,084	254	1.93	7,083,262	82
83	2012	14,313,677	266	1.84	26,337,166	83
84	2013	13,597,654	272	1.80	24,475,777	84
85	2014	10,346,136	342	1.43	14,794,974	85
86	2015	25,480,735	372	1.32	33,634,570	86
87	2016	9,309,082	388	1.26	11,729,443	87
88	2017	11,412,135	442	1.11	12,667,470	88
89	2018	17,361,423	476	1.03	17,882,266	89
90	2019	23,485,333	511	0.96	22,545,920	90
91	2020	23,125,595	490	1.00	23,125,595	
92	2021	14,729,993	490	1.00	14,729,993	
93	Total	$ 337,697,754			$ 644,546,304	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 385 - Measuring and Regulating Equipment - Ind.

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	0	54	14.20	0	27
28	1957	0	57	13.46	0	28
29	1958	0	60	12.78	0	29
30	1959	0	62	12.37	0	30
31	1960	0	64	11.98	0	31
32	1961	0	64	11.98	0	32
33	1962	0	66	11.62	0	33
34	1963	0	67	11.45	0	34
35	1964	0	68	11.28	0	35
36	1965	0	68	11.28	0	36
37	1966	0	70	10.96	0	37
38	1967	0	72	10.65	0	38
39	1968	53,003	73	10.51	557,062	39
40	1969	0	76	10.09	0	40
41	1970	0	83	9.24	0	41
42	1971	0	90	8.52	0	42
43	1972	21,891	97	7.91	173,158	43
44	1973	32,288	100	7.67	247,649	44
45	1974	103,218	116	6.61	682,271	45
46	1975	76,790	135	5.68	436,167	46
47	1976	45,302	148	5.18	234,664	47
48	1977	16,356	158	4.85	79,327	48
49	1978	17,162	173	4.43	76,028	49
50	1979	31,941	187	4.10	130,958	50
51	1980	123,098	203	3.78	465,310	51
52	1981	102,045	224	3.42	348,994	52
53	1982	140,659	246	3.12	438,856	53
54	1983	172,078	246	3.12	536,883	54
55	1984	346,498	248	3.09	1,070,679	55
56	1985	61,717	243	3.16	195,026	56
57	1986	156,319	243	3.16	493,968	57
58	1987	14,460	250	3.07	44,392	58
59	1988	164,131	267	2.87	471,056	59
60	1989	89,818	278	2.76	247,898	60
61	1990	52,403	276	2.78	145,680	61
62	1991	61,230	279	2.75	168,383	62
63	1992	35,239	288	2.66	93,736	63
64	1993	190,450	298	2.57	489,457	64
65	1994	229,598	310	2.47	567,107	65
66	1995	326,694	313	2.45	800,400	66
67	1996	461,199	323	2.37	1,093,042	67
68	1997	546,746	332	2.31	1,262,983	68
69	1998	668,489	335	2.29	1,530,840	69
70	1999	521,190	342	2.24	1,167,466	70
71	2000	191,839	352	2.18	418,209	71
72	2001	289,260	357	2.15	621,909	72
73	2002	347,398	364	2.11	733,010	73
74	2003	231,876	364	2.11	489,258	74
75	2004	344,321	420	1.83	630,107	75
76	2005	398,466	476	1.61	641,530	76
77	2006	335,049	494	1.55	519,326	77
78	2007	459,744	495	1.55	712,603	78
79	2008	613,313	535	1.43	877,038	79
80	2009	2,161,353	550	1.40	3,025,894	80
81	2010	300,863	531	1.45	436,251	81
82	2011	208,165	614	1.25	260,206	82
83	2012	165,580	671	1.14	188,761	83
84	2013	302,603	644	1.19	360,098	84
85	2014	338,672	664	1.16	392,860	85
86	2015	152,546	661	1.16	176,953	86
87	2016	159,896	650	1.18	188,677	87
88	2017	163,998	680	1.13	185,318	88
89	2018	534,915	712	1.08	577,708	89
90	2019	308,628	745	1.03	317,887	90
91	2020	796,959	773	0.99	788,989	
92	2021	203,797	767	1.00	203,797	
93	Total	$ 13,871,253			$ 26,995,829	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 387 - Other Distribution Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	0	54	14.20	0	27
28	1957	0	57	13.46	0	28
29	1958	0	60	12.78	0	29
30	1959	0	62	12.37	0	30
31	1960	0	64	11.98	0	31
32	1961	0	64	11.98	0	32
33	1962	0	66	11.62	0	33
34	1963	0	67	11.45	0	34
35	1964	0	68	11.28	0	35
36	1965	0	68	11.28	0	36
37	1966	0	70	10.96	0	37
38	1967	0	72	10.65	0	38
39	1968	0	73	10.51	0	39
40	1969	0	76	10.09	0	40
41	1970	0	83	9.24	0	41
42	1971	0	90	8.52	0	42
43	1972	0	97	7.91	0	43
44	1973	0	100	7.67	0	44
45	1974	0	116	6.61	0	45
46	1975	2,619	135	5.68	14,876	46
47	1976	0	148	5.18	0	47
48	1977	0	158	4.85	0	48
49	1978	0	173	4.43	0	49
50	1979	35,268	187	4.10	144,599	50
51	1980	34,199	203	3.78	129,272	51
52	1981	88,691	224	3.42	303,323	52
53	1982	254,179	246	3.12	793,038	53
54	1983	0	246	3.12	0	54
55	1984	12,674	248	3.09	39,163	55
56	1985	0	243	3.16	0	56
57	1986	4,468	243	3.16	14,119	57
58	1987	0	250	3.07	0	58
59	1988	0	267	2.87	0	59
60	1989	0	278	2.76	0	60
61	1990	0	276	2.78	0	61
62	1991	0	279	2.75	0	62
63	1992	0	288	2.66	0	63
64	1993	0	298	2.57	0	64
65	1994	0	310	2.47	0	65
66	1995	0	313	2.45	0	66
67	1996	0	323	2.37	0	67
68	1997	0	332	2.31	0	68
69	1998	0	335	2.29	0	69
70	1999	0	342	2.24	0	70
71	2000	0	352	2.18	0	71
72	2001	0	357	2.15	0	72
73	2002	0	364	2.11	0	73
74	2003	0	364	2.11	0	74
75	2004	0	420	1.83	0	75
76	2005	0	476	1.61	0	76
77	2006	0	494	1.55	0	77
78	2007	0	495	1.55	0	78
79	2008	0	535	1.43	0	79
80	2009	0	550	1.40	0	80
81	2010	0	531	1.45	0	81
82	2011	0	614	1.25	0	82
83	2012	0	671	1.14	0	83
84	2013	0	644	1.19	0	84
85	2014	0	664	1.16	0	85
86	2015	0	661	1.16	0	86
87	2016	0	650	1.18	0	87
88	2017	0	680	1.13	0	88
89	2018	0	712	1.08	0	89
90	2019	0	745	1.03	0	90
91	2020	0	773	0.99	0	
92	2021	0	767	1.00	0	
93	Total	$ 432,098			$ 1,438,390	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 389 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	0	1	1.00	0	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	2,027	1	1.00	2,027	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	0	1	1.00	0	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	573,337	1	1.00	573,337	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	792,870	1	1.00	792,870	55
56	1985	895,545	1	1.00	895,545	56
57	1986	288,000	1	1.00	288,000	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	3,091,145	1	1.00	3,091,145	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	0	1	1.00	0	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	173,927	1	1.00	173,927	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	1,963,827	1	1.00	1,963,827	78
79	2008	6,724,780	1	1.00	6,724,780	79
80	2009	49,980	1	1.00	49,980	80
81	2010	19,406	1	1.00	19,406	81
82	2011	0	1	1.00	0	82
83	2012	0	1	1.00	0	83
84	2013	0	1	1.00	0	84
85	2014	1,507,492	1	1.00	1,507,492	85
86	2015	0	1	1.00	0	86
87	2016	509,933	1	1.00	509,933	87
88	2017	421,201	1	1.00	421,201	88
89	2018	199,187	1	1.00	199,187	89
90	2019	173,131	1	1.00	173,131	90
91	2020	0	1	1.00	0	
92	2021	0	1	1.00	0	
93	Total	$ 17,385,788			$ 17,385,788	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 390.1 - Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	3,078,674	194	2.56	7,881,405	51
52	1981	28,662	204	2.43	69,649	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	2,122,140	224	2.21	4,689,929	55
56	1985	1,130,561	226	2.19	2,475,929	56
57	1986	979,247	231	2.15	2,105,381	57
58	1987	7,122	232	2.14	15,241	58
59	1988	4,672,049	233	2.13	9,951,464	59
60	1989	2,612,746	232	2.14	5,591,276	60
61	1990	151,850	237	2.09	317,367	61
62	1991	819,458	233	2.13	1,745,446	62
63	1992	17,942	238	2.08	37,319	63
64	1993	3,742	250	1.98	7,409	64
65	1994	0	261	1.90	0	65
66	1995	219,243	265	1.87	409,984	66
67	1996	39,764	276	1.80	71,575	67
68	1997	5,477	282	1.76	9,640	68
69	1998	170,137	286	1.73	294,337	69
70	1999	751,319	286	1.73	1,299,782	70
71	2000	91,037	295	1.68	152,942	71
72	2001	93,939	303	1.64	154,060	72
73	2002	168,587	311	1.59	268,053	73
74	2003	171,279	318	1.56	267,195	74
75	2004	258,120	342	1.45	374,274	75
76	2005	22,437	352	1.41	31,636	76
77	2006	97,332	362	1.37	133,345	77
78	2007	367,404	377	1.32	484,973	78
79	2008	792,951	399	1.24	983,259	79
80	2009	536,325	387	1.28	686,496	80
81	2010	539,193	396	1.25	673,991	81
82	2011	703,247	407	1.22	857,961	82
83	2012	6,164,776	419	1.18	7,274,436	83
84	2013	4,406,437	429	1.16	5,111,467	84
85	2014	10,704,441	437	1.14	12,203,063	85
86	2015	4,382,059	443	1.12	4,907,906	86
87	2016	5,750,872	442	1.12	6,440,977	87
88	2017	970,673	460	1.08	1,048,327	88
89	2018	4,862,107	481	1.03	5,007,970	89
90	2019	11,854,448	492	1.01	11,972,992	90
91	2020	1,811,834	498	1.00	1,811,834	
92	2021	24,120	496	1.00	24,120	
93	Total	$ 71,583,751			$ 97,844,410	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 390.2 - Leasehold Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	16,785	177	2.80	46,998	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	0	232	2.14	0	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	0	250	1.98	0	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	9,419	282	1.76	16,577	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	0	342	1.45	0	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	0	377	1.32	0	78
79	2008	0	399	1.24	0	79
80	2009	0	387	1.28	0	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	0	419	1.18	0	83
84	2013	0	429	1.16	0	84
85	2014	0	437	1.14	0	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	21,000	460	1.08	22,680	88
89	2018	78,545	481	1.03	80,901	89
90	2019	0	492	1.01	0	90
91	2020	0	498	1.00	0	
92	2021	0	496	1.00	0	
93	Total	$ 125,749			$ 167,156	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 391 - Office Furniture and Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	42.73	$ 0	1
2	1931	0	11	42.73	0	2
3	1932	0	11	42.73	0	3
4	1933	0	11	42.73	0	4
5	1934	0	11	42.73	0	5
6	1935	0	11	42.73	0	6
7	1936	0	12	39.17	0	7
8	1937	0	13	36.15	0	8
9	1938	0	13	36.15	0	9
10	1939	0	13	36.15	0	10
11	1940	0	13	36.15	0	11
12	1941	0	13	36.15	0	12
13	1942	0	15	31.33	0	13
14	1943	0	15	31.33	0	14
15	1944	0	15	31.33	0	15
16	1945	0	16	29.38	0	16
17	1946	0	20	23.50	0	17
18	1947	0	23	20.43	0	18
19	1948	0	26	18.08	0	19
20	1949	0	26	18.08	0	20
21	1950	0	27	17.41	0	21
22	1951	0	29	16.21	0	22
23	1952	0	31	15.16	0	23
24	1953	0	33	14.24	0	24
25	1954	0	34	13.82	0	25
26	1955	0	36	13.06	0	26
27	1956	0	39	12.05	0	27
28	1957	0	41	11.46	0	28
29	1958	0	42	11.19	0	29
30	1959	0	45	10.44	0	30
31	1960	0	46	10.22	0	31
32	1961	0	51	9.22	0	32
33	1962	0	53	8.87	0	33
34	1963	0	55	8.55	0	34
35	1964	0	57	8.25	0	35
36	1965	0	60	7.83	0	36
37	1966	0	62	7.58	0	37
38	1967	0	66	7.12	0	38
39	1968	0	70	6.71	0	39
40	1969	0	74	6.35	0	40
41	1970	0	81	5.80	0	41
42	1971	0	87	5.40	0	42
43	1972	0	94	5.00	0	43
44	1973	0	100	4.70	0	44
45	1974	0	109	4.31	0	45
46	1975	0	123	3.82	0	46
47	1976	0	130	3.62	0	47
48	1977	0	141	3.33	0	48
49	1978	0	151	3.11	0	49
50	1979	0	164	2.87	0	50
51	1980	0	178	2.64	0	51
52	1981	0	186	2.53	0	52
53	1982	0	203	2.32	0	53
54	1983	0	209	2.25	0	54
55	1984	0	212	2.22	0	55
56	1985	0	211	2.23	0	56
57	1986	0	218	2.16	0	57
58	1987	0	226	2.08	0	58
59	1988	0	219	2.15	0	59
60	1989	0	213	2.21	0	60
61	1990	0	228	2.06	0	61
62	1991	0	242	1.94	0	62
63	1992	0	249	1.89	0	63
64	1993	0	260	1.81	0	64
65	1994	0	257	1.83	0	65
66	1995	0	246	1.91	0	66
67	1996	0	250	1.88	0	67
68	1997	0	251	1.87	0	68
69	1998	0	253	1.86	0	69
70	1999	0	262	1.79	0	70
71	2000	0	267	1.76	0	71
72	2001	0	280	1.68	0	72
73	2002	0	290	1.62	0	73
74	2003	4,836	293	1.71	8,270	74
75	2004	187,663	298	1.68	315,274	75
76	2005	8,828	303	1.65	14,566	76
77	2006	140,746	303	1.65	232,231	77
78	2007	1,193,984	310	1.61	1,922,314	78
79	2008	206,478	335	1.49	307,652	79
80	2009	555,580	351	1.42	788,924	80
81	2010	266,230	374	1.34	356,748	81
82	2011	570,548	378	1.32	753,123	82
83	2012	3,136	405	1.23	3,857	83
84	2013	94,153	405	1.23	115,808	84
85	2014	322,072	426	1.17	376,824	85
86	2015	630,206	429	1.17	737,341	86
87	2016	222,188	442	1.13	251,072	87
88	2017	102,534	449	1.11	113,813	88
89	2018	356,457	468	1.07	381,409	89
90	2019	431,152	470	1.06	457,021	90
91	2020	7,558	500	1.00	7,558	
92	2021	4,047	500	1.00	4,047	
93	Total	$ 5,308,396			$ 7,147,852	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 391.1 - Computer Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	0	303	1.65	0	77
78	2007	0	310	1.61	0	78
79	2008	0	335	1.49	0	79
80	2009	0	351	1.42	0	80
81	2010	0	374	1.34	0	81
82	2011	0	378	1.32	0	82
83	2012	0	405	1.23	0	83
84	2013	0	405	1.23	0	84
85	2014	0	426	1.17	0	85
86	2015	0	429	1.17	0	86
87	2016	325,173	442	1.13	367,445	87
88	2017	4,438,873	449	1.11	4,927,149	88
89	2018	4,404,858	468	1.07	4,713,198	89
90	2019	933,186	470	1.06	989,177	90
91	2020	972,011	500	1.00	972,011	91
92	2021	6,574	500	1.00	6,574	92
93	Total	$ 11,080,675			$ 11,975,554	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 392.1 - Transportation Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	389,610	501	1.23	479,221	80
81	2010	1,200,738	501	1.23	1,476,908	81
82	2011	1,432,094	511	1.21	1,732,834	82
83	2012	982,210	533	1.16	1,139,364	83
84	2013	2,413,115	550	1.12	2,702,688	84
85	2014	4,100,039	558	1.10	4,510,043	85
86	2015	4,370,262	566	1.09	4,763,585	86
87	2016	4,423,889	572	1.08	4,777,800	87
88	2017	4,754,907	577	1.07	5,087,751	88
89	2018	6,176,943	578	1.07	6,609,329	89
90	2019	9,777,257	605	1.02	9,972,802	90
91	2020	4,893,005	617	1.00	4,893,005	
92	2021	6,528,514	617	1.00	6,528,514	
93	Total	$ 51,442,584			$ 54,673,844	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 393 - Stores Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	41,959	351	1.76	73,848	68
69	1998	0	380	1.62	0	69
70	1999	50,326	385	1.60	80,522	70
71	2000	10,930	389	1.58	17,269	71
72	2001	4,375	391	1.58	6,913	72
73	2002	73,300	396	1.56	114,348	73
74	2003	0	402	1.53	0	74
75	2004	26,256	414	1.49	39,121	75
76	2005	64,821	435	1.42	92,046	76
77	2006	11,760	455	1.36	15,994	77
78	2007	0	467	1.32	0	78
79	2008	81,414	479	1.29	105,024	79
80	2009	0	501	1.23	0	80
81	2010	27,374	501	1.23	33,670	81
82	2011	45,503	511	1.21	55,059	82
83	2012	1,940	533	1.16	2,250	83
84	2013	41,240	550	1.12	46,189	84
85	2014	49,821	558	1.10	54,803	85
86	2015	69,873	566	1.09	76,162	86
87	2016	192,568	572	1.08	207,973	87
88	2017	11,437	577	1.07	12,238	88
89	2018	117,113	578	1.07	125,311	89
90	2019	71,388	605	1.02	72,816	90
91	2020	181,167	617	1.00	181,167	91
92	2021	0	617	1.00	0	92
93	Total	$ 1,174,565			$ 1,412,723	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 394 - Tools, Shop and Garage Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	296,381	455	1.36	403,078	77
78	2007	423,466	467	1.32	558,975	78
79	2008	343,919	479	1.29	443,656	79
80	2009	1,461,053	501	1.23	1,797,095	80
81	2010	395,084	501	1.23	485,953	81
82	2011	629,896	511	1.21	762,174	82
83	2012	481,562	533	1.16	558,612	83
84	2013	754,983	550	1.12	845,581	84
85	2014	1,043,422	558	1.10	1,147,764	85
86	2015	1,302,683	566	1.09	1,419,924	86
87	2016	1,188,647	572	1.08	1,283,739	87
88	2017	1,708,014	577	1.07	1,827,575	88
89	2018	1,475,023	578	1.07	1,578,275	89
90	2019	5,115,224	605	1.02	5,217,528	90
91	2020	1,607,065	617	1.00	1,607,065	
92	2021	1,148,707	617	1.00	1,148,707	
93	Total	$ 19,375,129			$ 21,085,701	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 395 - Laboratory Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	1,707	253	1.98	3,380	69
70	1999	142,885	262	1.91	272,910	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	59,897	290	1.72	103,023	73
74	2003	1,552	293	1.71	2,654	74
75	2004	2,421	298	1.68	4,067	75
76	2005	0	303	1.65	0	76
77	2006	2,466	303	1.65	4,069	77
78	2007	42,853	310	1.61	68,993	78
79	2008	2,421	335	1.49	3,607	79
80	2009	336	351	1.42	477	80
81	2010	8,738	374	1.34	11,709	81
82	2011	32,281	378	1.32	42,611	82
83	2012	62,679	405	1.23	77,095	83
84	2013	0	405	1.23	0	84
85	2014	99,164	426	1.17	116,022	85
86	2015	0	429	1.17	0	86
87	2016	19,722	442	1.13	22,286	87
88	2017	52,425	449	1.11	58,192	88
89	2018	3,349	468	1.07	3,583	89
90	2019	7,524	470	1.06	7,975	90
91	2020	0	500	1.00	0	91
92	2021	0	500	1.00	0	92
91	Total	$ 542,420			$ 802,653	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 396 - Power Operated Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	91,819	467	1.32	121,201	78
79	2008	1,204,692	479	1.29	1,554,053	79
80	2009	598,438	501	1.23	736,079	80
81	2010	1,032,051	501	1.23	1,269,423	81
82	2011	613,696	511	1.21	742,572	82
83	2012	388,221	533	1.16	450,336	83
84	2013	272,897	550	1.12	305,645	84
85	2014	235,577	558	1.10	259,135	85
86	2015	760,294	566	1.09	828,720	86
87	2016	608,650	572	1.08	657,342	87
88	2017	283,390	577	1.07	303,227	88
89	2018	1,358,932	578	1.07	1,454,057	89
90	2019	1,418,698	605	1.02	1,447,072	90
91	2020	952,742	617	1.00	952,742	91
92	2021	169,763	617	1.00	169,763	92
93	Total	$ 9,989,860			$ 11,251,367	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.1 - Communication Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	0	365	1.39	0	79
80	2009	16,980	372	1.36	23,093	80
81	2010	156,463	402	1.26	197,143	81
82	2011	260,259	413	1.23	320,119	82
83	2012	548,932	423	1.20	658,718	83
84	2013	22,458	427	1.19	26,725	84
85	2014	577,846	433	1.17	676,080	85
86	2015	60,221	445	1.14	68,652	86
87	2016	84,327	449	1.13	95,290	87
88	2017	107,006	473	1.07	114,496	88
89	2018	289,055	481	1.05	303,508	89
90	2019	3,557,456	485	1.04	3,699,754	90
91	2020	23,028	506	1.00	23,028	91
92	2021	5,174	506	1.00	5,174	92
93	Total	$ 5,709,205			$ 6,211,780	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.2 - Telemetering Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	0	365	1.39	0	79
80	2009	0	372	1.36	0	80
81	2010	0	402	1.26	0	81
82	2011	0	413	1.23	0	82
83	2012	0	423	1.20	0	83
84	2013	0	427	1.19	0	84
85	2014	0	433	1.17	0	85
86	2015	0	445	1.14	0	86
87	2016	9,312	449	1.13	10,523	87
88	2017	0	473	1.07	0	88
89	2018	0	481	1.05	0	89
90	2019	0	485	1.04	0	90
91	2020	0	506	1.00	0	91
92	2021	0	506	1.00	0	92
93	Total	$ 9,312			$ 10,523	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 398 - Miscellaneous Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	4,815	342	1.48	7,126	77
78	2007	46,258	350	1.45	67,074	78
79	2008	15,323	365	1.39	21,299	79
80	2009	27,716	372	1.36	37,694	80
81	2010	119,593	402	1.26	150,687	81
82	2011	103,655	413	1.23	127,496	82
83	2012	14,500	423	1.20	17,400	83
84	2013	66,876	427	1.19	79,582	84
85	2014	209,061	433	1.17	244,601	85
86	2015	132,790	445	1.14	151,381	86
87	2016	946,154	449	1.13	1,069,154	87
88	2017	146,605	473	1.07	156,867	88
89	2018	502,108	481	1.05	527,213	89
90	2019	246,971	485	1.04	256,850	90
91	2020	1,939,115	506	1.00	1,939,115	91
92	2021	157,192	506	1.00	157,192	92
91	Total	$ 4,678,732			$ 5,010,731	91
92	Grand Total	$ 4,486,632,669			$ 7,023,678,371	92

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 389 - Land and Land Rights					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	0	1	1.00	0	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	0	1	1.00	0	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	0	1	1.00	0	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	0	1	1.00	0	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	0	1	1.00	0	55
56	1985	0	1	1.00	0	56
57	1986	0	1	1.00	0	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	248,909	1	1.00	248,909	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	142,398	1	1.00	142,398	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	0	1	1.00	0	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	0	1	1.00	0	78
79	2008	0	1	1.00	0	79
80	2009	0	1	1.00	0	80
81	2010	0	1	1.00	0	81
82	2011	0	1	1.00	0	82
83	2012	0	1	1.00	0	83
84	2013	0	1	1.00	0	84
85	2014	3,825,399	1	1.00	3,825,399	85
86	2015	0	1	1.00	0	86
87	2016	0	1	1.00	0	87
88	2017	0	1	1.00	0	88
89	2018	0	1	1.00	0	89
90	2019	2,007,241	1	1.00	2,007,241	90
91	2020	0	1	1.00	0	91
92	2021	1,802,975	1	1.00	1,802,975	92
93	Total	$ 8,026,922			$ 8,026,922	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 390.1 - General Plant Structures					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	477,495	232	2.14	1,021,839	58
59	1988	0	233	2.13	0	59
60	1989	9,517,325	232	2.14	20,367,076	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	21,094	250	1.98	41,766	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	4,191	286	1.73	7,250	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	24,594	303	1.64	40,334	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	265,902	342	1.45	385,558	75
76	2005	2,018,722	352	1.41	2,846,398	76
77	2006	132,672	362	1.37	181,761	77
78	2007	356,318	377	1.32	470,340	78
79	2008	435,364	399	1.24	539,851	79
80	2009	146,749	387	1.28	187,839	80
81	2010	546,888	396	1.25	683,610	81
82	2011	0	407	1.22	0	82
83	2012	476,843	419	1.18	562,675	83
84	2013	188,416	429	1.16	218,563	84
85	2014	12,351,377	437	1.14	14,080,570	85
86	2015	798,504	443	1.12	894,324	86
87	2016	1,437,730	442	1.12	1,610,258	87
88	2017	4,136,879	460	1.08	4,467,829	88
89	2018	625,259	481	1.03	644,017	89
90	2019	15,693,941	492	1.01	15,850,880	90
91	2020	9,164,799	498	1.00	9,164,799	91
92	2021	17,039,960	496	1.00	17,039,960	92
93	Total	$ 75,861,022			$ 91,307,497	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 390.2 - Leasehold Improvements Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	42,489	215	2.31	98,150	54
55	1984	3,685	224	2.21	8,144	55
56	1985	2,427	226	2.19	5,315	56
57	1986	1,880	231	2.15	4,042	57
58	1987	4,071	232	2.14	8,712	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	192,953	250	1.98	382,047	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	20,560	295	1.68	34,541	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	59,871	318	1.56	93,399	74
75	2004	60,915	342	1.45	88,327	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	153,898	377	1.32	203,145	78
79	2008	0	399	1.24	0	79
80	2009	675	387	1.28	864	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	296,119	419	1.18	349,420	83
84	2013	293,648	429	1.16	340,632	84
85	2014	660,042	437	1.14	752,448	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	378,695	460	1.08	408,991	88
89	2018	0	481	1.03	0	89
90	2019	1,017	492	1.01	1,027	90
91	2020	174,664	498	1.00	174,664	91
92	2021	0	496	1.00	0	92
93	Total	$ 2,347,609			$ 2,953,868	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 391 - Office Furniture and Equipment					Line No.
	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	1,300,485	303	1.65	2,145,800	77
78	2007	2,831,972	310	1.61	4,559,475	78
79	2008	125,388	335	1.49	186,828	79
80	2009	313,150	351	1.42	444,673	80
81	2010	222,355	374	1.34	297,956	81
82	2011	416,815	378	1.32	550,196	82
83	2012	281,912	405	1.23	346,752	83
84	2013	675,580	405	1.23	830,963	84
85	2014	364,405	426	1.17	426,354	85
86	2015	503,359	429	1.17	588,930	86
87	2016	653,396	442	1.13	738,337	87
88	2017	81,451	449	1.11	90,411	88
89	2018	185,420	468	1.07	198,399	89
90	2019	1,840,659	470	1.06	1,951,099	90
91	2020	1,875,800	500	1.00	1,875,800	91
92	2021	857,670	500	1.00	857,670	92
93	Total	$ 12,529,817			$ 16,089,643	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 391.1 - Computer Equipment					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	0	303	1.65	0	77
78	2007	0	310	1.61	0	78
79	2008	0	335	1.49	0	79
80	2009	0	351	1.42	0	80
81	2010	0	374	1.34	0	81
82	2011	0	378	1.32	0	82
83	2012	0	405	1.23	0	83
84	2013	0	405	1.23	0	84
85	2014	0	426	1.17	0	85
86	2015	0	429	1.17	0	86
87	2016	619,631	442	1.13	700,183	87
88	2017	5,726,511	449	1.11	6,356,427	88
89	2018	2,635,603	468	1.07	2,820,095	89
90	2019	4,423,492	470	1.06	4,688,902	90
91	2020	8,155,001	500	1.00	8,155,001	91
92	2021	860,186	500	1.00	860,186	92
93	Total	$ 22,420,424			$ 23,580,794	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 392.11 - Transportation Equip. - Light Vehicles

Line No.	Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	44,227	550	1.12	49,534	84
85	2014	1,027,779	558	1.10	1,130,557	85
86	2015	337,929	566	1.09	368,343	86
87	2016	278,379	572	1.08	300,649	87
88	2017	614,320	577	1.07	657,322	88
89	2018	206,476	578	1.07	220,929	89
90	2019	404,940	605	1.02	413,039	90
91	2020	40,732	617	1.00	40,732	91
92	2021	86,176	617	1.00	86,176	92
93	Total	$ 3,040,958			$ 3,267,281	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 392.21 - Transportation Equip - Aircraft					Line No.
	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	8,221,361	511	1.21	9,947,847	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	0	572	1.08	0	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	0	605	1.02	0	90
91	2020		617	1.00	0	91
92	2021		617	1.00	0	92
93	Total	$ 8,221,361			$ 9,947,847	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 393 - Stores Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	31,617	479	1.29	40,786	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	31,420	572	1.08	33,934	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	0	605	1.02	0	90
91	2020	0	617	1.00	0	91
92	2021	0	617	1.00	0	92
93	Total	$ 63,037			$ 74,720	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 394 - Tools, Shop, and Garage Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	80,661	467	1.32	106,473	78
79	2008	0	479	1.29	0	79
80	2009	17,816	501	1.23	21,914	80
81	2010	44,295	501	1.23	54,483	81
82	2011	145,939	511	1.21	176,586	82
83	2012	115,235	533	1.16	133,673	83
84	2013	87,743	550	1.12	98,272	84
85	2014	60,700	558	1.10	66,770	85
86	2015	45,484	566	1.09	49,578	86
87	2016	19,608	572	1.08	21,177	87
88	2017	324,144	577	1.07	346,834	88
89	2018	120,024	578	1.07	128,426	89
90	2019	196,708	605	1.02	200,642	90
91	2020	62,174	617	1.00	62,174	91
92	2021	0	617	1.00	0	92
93	Total	$ 1,320,531			$ 1,467,002	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 395 - Laboratory Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	46,970	290	1.72	80,788	73
74	2003	0	293	1.71	0	74
75	2004	15,738	298	1.68	26,440	75
76	2005	44,639	303	1.65	73,654	76
77	2006	0	303	1.65	0	77
78	2007	41,607	310	1.61	66,987	78
79	2008	15,774	335	1.49	23,503	79
80	2009	173,206	351	1.42	245,953	80
81	2010	0	374	1.34	0	81
82	2011	48,182	378	1.32	63,600	82
83	2012	4,376	405	1.23	5,382	83
84	2013	296,878	405	1.23	365,160	84
85	2014	224,898	426	1.17	263,131	85
86	2015	54,031	429	1.17	63,216	86
87	2016	13,913	442	1.13	15,722	87
88	2017	132,717	449	1.11	147,316	88
89	2018	75,331	468	1.07	80,604	89
90	2019	208,737	470	1.06	221,261	90
91	2020	110,890	500	1.00	110,890	91
92	2021	32,591	500	1.00	32,591	92
93	Total	$ 1,540,478			$ 1,886,198	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 396 - Power Operated Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	11,760	501	1.23	14,465	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	0	572	1.08	0	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	24,844	605	1.02	25,341	90
91	2020	222,838	617	1.00	222,838	91
92	2021	0	617	1.00	0	92
93	Total	$ 259,442			$ 262,644	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 397 - Communication Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	405,459	365	1.39	563,588	79
80	2009	1,742,481	372	1.36	2,369,774	80
81	2010	193,611	402	1.26	243,950	81
82	2011	594,239	413	1.23	730,914	82
83	2012	919,185	423	1.20	1,103,022	83
84	2013	1,046,489	427	1.19	1,245,322	84
85	2014	259,365	433	1.17	303,457	85
86	2015	16,807	445	1.14	19,160	86
87	2016	47,258	449	1.13	53,402	87
88	2017	0	473	1.07	0	88
89	2018	292,545	481	1.05	307,172	89
90	2019	2,019,941	485	1.04	2,100,739	90
91	2020	270,998	506	1.00	270,998	91
92	2021	9,611	506	1.00	9,611	92
93	Total	$ 7,817,989			$ 9,321,109	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.2 - Telemetry Equipment

Line No.	Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	32.33	$ 0	1
2	1931	0	15	32.33	0	2
3	1932	0	15	32.33	0	3
4	1933	0	15	32.33	0	4
5	1934	0	15	32.33	0	5
6	1935	0	15	32.33	0	6
7	1936	0	15	32.33	0	7
8	1937	0	17	28.53	0	8
9	1938	0	17	28.53	0	9
10	1939	0	17	28.53	0	10
11	1940	0	17	28.53	0	11
12	1941	0	18	26.94	0	12
13	1942	0	19	25.53	0	13
14	1943	0	19	25.53	0	14
15	1944	0	19	25.53	0	15
16	1945	0	19	25.53	0	16
17	1946	0	21	23.10	0	17
18	1947	0	24	20.21	0	18
19	1948	0	26	18.65	0	19
20	1949	0	28	17.32	0	20
21	1950	0	30	16.17	0	21
22	1951	0	31	15.65	0	22
23	1952	0	33	14.70	0	23
24	1953	0	34	14.26	0	24
25	1954	0	36	13.47	0	25
26	1955	0	37	13.11	0	26
27	1956	0	39	12.44	0	27
28	1957	0	41	11.83	0	28
29	1958	0	42	11.55	0	29
30	1959	0	45	10.78	0	30
31	1960	0	46	10.54	0	31
32	1961	0	49	9.90	0	32
33	1962	0	51	9.51	0	33
34	1963	0	52	9.33	0	34
35	1964	0	54	8.98	0	35
36	1965	0	57	8.51	0	36
37	1966	0	58	8.36	0	37
38	1967	0	62	7.82	0	38
39	1968	0	64	7.58	0	39
40	1969	0	69	7.03	0	40
41	1970	0	78	6.22	0	41
42	1971	0	88	5.51	0	42
43	1972	0	95	5.11	0	43
44	1973	0	100	4.85	0	44
45	1974	0	109	4.45	0	45
46	1975	0	122	3.98	0	46
47	1976	0	131	3.70	0	47
48	1977	0	142	3.42	0	48
49	1978	0	151	3.21	0	49
50	1979	0	160	3.03	0	50
51	1980	0	170	2.85	0	51
52	1981	0	185	2.62	0	52
53	1982	0	206	2.35	0	53
54	1983	0	218	2.22	0	54
55	1984	0	220	2.20	0	55
56	1985	0	214	2.27	0	56
57	1986	0	215	2.26	0	57
58	1987	0	216	2.25	0	58
59	1988	0	215	2.26	0	59
60	1989	0	214	2.27	0	60
61	1990	0	220	2.20	0	61
62	1991	0	225	2.16	0	62
63	1992	0	232	2.09	0	63
64	1993	0	236	2.06	0	64
65	1994	0	239	2.03	0	65
66	1995	0	247	1.96	0	66
67	1996	0	254	1.91	0	67
68	1997	0	257	1.89	0	68
69	1998	0	265	1.83	0	69
70	1999	0	275	1.76	0	70
71	2000	0	285	1.70	0	71
72	2001	0	299	1.62	0	72
73	2002	0	309	1.57	0	73
74	2003	0	317	1.53	0	74
75	2004	0	326	1.49	0	75
76	2005	0	335	1.45	0	76
77	2006	0	342	1.42	0	77
78	2007	0	350	1.39	0	78
79	2008	0	365	1.33	0	79
80	2009	0	372	1.30	0	80
81	2010	0	402	1.21	0	81
82	2011	0	413	1.17	0	82
83	2012	0	423	1.15	0	83
84	2013	0	427	1.14	0	84
85	2014	0	433	1.12	0	85
86	2015	0	445	1.09	0	86
87	2016	0	449	1.08	0	87
88	2017	0	473	1.03	0	88
89	2018	0	481	1.01	0	89
90	2019	0	485	1.00	0	90
91	2019	0	506	0.96	0	91
92	2019	0	506	0.96	0	92
93	Total	$ 0			$ 0	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 398 - Miscellaneous Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	20,318	342	1.48	30,071	77
78	2007	8,989	350	1.45	13,034	78
79	2008	42,617	365	1.39	59,238	79
80	2009	67,497	372	1.36	91,796	80
81	2010	83,004	402	1.26	104,585	81
82	2011	38,936	413	1.23	47,891	82
83	2012	32,528	423	1.20	39,034	83
84	2013	14,287	427	1.19	17,002	84
85	2014	315,147	433	1.17	368,722	85
86	2015	115,696	445	1.14	131,893	86
87	2016	272,684	449	1.13	308,133	87
88	2017	71,238	473	1.07	76,225	88
89	2018	212,797	481	1.05	223,437	89
90	2019	2,679,037	485	1.04	2,786,198	90
91	2020	843,740	506	1.00	843,740	91
92	2021	124,611	506	1.00	124,611	92
93	Total	$ 4,943,126			$ 5,265,610	93
94	Grand Total	$ 148,392,716			$ 173,451,135	94

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF RCND RESERVE BASED ON GAS PLANT IN SERVICE
AS OF AUGUST 31, 2021

Line No.	Description	Arizona	System Allocable	Line No.
	(a)	(b)	(c)	
		Company Records	Company Records	
	Gas Plant In Service			
1	Intangible Plant	$ 4,618,980	$ 371,144,066	1
2	Storage Plant	75,025,126	0	2
3	Distribution Plant	4,213,201,374	0	3
4	General Plant	198,406,168	148,392,717	4
5	Total Gas Plant In Service	$ 4,491,251,648	$ 519,536,783	5
	Accumulated Provision			
6	Intangible Plant	$ 3,198,029	$ 230,010,063	6
7	Storage Plant	5,705,215	0	7
8	Distribution Plant	1,453,228,121	0	8
9	General Plant	66,401,579	37,480,093	9
10	Total Accumulated Provision	$ 1,528,532,944	$ 267,490,156	10
	Percentage of Accumulated Reserve to Gas Plant In Service			
11	Intangible Plant	69.24%	61.97%	11
12	Storage Plant	7.60%	N/A	12
13	Distribution Plant	34.49%	N/A	13
14	General Plant	33.47%	25.26%	14

Source: Company Records

SOUTHWEST GAS CORPORATION
ARIZONA
RCN DEFERRED TAXES BY VINTAGE
AT AUGUST 31, 2021

Line No.	Year	Arizona			System Allocable					RCN Deferred Taxes			Line No.
		Total Federal 282 Deferred Tax Liability at 1/31/19	Total State 282 Deferred Tax Liability at 1/31/19	Total Arizona Deferred Tax Liability at 1/31/19	Total Federal 282 Deferred Tax Liability at 1/31/19	Total System Allocable at 1/31/19	4-Factor	Total Recorded Deferred Tax Liability at 1/31/19	Total AZ Recorded Deferred Tax Liability at 1/31/19	H - W Index	Ratio to Current Index	RCN Deferred Taxes for Arizona	
	(a)	(b) Company Records	(c) Company Records	(d) (b) + (c)	(e) Company Records	(g) (e) + (f)	(h) Sch C-1, Sh 17, Ln 9(c)	(i) (g) * (h)	(j) (d) + (i)	(k) Company Records	(l) Ln 62(k) / (k)	(m) (j) * (l)	
1	1958	$ (312)	$ (57)	$ (368)	$ 0	$ 0	56.26%	$ 0	$ (368)	61	12.47	$ (4,593)	1
2	1959	0	0	0	0	0	56.26%	0	0	63	12.07	0	2
3	1960	0	0	0	0	0	56.26%	0	0	65	11.70	0	3
4	1961	0	0	0	0	0	56.26%	0	0	66	11.52	0	4
5	1962	0	0	0	0	0	56.26%	0	0	67	11.35	0	5
6	1963	0	0	0	0	0	56.26%	0	0	68	11.18	0	6
7	1964	0	0	0	0	0	56.26%	0	0	69	11.02	0	7
8	1965	0	0	0	0	0	56.26%	0	0	71	10.71	0	8
9	1966	0	0	0	0	0	56.26%	0	0	72	10.56	0	9
10	1967	0	0	0	0	0	56.26%	0	0	74	10.28	0	10
11	1968	0	0	0	0	0	56.26%	0	0	76	10.01	0	11
12	1969	0	0	0	(12,198)	(12,198)	56.26%	(6,863)	(6,863)	79	9.63	(66,091)	12
13	1970	0	0	0	0	0	56.26%	0	0	84	9.05	0	13
14	1971	(737)	(134)	(871)	0	0	56.26%	0	(871)	90	8.45	(7,358)	14
15	1972	(7,514)	(1,369)	(8,883)	0	0	56.26%	0	(8,883)	95	8.01	(71,156)	15
16	1973	(3,270)	(596)	(3,866)	0	0	56.26%	0	(3,866)	100	7.61	(29,419)	16
17	1974	74	13	87	0	0	56.26%	0	87	115	6.61	577	17
18	1975	(186)	(34)	(219)	0	0	56.26%	0	(219)	133	5.72	(1,255)	18
19	1976	0	0	0	0	0	56.26%	0	0	143	5.32	0	19
20	1977	0	0	0	0	0	56.26%	0	0	155	4.91	0	20
21	1978	0	0	0	0	0	56.26%	0	0	169	4.50	0	21
22	1979	1,281,202	233,486	1,514,687	0	0	56.26%	0	1,514,687	184	4.13	6,255,658	22
23	1980	218,908	39,894	258,801	0	0	56.26%	0	258,801	198	3.84	993,797	23
24	1981	89,000	16,219	105,219	0	0	56.26%	0	105,219	223	3.41	358,796	24
25	1982	76,922	14,018	90,941	0	0	56.26%	0	90,941	235	3.24	294,647	25
26	1983	48,801	8,893	57,694	1,148	1,148	56.26%	646	58,340	241	3.16	184,354	26
27	1984	1,459,758	266,025	1,725,783	24,479	24,479	56.26%	13,772	1,739,555	246	3.09	5,375,226	27
28	1985	909,257	165,703	1,074,960	4,225	4,225	56.26%	2,377	1,077,337	241	3.16	3,404,385	28
29	1986	566,940	100,739	667,679	1,213	1,213	56.26%	682	668,361	234	3.25	2,172,173	29
30	1987	524,500	95,585	620,084	0	0	56.26%	0	620,084	242	3.14	1,947,065	30
31	1988	947,141	172,606	1,119,747	0	0	56.26%	0	1,119,747	255	2.98	3,336,847	31
32	1989	693,439	126,372	819,811	228,405	228,405	56.26%	128,500	948,311	264	2.88	2,731,137	32
33	1990	287,170	52,334	339,504	6,066	6,066	56.26%	3,413	342,917	271	2.81	963,597	33
34	1991	353,663	64,451	418,115	3,490	3,490	56.26%	1,964	420,079	278	2.74	1,151,016	34
35	1992	769,435	140,221	909,656	2,567	2,567	56.26%	1,444	911,100	283	2.69	2,450,860	35
36	1993	900,177	164,048	1,064,225	5,408	5,408	56.26%	3,043	1,067,268	291	2.61	2,785,569	36
37	1994	970,967	176,948	1,147,915	4,347	4,347	56.26%	2,446	1,150,361	307	2.48	2,852,896	37
38	1995	2,029,687	369,889	2,399,576	4,251	4,251	56.26%	2,391	2,401,967	309	2.46	5,908,839	38
39	1996	2,079,738	379,010	2,458,749	0	0	56.26%	0	2,458,749	312	2.44	5,999,347	39
40	1997	2,273,465	412,933	2,686,399	0	0	56.26%	0	2,686,399	320	2.38	6,393,629	40
41	1998	3,008,164	548,206	3,556,371	34,971	34,971	56.26%	19,674	3,576,045	323	2.35	8,403,705	41
42	1999	4,433,853	808,023	5,241,876	5,960	5,960	56.26%	3,353	5,245,229	331	2.30	12,064,027	42
43	2000	4,270,591	778,270	5,048,862	12,496	12,496	56.26%	7,030	5,055,892	346	2.20	11,122,961	43
44	2001	5,615,331	1,023,335	6,638,666	192,159	192,159	56.26%	108,108	6,746,774	352	2.16	14,573,032	44
45	2002	6,534,912	1,186,467	7,721,380	71,327	71,327	56.26%	40,128	7,761,508	358	2.12	16,454,396	45
46	2003	7,777,262	1,414,467	9,191,729	48,161	48,161	56.26%	27,095	9,218,824	373	2.04	18,806,401	46
47	2004	9,678,507	1,577,586	11,256,093	135,438	135,438	56.26%	76,197	11,332,290	439	1.73	19,604,861	47
48	2005	7,689,873	1,401,549	9,091,421	233,850	233,850	56.26%	131,563	9,222,984	517	1.47	13,557,787	48
49	2006	9,336,521	1,701,483	11,038,003	177,529	177,529	56.26%	99,877	11,137,880	529	1.44	16,038,548	49
50	2007	11,096,070	2,022,142	13,118,212	86,398	86,398	56.26%	48,607	13,166,819	518	1.47	19,355,224	50
51	2008	11,644,381	1,968,028	13,612,408	141,747	141,747	56.26%	79,746	13,692,154	578	1.31	17,936,722	51
52	2009	9,866,344	1,636,472	11,502,816	93,702	93,702	56.26%	52,717	11,555,533	581	1.31	15,137,748	52
53	2010	12,325,972	1,922,525	14,248,497	67,028	67,028	56.26%	37,710	14,286,207	603	1.26	18,000,621	53
54	2011	22,297,291	2,188,872	24,486,163	990,251	990,251	56.26%	557,110	25,043,273	670	1.14	28,549,332	54
55	2012	18,193,770	2,388,982	20,582,752	281,557	281,557	56.26%	158,403	20,741,155	722	1.05	21,778,213	55
56	2013	13,936,298	1,591,888	15,528,186	361,540	361,540	56.26%	203,401	15,731,587	714	1.07	16,832,798	56
57	2014	19,551,745	2,040,194	21,591,938	1,300,315	1,300,315	56.26%	731,551	22,323,489	716	1.06	23,662,898	57
58	2015	26,587,715	2,645,315	29,233,030	569,827	569,827	56.26%	320,582	29,553,612	699	1.09	32,213,437	58
59	2016	19,984,976	2,033,731	22,018,707	1,413,959	1,413,959	56.26%	795,486	22,814,193	693	1.10	25,095,613	59
60	2017	36,634,169	3,137,248	39,771,417	1,240,707	1,240,707	56.26%	698,016	40,469,433	728	1.05	42,492,905	60
61	2018	19,717,101	3,374,148	23,091,248	2,337,208	2,337,208	56.26%	1,314,902	24,406,150	761	1.00	24,406,150	61
62	2019	21,894,177	3,306,439	25,200,616	2,746,616	2,746,616	56.26%	1,545,233	26,745,849	761	1.00	26,745,849	62
63	2020	10,600,941	1,931,910	12,532,850	3,228,694	3,228,694	56.26%	1,816,448	14,349,298	761	1.00	14,349,298	
64	2021	4,575,361	833,811	5,409,172	(9,961,756)	(9,961,756)	56.26%	(5,604,436)	(195,264)	761	1.00	(195,264)	
65													65
66	Total	$ 333,719,551	$ 46,458,288	$ 380,177,839	$ 6,083,083	$ 6,083,083		$ 3,422,316	$ 383,600,155			$ 512,367,805	66
										Excess Deferred Taxes		185,280,462	
										Deferred Tax Adjustments		1,261,540	
										Total RCND Deferred Taxes		$ 698,909,807	
												Sch B-1, Sh 1, Ln 13(d)	

SCHEDULE B-5

SOUTHWEST GAS CORPORATION
ARIZONA
WORKING CAPITAL ALLOWANCE COMPUTATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Cash Working Capital	Sch B-5, Sh 2, Ln 15(c)	$	(16,619,324)	1
2	Materials and Supplies	Sch B-5, Sh 3, Ln 16(f)		30,847,268	2
3	Prepayments	Sch B-5, Sh 4, Ln 19(h)		14,121,283	3
4	Total Working Capital Allowance	Sum Lns 1-3	$	28,349,227	4
				Sch B-1, Sh 2, Lns 8-10	

SOUTHWEST GAS CORPORATION
ARIZONA
CASH WORKING CAPITAL
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Cost	Lag Days	Dollar Days	Line No.
	(a)	(b)	(c)	(d)	(e) (c) * (d)	
1	Cost of Gas	[1]	$ 209,542,135	41.75	$ 8,748,355,696	1
2	Labor and Benefits Expense	WP B-5, Sh 14	136,658,072	11.97	1,636,142,843	2
3	Prepayments Amortized to O&M	WP B-5, Sh 29	17,873,684	0.00	0	3
4	Uncollectibles Expense	WP B-5, Sh 28	1,692,711	90.83	153,754,603	4
5	Other O&M Expense	WP B-5, Sh 28	81,891,353	23.50	1,924,415,960	5
6	Total O&M Expense	Sum Lns 1-5	$ 447,657,955	27.84	$ 12,462,669,102	6
7	Interest	Sch C-1, Sh 16, Ln 21(e)	53,723,986	91.14	4,896,437,122	7
8	Taxes Other than Income Taxes	Sch A-1, Sh 2, Ln 15(g)	69,307,596	173.60	12,032,083,329	8
9	Income Taxes - Current	Sch C-1, Sh 16, Ln 18(e)	34,462,457	36.50	1,257,879,669	9
10	Total	Sum Lns 6-9	$ 605,151,993	50.65	$ 30,649,069,222	10
11	Number of Days in Test Period		365			11
12	Average Daily Operating Expenses	Ln 10 / Ln 11	$ 1,657,951			12
13	Lag in Receipt of Revenue	WP B-5, Sh 93, Ln 4(c)		40.62		13
14	Net Revenue Lag (Expense Lead)	Ln 13(d) - Ln 10(d)	(10.02)			14
15	Cash Working Capital	Ln 12 * Ln 14	$ (16,619,324)			15
			Sch B-5, Sh 1, Ln 1(c)			

[1] Gas Costs adjusted for present volumes and rates.

SOUTHWEST GAS CORPORATION
ARIZONA
MATERIALS AND SUPPLIES (M&S) [1]
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account Number 154	163	164.2	System Allocable	Total	Line No.
	(a)	(b)	(c)	(d)		(e)	(f)	
			Company Records	Company Records	Company Records	WP B-5, Sh 1	Sum (c)-(e)	
1	August 2020		$ 31,122,296	$ 1,490,281	$ 2,094,887	$ (13,338)	$ 34,694,126	1
2	September 2020		30,344,828	1,558,286	2,041,325	(13,354)	33,931,084	2
3	October 2020		29,919,590	1,337,801	2,070,725	(13,502)	33,314,614	3
4	November 2020		28,700,876	1,345,285	2,058,631	(13,502)	32,091,289	4
5	December 2020		27,817,017	1,194,321	2,192,993	(13,502)	31,190,829	5
6	January 2021		27,377,397	1,243,740	2,273,980	(13,502)	30,881,614	6
7	February 2021		26,899,317	1,119,411	2,225,215	(14,908)	30,229,035	7
8	March 2021		26,197,552	929,750	2,055,982	(13,544)	29,169,741	8
9	April 2021		25,807,425	832,225	1,980,383	(13,540)	28,606,493	9
10	May 2021		26,239,386	312,360	1,904,733	(11,878)	28,444,601	10
11	June 2021		26,887,804	411,890	1,837,567	(42,789)	29,094,471	11
12	July 2021		26,629,993	782,210	1,754,664	(42,789)	29,124,077	12
13	August 2021		26,978,499	1,052,400	2,254,397	(42,789)	30,242,506	13
14	Thirteen Month Total	Sum Lns 1-13	$ 360,921,979	$ 13,609,960	$ 26,745,483	$ (262,941)	$ 401,014,481	14
15	Thirteen Month Average	Ln 14 / 13	$ 27,763,229	$ 1,046,920	$ 2,057,345	$ (20,226)	$ 30,847,268	15
16	Test Year M&S	Ln 15					$ 30,847,268	16
							Sch B-5, Sh 1, Ln 2	

[1] $2.8M of LNG inventory is added to test year M&S in Adjustment No. 18.

SOUTHWEST GAS CORPORATION
ARIZONA
PREPAYMENTS
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Postage 165000000	Insurance and Other 165001129	Prepaid Supplies-General Office 165001132	Commercial Paper Facility 165001353	Total	Line No.
	(a)	(b)	(c)	(d)	(f)	(g)	(h)	
			Company Records	Company Records	Company Records	Company Records	Sum (c)-(g)	
1	August 2020		$ 293,773	$ 32,223,094	$ 40,755	$ 0	$ 32,557,622	1
2	September 2020		50,027	30,259,863	40,173	4,958	30,355,021	2
3	October 2020		54,142	28,230,542	37,089	6,514	28,328,287	3
4	November 2020		43,554	25,960,105	45,001	5,417	26,054,077	4
5	December 2020		30,737	28,506,157	52,796	4,533	28,594,223	5
6	January 2021		25,052	25,795,607	53,349	2,667	25,876,674	6
7	February 2021		31,982	23,213,201	52,107	2,633	23,299,924	7
8	March 2021		49,819	22,641,633	57,544	9,300	22,758,296	8
9	April 2021		40,572	21,368,606	50,736	8,300	21,468,214	9
10	May 2021		32,116	18,896,816	46,460	6,244	18,981,636	10
11	June 2021		43,284	18,875,111	45,429	7,300	18,971,123	11
12	July 2021		37,573	18,379,429	41,944	3,117	18,462,063	12
13	August 2021		25,736	30,719,496	39,529	0	30,784,761	13
14	Thirteen Month Total	Sum Lns 1-13	$ 758,366	$ 325,069,661	$ 602,910	$ 60,983	$ 326,491,921	14
15	Thirteen Month Average	Ln 14 / 13	$ 58,336	$ 25,005,359	$ 46,378	$ 4,691	$ 25,114,763	15
16	Deferred Taxes	Ln 15 * Sch C-3, Sh 2, Ln 4(c)	14,509	0	0	0	14,509	16
17	Balance Net of Deferred Taxes	Ln 15 - Ln 16	$ 43,827	$ 25,005,359	$ 46,378	$ 4,691	$ 25,100,254	17
18	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)					56.26%	18
19	Prepayments Allocated to AZ	Ln 17 * Ln 18					$ 14,121,283	19
							Sch B-5, Sh 1, Ln 3	

SCHEDULE B-5
SHEET 4 OF 4

SCHEDULE B-6

SOUTHWEST GAS CORPORATION
ARIZONA
CUSTOMER DEPOSITS
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account 235 Balance	Line No.
	(a)	(b)	(c)	
			Company Records	
1	August 2020		$ 36,587,519	1
2	September 2020		36,293,867	2
3	October 2020		35,939,360	3
4	November 2020		35,839,762	4
5	December 2020		35,572,817	5
6	January 2021		35,452,953	6
7	February 2021		35,246,751	7
8	March 2021		35,155,364	8
9	April 2021		35,282,220	9
10	May 2021		35,605,959	10
11	June 2021		21,668,700	11
12	July 2021		30,868,246	12
13	August 2021		29,237,043	13
14	Thirteen Month Total	Sum Lns 1-13	$ 438,750,560	14
15	Thirteen Month Average	Ln 14 / 13	$ 33,750,043	15
16	Test Year Customer Deposits	Ln 15	$ 33,750,043	16
			Sch B-1, Sh 2, Ln 11(c)	

SOUTHWEST GAS CORPORATION
ARIZONA
CUSTOMER ADVANCES
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account 252 Balance	Line No.
	(a)	(b)	(c)	
			Company Records	
1	August 2020		$ 55,451,699	1
2	September 2020		54,890,607	2
3	October 2020		54,673,059	3
4	November 2020		54,535,734	4
5	December 2020		58,901,460	5
6	January 2021		59,891,523	6
7	February 2021		60,276,253	7
8	March 2021		61,878,720	8
9	April 2021		59,534,907	9
10	May 2021		61,935,033	10
11	June 2021		62,877,255	11
12	July 2021		63,213,613	12
13	August 2021		64,730,332	13
14	Thirteen Month Total	Sum Lns 1-13	$ 772,790,196	14
15	Thirteen Month Average	Ln 14 / 13	$ 59,445,400	15
16	Test Year Customer Advances	Ln 15	$ 59,445,400	16
			Sch B-1, Sh 2, Ln 12(c)	

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES AS RECORDED
AT AUGUST 31, 2021

Line No.	Description	Reference	AZ Direct	System Allocable	After 4-Factor Allocation	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
			Company Records	Company Records	Col (d) * Ln 6(e)	(c) + (e)	
1	Deferred Tax Liability - State	Account 282	$ 44,235,443	$ 3,951,056	$ 2,222,845	$ 46,458,288	1
2	Deferred Tax Liability - Federal	Account 282	333,719,551	6,083,083	3,422,313	337,141,864	2
3	Excess Deferred Income Taxes	Account 254				185,280,462	3
4							4
5	Total	Sum Lns 1 - 4	$ 377,954,994	$ 10,034,139	$ 5,645,158	$ 568,880,614	5
						Sch B-1, Sh 2, Ln 13(c)	
6	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)			56.26%		6

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES AS ADJUSTED
AT AUGUST 31, 2021

Line No.	Description	Reference	AZ Direct	System Allocable	After 4-Factor Allocation	Total	Line No.
	(a)	(b)	(c)	(d)	(e) Col (d) * Ln 16(e)	(f) (c) + (e)	
	As Recorded						
1	Deferred Tax Liability - State	Sch B-6, Sh 3, Ln 1	$ 44,235,443	$ 3,951,056	$ 2,222,845	$ 46,458,288	1
2	Deferred Tax Liability - Federal	Sch B-6, Sh 3, Ln 2	333,719,551	6,083,083	3,422,313	337,141,864	2
3	Excess Deferred Income Taxes	Sch B-6, Sh 3, Ln 3	0	0	0	185,280,462	3
4							4
5	Total	Sum Lns 1 - 4	$ 377,954,994	$ 10,034,139	$ 5,645,158	$ 568,880,614	5
	Adjustments						
6	Deferred Tax Liability - State	B-2, Adj. 24, Sh 1	$ 321,899	$ (58,982)	$ (33,183)	$ 288,716	6
7	Deferred Tax Liability - Federal	B-2, Adj. 24, Sh 1	1,746,287	(319,975)	(180,016)	1,566,271	7
8	Excess Deferred Income Taxes	B-2, Adj. 24, Sh 1	0	(1,054,837)	(593,446)	(593,446)	8
9							9
10	Total	Sum Lns 6 - 9	$ 2,068,186	$ (1,433,793)	$ (806,645)	$ 1,261,540	10
						Sch C-2, Sh 2, Col (e)	
	As Adjusted						
11	Deferred Tax Liability - State	Ln 1 + Ln 6	$ 44,557,342	$ 3,892,074	$ 2,189,662	$ 46,747,004	11
12	Deferred Tax Liability - Federal	Ln 2 + Ln 7	335,465,838	5,763,108	3,242,297	338,708,135	12
13	Excess Deferred Income Taxes	Ln 3 + Ln 8	0	(1,054,837)	(593,446)	184,687,015	13
14							14
15	Total	Sum Lns 11 - 14	$ 380,023,180	$ 8,600,345	$ 4,838,513	$ 570,142,154	15
16	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)			56.26%		16

SOUTHWEST GAS CORPORATION
ARIZONA
EXCESS ACCUMULATED DEFERRED INCOME TAXES
REGULATORY LIABILITY

Line No.	Description	Reference	Plant Amount	Non-Plant Amount	Total	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
1	Original Arizona EADIT	Prior Rate Case	$ 155,586,766	34,863,739	190,450,505	1
2	EADIT Amortized Through August 31, 2021	Company Records	(2,721,567)	(2,448,477)	(5,170,043)	
3	Arizona EADIT Balance at August 31, 2021 [1]	Ln 1 + Ln 2	$ 152,865,199	$ 32,415,262	$ 185,280,462	2
3	Gross-up [2]	Company Records	46,397,361	9,838,620	56,235,982	3
4	Total Arizona Regulatory Liability	Ln 3 + Ln 3	$ 199,262,561	$ 42,253,883	$ 241,516,443	4
5			Sch B-6, Sh 6,	Sch B-6, Sh 6,		5
6			Ln 1(c)	Ln 1(d)		6
7						7
8						8

[1] Rate Base adjustment associated with plant-related excess deferred income tax
[2] Excess deferred taxes are grossed-up to reflect the future tax savings of reduced future revenue

SOUTHWEST GAS CORPORATION
ARIZONA
AMORTIZATION OF EXCESS ACCUMULATED DEFERRED INCOME TAXES (EADIT)

Line No.	Description	Reference	Protected	Unprotected	Total	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
1	EADIT Balance at 8/31/21	Sch B-6, Sh 5	$ 152,865,199	$ 32,415,262	$ 185,280,462	1
2	Additonal EADIT Amortized Through December 31, 2022	Company Records		(4,524,271)		2
3	EADIT Balance at 12/31/22		$	27,890,991		3
4	Amortization Period (Remaining Months)			96		4
5	Annual Amortization of EADIT	Company Records	3,110,789 [3]	3,486,374		5
6	Arizona Share of System Allocable EADIT and NOL		687,434			6
7	Total Arizona Annual Amortization of EADIT [1]	Ln 1 + Ln 5	$ 3,798,223	$ 3,486,374	7,284,597	7
					Sch C-1, Sh 16, Ln 15(d)	
	SYSTEM ALLOCABLE					
8	Annual Amortization of EADIT	Company Records	$ 1,829,192			8
9	4-Factor at 12/31/17	[2]	55.47%			9
10	Arizona Share of Annual Amortization of EADIT	Ln * Ln	$ 1,014,653			10
11	EADIT Amort. Related to Net Operating Loss		(327,219)			11
12	Total Allocated to Arizona	Ln 10 + Ln 11	687,434			12

SCHEDULE C-1

SOUTHWEST GAS CORPORATION
ARIZONA
ADJUSTED TEST YEAR INCOME STATEMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
				Sch C-2, Sh 2, Col (p)	(c) + (d)	
1	Operating Revenue	Sch C-2, Adj 1, Sh 1	$ 722,593,622	$ (143,408,188)	$ 579,185,433	1
2	Gas Cost	Sch C-1, Sh 3, Lns 6 and 9	157,575,309	(157,575,309)	0	2
3	Operating Margin	Ln 1 - Ln 2	$ 565,018,312	$ 14,167,121	$ 579,185,433	3
	Operating Expenses					
4	Other Gas Costs	Sch C-1, Sh 3, Ln 7(c)	$ 1,306,683	$ 28,691	$ 1,335,375	4
5	Storage	Sch C-1, Sh 3, Ln 8(c)	1,973,882	27,219	2,001,101	5
6	Distribution	Sch C-1, Sh 3, Ln 25(c)	109,198,435	2,126,260	111,324,695	6
7	Customer Accounts	Sch C-1, Sh 3, Ln 31(c)	28,049,178	(1,077,005)	26,972,173	7
8	Customer Service & Info.	Sch C-1, Sh 4, Ln 4(c)	188,705	(20,780)	167,925	8
9	Sales	Sch C-1, Sh 4, Ln 8(c)	3,425	(3,628)	(203)	9
	Administrative & General					
10	Direct	Sch C-1, Sh 9, Ln 25(d)	4,455,155	810,190	5,265,344	10
11	System Allocable	Sch C-1, Sh 9, Ln 25(k)	93,755,791	(2,895,888)	90,859,903	11
	Depreciation & Amortization					
12	Direct	Sch C-1, Sh 14, Ln 3(d)	112,464,317	7,427,002	119,891,319	12
13	System Allocable	Sch C-1, Sh 14, Ln 12(d)	13,602,014	3,051,686	16,653,700	13
14	Regulatory Amortizations	Sch C-1, Sh 14, Ln 6(d)	2,620,521	1,695,436	4,315,957	14
15	Taxes Other Than Income	Sch C-1, Sh 15, Ln 3(c)	51,219,448	18,088,148	69,307,596	15
16	Interest on Customer Deposits	Sch C-2, Adj. 22, Sh 1, Ln 4(c)	803,794	(766,669)	37,125	16
17	Income Taxes	Sch C-1, Sh 16, Ln 18(c)	23,660,630	(11,713,236)	11,947,394	17
18	Total Operating Expenses	Sum Lns 4-17	$ 443,301,978	$ 16,777,427	$ 460,079,404	18
19	Net Operating Income	Ln 3 - Ln 18	$ 121,716,335	$ (2,610,306)	$ 119,106,029	19
			Sch A-1, Sh 2, Col (c)	Sch A-1, Sh 2, Col (d)	Sch A-1, Sh 2, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
ADJUSTED SALES VOLUMES AND REVENUES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded At 8/31/2021	Adjustment No. 1	Test Period Balance As Adjusted	Line No.
	(a)	(b)	(c)	(d)	
1	Sales Quantity (Therms) [1]	571,813,620	(20,499,366)	551,314,254	1
2	Revenue [1]	$ 722,593,622	$ (143,408,188)	$ 579,185,433	2
3	Total Revenue Adjustment		$ (143,408,188)		3

[1] Schedule C-2, Adjustment No. 1, Sheet 1.

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Account No./ Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c) Sch C-1, Sh 5-8, Col (c)	(d) (e) - (c)	(e) Sch C-1, Sh 5-8, Col (k)	
	Purchased Gas Costs					
1	Natural Gas Transmission Line Purchases	803	$ 312,371,683	$ (312,371,683)	$ 0	1
2	Purchased Gas Cost Adjustments	805	(208,439,764)	208,439,764	0	2
3	Gas Withdrawn From Storage	808	1,045,270	(1,045,270)	0	3
4	Gas Delivered To Storage	808	(1,204,779)	1,204,779	0	4
5	Gas Used for Compressor Station Fuel	810	0	0	0	5
6	Total Purchased Gas Costs	Sum Lns 1-5	$ 103,772,410	$ (103,772,410)	$ 0	6
	Other Gas Costs					
7	Other Gas Supply	813	$ 1,306,683	$ 28,691	$ 1,335,375	7
	Storage					
8	LNG Storage Facility	Various	$ 1,973,882	$ 27,219	$ 2,001,101	8
	Transmission					
9	Transmission and Compression of Gas by Others	858	$ 53,802,899	$ (53,802,899)	$ 0	9
	Distribution					
10	Operation Supervision and Engineering	870	$ 10,720,564	$ 273,180	$ 10,993,743	10
11	Operation Distribution Load Dispatching	871	1,288,310	28,831	1,317,141	11
12	Operation Mains and Services	874	19,947,408	245,786	20,193,195	12
13	Operation Measuring and Regulation Station	875	2,840,731	40,391	2,881,122	13
14	Operation Meter and House Regulator	878	10,512,121	243,254	10,755,375	14
15	Customer Installation	879	12,732,567	224,214	12,956,782	15
16	Other	880	10,393,020	111,247	10,504,267	16
17	Rents	881	(838,690)	0	(838,690)	17
18	Maintenance Supervision and Engineering	885	2,569,382	57,971	2,627,353	18
19	Maintenance of Structures and Improvements	886	7,647	14	7,662	19
20	Maintenance of Mains	887	21,627,796	476,615	22,104,411	20
21	Maintenance of Measuring and Reg. Station Eq.	889	2,125,448	29,734	2,155,182	21
22	Maintenance of Services	892	10,155,399	319,319	10,474,717	22
23	Maintenance of Meters and House Regulators	893	4,815,518	71,654	4,887,172	23
24	Maintenance of Other Equipment	894	301,214	4,051	305,265	24
25	Total Distribution	Sum Lns 10-24	$ 109,198,435	$ 2,126,260	$ 111,324,695	25
	Customer Accounts					
26	Supervision	901	$ 2,405,414	$ 49,797	$ 2,455,211	26
27	Meter Reading	902	1,583,622	41,075	1,624,697	27
28	Customer Records and Collection	903	21,439,138	(317,714)	21,121,424	28
29	Uncollectible Accounts	904	2,544,346	(851,635)	1,692,711	29
30	Miscellaneous	905	76,658	1,472	78,129	30
31	Total Customer Accounts	Sum Lns 26-30	$ 28,049,178	$ (1,077,005)	$ 26,972,173	31

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Account No./ Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Sch C-1, Sh 5-8, Col (c)	(e) - (c)	Sch C-1, Sh 5-8, Col (k)	
	Customer Service and Information					
1	Customer Assistance	908	$ 0	$ 0	$ 0	1
2	Informational and Instructional Advertising	909	0	0	0	2
3	Miscellaneous	910	188,705	(20,780)	167,925	3
4	Total Customer Service and Information	Sum Lns 1-3	$ 188,705	$ (20,780)	$ 167,925	4
	Sales					
5	Supervision	911	$ 0	$ 0	$ 0	5
6	Demonstration and Selling	912	0	0	0	6
7	Advertising	913	3,425	(3,628)	(203)	7
8	Total Sales	Sum Lns 5-7	$ 3,425	$ (3,628)	$ (203)	8
9	Total O&M		$ 298,295,618	$ (156,494,550)	$ 141,801,067	9
	Administrative and General (A&G)		Sch C-1, Sh 9, Col (l)		Sch C-1, Sh 13, Col (l)	
10	A&G Salaries	920	$ 54,417,660	$ (2,041,714)	$ 52,375,946	10
11	Office Supplies and Expenses	921	6,547,718	(88,735)	6,458,984	11
12	A&G Expenses Transferred (Credit)	922	(8,060,224)	214,238	(7,845,986)	12
13	Outside Services	923	17,531,416	(107,358)	17,424,059	13
14	Property Insurance	924	497,489	105,698	603,187	14
15	Injuries and Damages	925	8,151,365	1,878,523	10,029,888	15
16	Employee Pension and Benefits	926	8,622,854	(276,161)	8,346,693	16
17	Regulatory Commission Expenses	928	110,725	86,609	197,333	17
18	Safety Advertising	930.1	829,341	0	829,341	18
19	Miscellaneous General	930.2	4,172,049	(423,904)	3,748,145	19
20	Rents	931	1,029,368	(18,177)	1,011,191	20
21	Maintenance of General Plant	935	4,361,183	(1,414,717)	2,946,466	21
22	Total A&G	Sum Lns 10-21	$ 98,210,946	$ (2,085,699)	$ 96,125,247	22
23	Total O&M and A&G	Ln 9 + Ln 22	$ 396,506,563	$ (158,580,249)	$ 237,926,314	23

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
	Purchased Gas Costs													
1	Natural Gas Transmission Line Purchases	803	$ 312,371,683	$ (312,371,683)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	1
2	Purchased Gas Cost Adjustments	805	(208,439,764)	208,439,764	0	0	0	0	0	0	0		0	2
3	Gas Withdrawn From Storage	808	1,045,270	(1,045,270)	0	0	0	0	0	0	0		0	3
4	Gas Delivered To Storage	808	(1,204,779)	1,204,779	0	0	0	0	0	0	0		0	4
5	Gas Used for Compressor Station Fuel	810	0	0	0	0	0	0	0	0	0		0	5
6	Total Purchased Gas Costs	Sum Lns 1-5	$ 103,772,410	$ (103,772,410)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	6
7														7
8	Other Gas Costs													8
9	Other Gas Supply	813												9
10	Labor		$ 764,177	$ 0	$ 51,022	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 815,199	10
11	Labor Loadings		473,645	0	(22,331)	0	0	0	0	0	0		451,314	11
12	Materials and Expenses		68,861	0	0	0	0	0	0	0	0		68,861	12
13	Total Other Gas Supply	Sum Lns 10-12	$ 1,306,683	$ 0	$ 28,691	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,335,375	13
14														14
15	Storage	840 - 843.9												15
16	Labor		872,189		33,200								905,389	16
17	Labor Loadings		536,219		(5,981)								530,238	17
18	Materials and Expenses		565,475										565,475	18
19	Total LNG Storage Facility		$ 1,973,882	$ 0	$ 27,219	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,001,101	19
20														20
21	Transmission													21
22	Transmission and Compression of Gas by Others	858	$ 53,802,899	$ (53,802,899)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	22
23														23
24	Distribution													24
25	Operation Supervision and Engineering	870												25
26	Labor		$ 5,899,398	$ 0	$ 227,556	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 6,126,955	26
27	Labor Loadings		3,638,177	0	(42,784)	0	0	0	0	0	0		3,595,392	27
28	Materials and Expenses		1,182,988	0	0	0	(10,642)	(175)	0	0	99,225		1,271,396	28
29	Total Operation Supervision and Engineering	Sum Lns 26-28	$ 10,720,564	$ 0	$ 184,772	$ 0	$ (10,642)	$ (175)	$ 0	$ 0	$ 99,225	$ 0	$ 10,993,743	29
30														30
31	Operation Distribution Load Dispatching	871												31
32	Labor		$ 764,831	$ 0	$ 51,066	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 815,897	32
33	Labor Loadings		471,611	0	(22,235)	0	0	0	0	0	0		449,376	33
34	Materials and Expenses		51,869	0	0	0	0	0	0	0	0		51,869	34
35	Total Operation Distribution Load Dispatching	Sum Lns 32-34	$ 1,288,310	$ 0	$ 28,831	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,317,141	35
36														36
37	Operation Mains and Services	874												37
38	Labor		$ 3,391,433	$ 0	$ 129,104	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,520,537	38
39	Labor Loadings		2,101,220	0	(23,443)	0	0	0	0	0	0		2,077,778	39
40	Materials and Expenses		14,454,755	0	0	0	(375)	0	0	0	140,500		14,594,880	40
41	Total Operation Mains and Services	Sum Lns 38-40	$ 19,947,408	$ 0	$ 105,661	$ 0	$ (375)	$ 0	$ 0	$ 0	$ 140,500	$ 0	$ 20,193,195	41
42														42
43	Operation Measuring and Regulation Station	875												43
44	Labor		$ 1,301,669	$ 0	$ 49,549	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,351,217	44
45	Labor Loadings		806,809	0	(8,999)	0	0	0	0	0	0		797,810	45
46	Materials and Expenses		732,253	0	0	0	(158)	0	0	0	0		732,095	46
47	Total Operation Measuring and Regulation Station	Sum Lns 44-46	$ 2,840,731	$ 0	$ 40,549	$ 0	$ (158)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,881,122	47
48														48
49	Operation Meter and House Regulator	878												49
50	Labor		$ 4,371,056	$ 0	$ 166,386	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 4,537,442	50
51	Labor Loadings		2,691,176	0	(30,018)	0	0	0	0	0	0		2,661,158	51
52	Materials and Expenses		3,449,889	0	0	0	0	0	0	0	106,885		3,556,774	52
53	Total Operation Meter and House Regulator	Sum Lns 50-52	$ 10,512,121	$ 0	$ 136,369	$ 0	$ 0	$ 0	$ 0	$ 0	$ 106,885	$ 0	$ 10,755,375	53

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
54														54
55	Customer Installation	879												55
56	Labor		$ 6,811,243	$ 0	$ 296,981	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 7,108,224	56
57	Labor Loadings		4,171,738	0	(75,766)	0	0	0	0	0	0		4,095,971	57
58	Materials and Expenses		1,749,586	0	0	0	0	0	0	0	3,000		1,752,586	58
59	Total Customer Installation	Sum Lns 56-58	$ 12,732,567	$ 0	$ 221,214	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,000	$ 0	$ 12,956,782	59
60														60
61	Other	880												61
62	Labor		$ 3,611,004	$ 0	$ 156,744	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,767,748	62
63	Labor Loadings		2,250,262	0	(40,204)	0	0	0	0	0	0		2,210,058	63
64	Materials and Expenses		4,531,754	0	0	0	(43,293)	0	0	0	38,000		4,526,461	64
65	Total Other	Sum Lns 62-64	$ 10,393,020	$ 0	$ 116,540	$ 0	$ (43,293)	$ 0	$ 0	$ 0	$ 38,000	$ 0	$ 10,504,267	65
66														66
67	Rents	881	$ (838,690)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ (838,690)	67
68														68
69	Maintenance Supervision and Engineering	885												69
70	Labor		$ 1,441,744	$ 0	$ 56,479	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,498,223	70
71	Labor Loadings		890,452	0	(11,108)	0	0	0	0	0	0		879,344	71
72	Materials and Expenses		237,186	0	0	0	(2,665)	0	0	0	15,265		249,786	72
73	Total Maintenance Supervision and Engineering	Sum Lns 70-72	$ 2,569,382	$ 0	$ 45,371	$ 0	$ (2,665)	$ 0	$ 0	$ 0	$ 15,265	$ 0	$ 2,627,353	73
74														74
75	Maintenance of Structures and Improvements	886												75
76	Labor		$ 474	$ 0	$ 18	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 492	76
77	Labor Loadings		328	0	(4)	0	0	0	0	0	0		324	77
78	Materials and Expenses		6,846	0	0	0	0	0	0	0	0		6,846	78
79	Total Maintenance of Structures and Improvements	Sum Lns 76-78	$ 7,647	$ 0	$ 14	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,662	79
80														80
81	Maintenance of Mains	887												81
82	Labor		$ 6,944,295	$ 0	$ 264,338	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 7,208,633	82
83	Labor Loadings		4,278,647	0	(47,724)	0	0	0	0	0	0		4,230,923	83
84	Materials and Expenses		10,404,854	0	0	0	(6,435)	0	0	0	266,436		10,664,855	84
85	Total Maintenance of Mains	Sum Lns 82-84	$ 21,627,796	$ 0	$ 216,614	$ 0	$ (6,435)	$ 0	$ 0	$ 0	$ 266,436	$ 0	$ 22,104,411	85
86														86
87	Maintenance of Measuring and Reg. Station Eq.	889												87
88	Labor		$ 887,610	$ 0	$ 33,787	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 921,397	88
89	Labor Loadings		542,652	0	(6,053)	0	0	0	0	0	0		536,599	89
90	Materials and Expenses		695,186	0	0	0	(0)	0	0	0	2,000		697,186	90
91	Total Maintenance of Measuring and Reg. Station Eq.	Sum Lns 88-90	$ 2,125,448	$ 0	$ 27,735	$ 0	$ (0)	$ 0	$ 0	$ 0	$ 2,000	$ 0	$ 2,155,182	91
92														92
93	Maintenance of Services	892												93
94	Labor		$ 3,105,780	$ 0	$ 118,223	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,224,003	94
95	Labor Loadings		1,905,005	0	(21,249)	0	0	0	0	0	0		1,883,756	95
96	Materials and Expenses		5,144,614	0	0	0	0	0	0	0	222,344		5,366,958	96
97	Total Maintenance of Services	Sum Lns 94-96	$ 10,155,399	$ 0	$ 96,975	$ 0	$ 0	$ 0	$ 0	$ 0	$ 222,344	$ 0	$ 10,474,717	97

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
98														98
99	Maintenance of Meters and House Regulators	893												99
100	Labor		$ 2,224,370	$ 0	$ 84,672	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 2,309,042	100
101	Labor Loadings		1,346,406	0	(15,018)	0	0	0	0	0	0		1,331,388	101
102	Materials and Expenses		1,244,741	0	0	0	0	0	0	0	2,000		1,246,741	102
103	Total Maintenance of Meters and House Regulators	Sum Lns 100-102	$ 4,815,518	$ 0	$ 69,654	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,000	$ 0	$ 4,887,172	103
104														104
105	Maintenance of Other Equipment	894												105
106	Labor		$ 129,397	$ 0	$ 4,926	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 134,322	106
107	Labor Loadings		78,418	0	(875)	0	0	0	0	0	0		77,543	107
108	Materials and Expenses		93,400	0	0	0	0	0	0	0	0		93,400	108
109	Total Maintenance of Other Equipment	Sum Lns 106-108	$ 301,214	$ 0	$ 4,051	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 305,265	109
110														110
111	Total Distribution													111
112	Labor		$ 40,884,304	$ 0	$ 1,639,828	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 42,524,132	112
113	Labor Loadings		25,172,900	0	(345,479)	0	0	0	0	0	0	0	24,827,420	113
114	Materials and Expenses		43,141,231	0	0	0	(63,568)	(175)	0	0	895,655	0	43,973,143	114
115	Total Distribution	Sum Lns 112-114	$ 109,198,435	$ 0	$ 1,294,349	$ 0	$ (63,568)	$ (175)	$ 0	$ 0	$ 895,655	$ 0	$ 111,324,695	115
116														116
117	Customer Accounts													117
118	Supervision	901												118
119	Labor		$ 1,450,298	$ 0	$ 88,814	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,539,112	119
120	Labor Loadings		898,127	0	(36,131)	0	0	0	0	0	0		861,996	120
121	Materials and Expenses		56,989	0	0	0	(2,886)	0	0	0	0		54,104	121
122	Total Supervision	Sum Lns 119-121	$ 2,405,414	$ 0	$ 52,683	$ 0	$ (2,886)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,455,211	122
123														123
124	Meter Reading	902												124
125	Labor		$ 739,497	$ 0	$ 28,149	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 767,647	125
126	Labor Loadings		454,902	0	(5,074)	0	0	0	0	0	0		449,828	126
127	Materials and Expenses		389,223	0	0	0	0	0	0	0	18,000		407,223	127
128	Total Meter Reading	Sum Lns 125-127	$ 1,583,622	$ 0	$ 23,075	$ 0	$ 0	$ 0	$ 0	$ 0	$ 18,000	$ 0	$ 1,624,697	128
129														129
130	Customer Records and Collection	903												130
131	Labor		$ 5,337,412	$ 0	$ 353,586	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 5,690,998	131
132	Labor Loadings		3,316,016	0	(154,147)	0	0	0	0	0	0	0	3,161,869	132
133	Materials and Expenses		12,785,710	0	0	(131,769)	(8,677)	0	0	(662,858)	0	286,150	12,268,558	133
134	Total Customer Records and Collection	Sum Lns 131-133	$ 21,439,138	$ 0	$ 199,439	$ (131,769)	$ (8,677)	$ 0	$ 0	$ (662,858)	$ 0	$ 286,150	$ 21,121,424	134
135														135
136	Uncollectible Accounts	904	$ 2,544,346	$ 0	$ 0	$ 0	$ 0	$ 0	$ (851,635)	$ 0	$ 0	$	$ 1,692,711	136
137														137
138	Miscellaneous	905												138
139	Labor		$ 47,217	$ 0	$ 1,797	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 49,014	139
140	Labor Loadings		29,204	0	(326)	0	0	0	0	0	0		28,878	140
141	Materials and Expenses		237	0	0	0	0	0	0	0	0		237	141
142	Total Miscellaneous	Sum Lns 139-141	$ 76,658	$ 0	$ 1,472	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 78,129	142
143														143
144	Total Customer Accounts													144
145	Labor		$ 7,574,424	$ 0	$ 472,347	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,046,770	145
146	Labor Loadings		4,698,248	0	(195,678)	0	0	0	0	0	0	0	4,502,571	146
147	Materials and Expenses		15,776,506	0	0	(131,769)	(11,562)	0	(851,635)	(662,858)	18,000	286,150	14,422,832	147
148	Total Customer Accounts	Sum Lns 145-147	$ 28,049,178	$ 0	$ 276,669	$ (131,769)	$ (11,562)	$ 0	$ (851,635)	$ (662,858)	$ 18,000	$ 286,150	$ 26,972,173	148

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
149														149
150	Customer Service and Information													150
151	Customer Assistance	908												151
152	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	152
153	Labor Loadings		0	0	0	0	0	0	0	0	0		0	153
154	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	154
155	Total Customer Assistance	Sum Lns 152-154	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	155
156														156
157	Informational and Instructional Advertising	909												157
158	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	158
159	Labor Loadings		0	0	0	0	0	0	0	0	0		0	159
160	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	160
161	Total Informational and Instructional Advertising	Sum Lns 158-160	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	161
162														162
163	Miscellaneous	910												163
164	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	164
165	Labor Loadings		0	0	0	0	0	0	0	0	0		0	165
166	Materials and Expenses		188,705	0	0	0	(20,780)	0	0	0	0		167,925	166
167	Total Miscellaneous	Sum Lns 164-166	$ 188,705	$ 0	$ 0	$ 0	$ (20,780)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	167
168														168
169	Total Customer Service and Information													169
170	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	170
171	Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	171
172	Materials and Expenses		188,705	0	0	0	(20,780)	0	0	0	0	0	167,925	172
173	Total Customer Service and Information	Sum Lns 170-172	$ 188,705	$ 0	$ 0	$ 0	$ (20,780)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	173
174														174
175	Sales													175
176	Supervision	911												176
177	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	177
178	Labor Loadings		0	0	0	0	0	0	0	0	0		0	178
179	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	179
180	Total Supervision	Sum Lns 177-179	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	180
181														181
182	Demonstration and Selling	912												182
183	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	183
184	Labor Loadings		0	0	0	0	0	0	0	0	0		0	184
185	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	185
186	Total Demonstration and Selling	Sum Lns 183-185	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	186
187														187
188	Advertising	913												188
189	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	189
190	Labor Loadings		0	0	0	0	0	0	0	0	0		0	190
191	Materials and Expenses		3,425	0	0	0	(3,628)	0	0	0	0		(203)	191
192	Total Advertising	Sum Lns 189-191	$ 3,425	$ 0	$ 0	$ 0	$ (3,628)	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	192
193														193
194	Total Sales													194
195	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	195
196	Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	196
197	Materials and Expenses		3,425	0	0	0	(3,628)	0	0	0	0	0	(203)	197
198	Total Sales	Sum Lns 195-197	$ 3,425	$ 0	$ 0	$ 0	$ (3,628)	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	198
199														199
200	Total O&M													200
201	Labor		$ 49,222,905	$ 0	$ 2,196,397	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 51,419,302	201
202	Labor Loadings		30,344,793	0	(569,469)	0	0	0	0	0	0	0	29,775,324	202
203	Materials and Expenses		218,727,920	(157,575,309)	0	(131,769)	(99,538)	(175)	(851,635)	(662,858)	913,655	286,150	60,606,441	203
204	Total O&M	Sum Lns 201-203	$ 298,295,618	$ (157,575,309)	$ 1,626,928	$ (131,769)	$ (99,538)	$ (175)	$ (851,635)	$ (662,858)	$ 913,655	$ 286,150	$ 141,801,067	204
			Sch C-1, Sh 3, Col (c)										Sch C-1, Sh 3, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA
RECORDED ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			Company Records	Company Records	(c) - (d) - (f)	Company Records	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ 68,261,172	$ 0	$ 0	$ 68,261,172	$ 38,403,408	$ 0	$ 0	$ 0	$ 38,403,408	$ 38,403,408	1
2	Labor Loadings		32,463,286	0	0	32,463,286	18,263,689	0	0	0	18,263,689	18,263,689	2
3	Materials and Expenses		(3,998,323)	0	0	(3,998,323)	(2,249,437)	0	0	0	(2,249,437)	(2,249,437)	3
4	Total A&G Salaries	Sum Lns 1-3	$ 96,726,136	$ 0	$ 0	$ 96,726,136	$ 54,417,660	$ 0	$ 0	$ 0	$ 54,417,660	$ 54,417,660	4
5	Office Supplies and Expenses	921	$ 11,638,418	$ 0	$ 0	$ 11,638,418	$ 6,547,718	$ 0	$ 0	$ 0	$ 6,547,718	$ 6,547,718	5
6	A&G Expenses Transferred (Credit)	922	$ (15,577,244)	$ 0	$ 0	$ (15,577,244)	$ 0	$ 0	$ 0	$ (8,060,224)	$ (8,060,224)	$ (8,060,224)	6
7	Outside Services	923	$ 31,320,687	$ 44,953	$ 193,949	$ 31,081,785	$ 17,486,463	$ 0	$ 0	$ 0	$ 17,486,463	$ 17,531,416	7
8	Property Insurance	924	$ 872,486	$ 0	$ 0	$ 872,486	$ 0	$ 497,489	$ 0	$ 0	$ 497,489	$ 497,489	8
9	Injuries and Damages	925	$ 14,763,535	$ 633,392	$ 767,119	$ 13,363,024	$ 7,517,973	$ 0	$ 0	$ 0	$ 7,517,973	$ 8,151,365	9
10	Employee Pension and Benefits	926	$ 15,333,080	$ 157	$ 6,279	$ 15,326,644	$ 8,622,697	$ 0	$ 0	$ 0	$ 8,622,697	$ 8,622,854	10
11	Regulatory Commission Expenses	928	$ 273,129	$ 110,725	$ 162,405	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 110,725	11
12	Safety Advertising	930.1	$ 1,557,339	$ 569,965	$ 526,340	$ 461,034	$ 259,375	$ 0	$ 0	$ 0	$ 259,375	$ 829,341	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		7,656,995	660,011	754,418	6,242,566	3,512,038	0	0	0	3,512,038	4,172,049	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 7,656,995	$ 660,011	$ 754,418	$ 6,242,566	$ 3,512,038	$ 0	$ 0	$ 0	$ 3,512,038	$ 4,172,049	16
17	Rents	931	$ 2,030,396	$ 91,584	$ 271,922	$ 1,666,890	$ 937,784	$ 0	$ 0	$ 0	$ 937,784	$ 1,029,368	17
	Maintenance of General Plant	935											
18	Labor		$ 860,921	$ 285	$ 15,274	$ 845,362	$ 475,597	$ 0	$ 0	$ 0	$ 475,597	$ 475,882	18
19	Labor Loadings		531,643	183	9,231	522,229	293,803	0	0	0	293,803	293,986	19
20	Materials and Expenses		6,892,299	2,343,899	2,331,147	2,217,254	1,247,416	0	0	0	1,247,416	3,591,315	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 8,284,863	$ 2,344,367	$ 2,355,651	$ 3,584,845	$ 2,016,817	$ 0	$ 0	$ 0	$ 2,016,817	$ 4,361,183	21
	Total A&G Expenses												
22	Labor		$ 69,122,093	$ 285	$ 15,274	$ 69,106,534	$ 38,879,005	$ 0	$ 0	$ 0	$ 38,879,005	$ 38,879,290	22
23	Labor Loadings		32,994,929	183	9,231	32,985,515	18,557,493	0	0	0	18,557,493	18,557,675	23
24	Materials and Expenses		72,762,798	4,454,686	5,013,578	63,294,534	43,882,028	497,489	0	(8,060,224)	36,319,293	40,773,980	24
25	Total A&G Expenses	Sum Lns 22-24	$ 174,879,821	$ 4,455,155	$ 5,038,082	$ 165,386,584	$ 101,318,526	$ 497,489	$ 0	$ (8,060,224)	$ 93,755,791	$ 98,210,946	25
			Sch C-1, Sh 13, Col (c)	Sch C-1, Sh 13, Col (d)	Sch C-1, Sh 13, Col (e)							Sch C-1, Sh 4, Col (c)	

SOUTHWEST GAS CORPORATION
ARIZONA
ADJUSTMENTS TO DIRECT ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Labor/Loading Annualization Adj. No. 3	Cost of Service Analysis Adj. No. 5	Self-Insured Retention Adj. No. 9	Rate Case Expense Adj. No. 12	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			Sch C-2, Adj. 3, Sh 1, Ln 36	Sch C-2, Adj. 5, Sh 1 Lns 12-13	Sch C-2, Adj. 9, Sh 1, Ln 1(d)	Sch C-2, Adj. 12, Sh 1, Ln 10(c)	Sum (c)-(f)	
	Administrative and General (A&G)							
	A&G Salaries	920						
1	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Labor Loadings		0	0	0	0	0	2
3	Materials and Expenses		0	0	0	0	0	3
4	Total A&G Salaries	Sum Lns 1-3	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Office Supplies and Expenses	921	$ 0	$ 16,994	$ 0	$ 0	$ 16,994	5
6	A&G Expenses Transferred (Credit)	922	$ 0	$ 0	$ 0	$ 0	$ 0	6
7	Outside Services	923	$ 0	$ 0	$ 0	$ 0	$ 0	7
8	Property Insurance	924	$ 0	$ 0	$ 0	$ 0	$ 0	8
9	Injuries and Damages	925	$ 0	$ (30)	$ 682,347	$ 0	$ 682,317	9
10	Employee Pension and Benefits	926	$ 0	$ 0	$ 0	$ 0	$ 0	10
11	Regulatory Commission Expenses	928	$ 0	$ 0	$ 0	$ 86,609	$ 86,609	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2						
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	14
15	Materials and Expenses		0	24,261	0	0	24,261	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 0	$ 24,261	$ 0	$ 0	$ 24,261	16
17	Rents	931	$ 0	$ 0	$ 0	$ 0	$ 0	17
	Maintenance of General Plant	935						
18	Labor		$ 11	$ 0	$ 0	$ 0	$ 11	18
19	Labor Loadings		(2)	0	0	0	(2)	19
20	Materials and Expenses		0	0	0	0	0	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 9	$ 0	$ 0	$ 0	$ 9	21
	Total A&G Expenses							
22	Labor		$ 11	$ 0	$ 0	$ 0	$ 11	22
23	Labor Loadings		(2)	0	0	0	(2)	23
24	Materials and Expenses		0	41,225	682,347	86,609	810,181	24
25	Total A&G Expenses	Sum Lns 22-24	$ 9	$ 41,225	$ 682,347	$ 86,609	$ 810,190	25
							Sch C-1, Sh 12, Col (d)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
ADJUSTMENTS TO ADMINISTRATIVE AND GENERAL (A&G) EXPENSES BEFORE ALLOCATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Labor/Loading Annualization Adj. No. 3	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Self-Insured Retention Adj. No. 9	Membership Dues Adj. No. 10	Great Basin Alloc. Annualization Adj. No. 11	Insurance Annualization Adj. No. 15	Corporate Aircraft Adj. No. 8	Corp HQ Adj. No. 17	Variable Pay Adj. Adj. No. 18	Total System Alloc.	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)	(i)	
			Sch C-2, Adj. 3, Sh 1 Sch C-2, Adj. 3, Sh 2	Sch C-2, Adj. 5, Sh 2, Col (o)	Sch C-2, Adj. 6, Sh 2, Ln 4(e)	Sch C-2, Adj. 9, Sh 1, Ln 4(d)	Sch C-2, Adj. 10, Sh 1, Ln 5(d)	Sch C-2, Adj. 11, Sh 1, Col (h)	Sch C-2, Adj. 15, Sh 1	Sch C-2, Adj. 8, Sh 1 Col (j)	Sch C-2, Adj. 17, Sh 1 Col	Sch C-2, Adj. 18, Sh 1 Col	Sum (c)-(h)	
	Administrative and General (A&G)													
	A&G Salaries	920												
1	Labor		$ (498,925)	$ 0	$ (2,985)	$ 0	$ 0	$ 0	$	$	$	$ (695,814)	$ (1,197,724)	1
2	Labor Loadings		(2,383,780)	0	0	0	0	0					(2,383,780)	2
3	Materials and Expenses		0	0	0	0	0	(47,596)					(47,596)	3
4	Total A&G Salaries	Sum Lns 1-3	$ (2,882,705)	$ 0	$ (2,985)	$ 0	$ 0	$ (47,596)	$ 0	$ 0	$ 0	$ (695,814)	$ (3,629,100)	4
5	Office Supplies and Expenses	921	$ 0	$ (195,903)	$ 0	$ 0	$ 0	$ 7,973	$	$ 0	$ 0	$ 0	$ (187,930)	5
6	A&G Expenses Transferred (Credit)	922	$ 423,758	$ 0	$ 0	$ 0	$ 0	$ (9,721)	$	$ 0	$ 0	$ 0	$ 414,037	6
7	Outside Services	923	$ 0	$ (225,649)	$ 0	$ 0	$ 0	$ 34,823	$	$ 0	$ 0	$ 0	$ (190,826)	7
8	Property Insurance	924	$ 0	$ 0	$ 0	$ 0	$ 0	$ 50,338	$ 135,033	$ 0	$ 0	$ 0	$ 185,371	8
9	Injuries and Damages	925	$ 0	$ 0	$ 0	$ 111,028	$ 0	$ 15,350	$ 1,999,850	$ 0	$ 0	$ 0	$ 2,126,228	9
10	Employee Pension and Benefits	926	$ (490,869)	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ (490,869)	10
11	Regulatory Commission Expenses	928	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ 0	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2												
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$	$	$	$ 0	13
14	Labor Loadings		0	0	0	0	0	0					0	14
15	Materials and Expenses		0	0	0	0	(35,693)	(2,623)	0	(758,286)			(796,603)	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 0	$ 0	$ 0	$ 0	$ (35,693)	$ (2,623)	$ 0	$ (758,286)	$ 0	$ 0	$ (796,603)	16
17	Rents	931	$ 0	$ (1,168)	$ 0	$ 0	$ 0	$ (31,141)	$	$	$	$	$ (32,310)	17
	Maintenance of General Plant	935												
18	Labor		$ (8,051)	$ 0	$ 0	$ 0	$ 0	$ 0	$	$	$	$	$ (8,051)	18
19	Labor Loadings		(38,347)	0	0	0	0	0					(38,347)	19
20	Materials and Expenses		0	5,098	0	0	0	4,717			(2,478,060)		(2,468,245)	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ (46,398)	$ 5,098	$ 0	$ 0	$ 0	$ 4,717	$ 0	$ 0	$ (2,478,060)	$ 0	$ (2,514,643)	21
	Total A&G Expenses													
22	Labor		$ (506,976)	$ 0	$ (2,985)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (695,814)	$ (1,205,775)	22
23	Labor Loadings		(2,422,127)	0	0	0	0	0	0	0	0	0	(2,422,127)	23
24	Materials and Expenses		(67,111)	(417,623)	0	111,028	(35,693)	22,120	2,134,882	(758,286)	(2,478,060)	0	(1,488,743)	24
25	Total A&G Expenses	Sum Lns 22-24	$ (2,996,214)	$ (417,623)	$ (2,985)	$ 111,028	$ (35,693)	$ 22,120	$ 2,134,882	$ (758,286)	$ (2,478,060)	$ (695,814)	$ (5,116,645)	25
													Sch C-1, Sh 12, Col (f)	

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF ADMINISTRATIVE AND GENERAL (A&G) EXPENSE ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			(d) + (e) + (f)	Sch C-1, Sh 10, Col (g)	N/A	Sch C-1, Sh 11, Col (i)	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ (1,197,724)	$ 0	$ 0	$ (1,197,724)	$ (673,834)	$ 0	$ 0	$ 0	$ (673,834)	$ (673,834)	1
2	Labor Loadings		(2,383,780)	0	0	(2,383,780)	(1,341,103)	0	0	0	(1,341,103)	(1,341,103)	2
3	Materials and Expenses		(47,596)	0	0	(47,596)	(26,777)	0	0	0	(26,777)	(26,777)	3
4	Total A&G Salaries	Sum Lns 1-3	$ (3,629,100)	$ 0	$ 0	$ (3,629,100)	$ (2,041,714)	$ 0	$ 0	$ 0	$ (2,041,714)	$ (2,041,714)	4
5	Office Supplies and Expenses	921	$ (170,936)	$ 16,994	$ 0	$ (187,930)	$ (105,729)	$ 0	$ 0	$ 0	$ (105,729)	$ (88,735)	5
6	A&G Expenses Transferred (Credit)	922	$ 414,037	$ 0	$ 0	$ 414,037	$ 0	$ 0	$ 0	$ 214,238	$ 214,238	$ 214,238	6
7	Outside Services	923	$ (190,826)	$ 0	$ 0	$ (190,826)	$ (107,358)	$ 0	$ 0	$ 0	$ (107,358)	$ (107,358)	7
8	Property Insurance	924	$ 185,371	$ 0	$ 0	$ 185,371	$ 0	$ 105,698	$ 0	$ 0	$ 105,698	$ 105,698	8
9	Injuries and Damages	925	$ 2,808,545	$ 682,317	$ 0	$ 2,126,228	$ 1,196,206	$ 0	$ 0	$ 0	$ 1,196,206	$ 1,878,523	9
10	Employee Pension and Benefits	926	$ (490,869)	$ 0	$ 0	$ (490,869)	$ (276,161)	$ 0	$ 0	$ 0	$ (276,161)	$ (276,161)	10
11	Regulatory Commission Expenses	928	$ 86,609	$ 86,609	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 86,609	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		(772,342)	24,261	0	(796,603)	(448,165)	0	0	0	(448,165)	(423,904)	15
16	Total Miscellaneous General	Sum Lns 13-15	$ (772,342)	$ 24,261	$ 0	$ (796,603)	$ (448,165)	$ 0	$ 0	$ 0	$ (448,165)	$ (423,904)	16
17	Rents	931	$ (32,310)	$ 0	$ 0	$ (32,310)	$ (18,177)	$ 0	$ 0	$ 0	$ (18,177)	$ (18,177)	17
	Maintenance of General Plant	935											
18	Labor		$ (8,040)	$ 11	$ 0	$ (8,051)	$ (4,529)	$ 0	$ 0	$ 0	$ (4,529)	$ (4,518)	18
19	Labor Loadings		(38,349)	(2)	0	(38,347)	(21,574)	0	0	0	(21,574)	(21,576)	19
20	Materials and Expenses		(2,468,245)	0	0	(2,468,245)	(1,388,623)	0	0	0	(1,388,623)	(1,388,623)	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ (2,514,634)	$ 9	$ 0	$ (2,514,643)	$ (1,414,726)	$ 0	$ 0	$ 0	$ (1,414,726)	$ (1,414,717)	21
	Total A&G Expenses												
22	Labor		$ (1,205,764)	$ 11	$ 0	$ (1,205,775)	$ (678,363)	$ 0	$ 0	$ 0	$ (678,363)	$ (678,352)	22
23	Labor Loadings		(2,422,129)	(2)	0	(2,422,127)	(1,362,677)	0	0	0	(1,362,677)	(1,362,679)	23
24	Materials and Expenses		(678,562)	810,181	0	(1,488,743)	(1,174,784)	105,698	0	214,238	(854,848)	(44,667)	24
25	Total A&G Expenses	Sum Lns 22-24	$ (4,306,455)	$ 810,190	$ 0	$ (5,116,645)	$ (3,215,824)	$ 105,698	$ 0	$ 214,238	$ (2,895,888)	$ (2,085,699)	25
			Sch C-1, Sh 13, Col (c)	Sch C-1, Sh 13, Col (d)	Sch C-1, Sh 13, Col (e)							Sch C-1, Sh 4 Col (d)	

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF ADJUSTED ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			Sch C-1, Sh 9, Col (c) Sch C-1, Sh 12, Col (c)	Sch C-1, Sh 9, Col (d) Sch C-1, Sh 12, Col (d)	Sch C-1, Sh 9, Col (e) Sch C-1, Sh 12, Col (e)	(c) - (d) - (e)	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ 67,063,448	$ 0	$ 0	$ 67,063,448	$ 37,729,574	$ 0	$ 0	$ 0	$ 37,729,574	$ 37,729,574	1
2	Labor Loadings		30,079,507	0	0	30,079,507	16,922,586	0	0	0	16,922,586	16,922,586	2
3	Materials and Expenses		(4,045,919)	0	0	(4,045,919)	(2,276,215)	0	0	0	(2,276,215)	(2,276,215)	3
4	Total A&G Salaries	Sum Lns 1-3	$ 93,097,036	$ 0	$ 0	$ 93,097,036	$ 52,375,946	$ 0	$ 0	$ 0	$ 52,375,946	$ 52,375,946	4
5	Office Supplies and Expenses	921	$ 11,467,482	$ 16,994	$ 0	$ 11,450,488	$ 6,441,990	$ 0	$ 0	$ 0	$ 6,441,990	$ 6,458,984	5
6	A&G Expenses Transferred (Credit)	922	$ (15,163,207)	$ 0	$ 0	$ (15,163,207)	$ 0	$ 0	$ 0	$ (7,845,986)	$ (7,845,986)	$ (7,845,986)	6
7	Outside Services	923	$ 31,129,861	$ 44,953	$ 193,949	$ 30,890,959	$ 17,379,106	$ 0	$ 0	$ 0	$ 17,379,106	$ 17,424,059	7
8	Property Insurance	924	$ 1,057,857	$ 0	$ 0	$ 1,057,857	$ 0	$ 603,187	$ 0	$ 0	$ 603,187	$ 603,187	8
9	Injuries and Damages	925	$ 17,572,080	$ 1,315,709	$ 767,119	$ 15,489,252	$ 8,714,179	$ 0	$ 0	$ 0	$ 8,714,179	$ 10,029,888	9
10	Employee Pension and Benefits	926	$ 14,842,211	$ 157	$ 6,279	$ 14,835,775	$ 8,346,536	$ 0	$ 0	$ 0	$ 8,346,536	$ 8,346,693	10
11	Regulatory Commission Expenses	928	$ 359,738	$ 197,333	$ 162,405	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 197,333	11
12	Safety Advertising	930.1	$ 1,557,339	$ 569,965	$ 526,340	$ 461,034	$ 259,375	$ 0	$ 0	$ 0	$ 259,375	$ 829,341	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		6,884,653	684,272	754,418	5,445,963	3,063,873	0	0	0	3,063,873	3,748,145	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 6,884,653	$ 684,272	$ 754,418	$ 5,445,963	$ 3,063,873	$ 0	$ 0	$ 0	$ 3,063,873	$ 3,748,145	16
17	Rents	931	$ 1,998,087	$ 91,584	$ 271,922	$ 1,634,581	$ 919,607	$ 0	$ 0	$ 0	$ 919,607	$ 1,011,191	17
	Maintenance of General Plant	935											
18	Labor		$ 852,882	$ 296	$ 15,274	$ 837,312	$ 471,067	$ 0	$ 0	$ 0	$ 471,067	$ 471,364	18
19	Labor Loadings		493,293	181	9,231	483,881	272,229	0	0	0	272,229	272,410	19
20	Materials and Expenses		4,424,054	2,343,899	2,331,147	(250,991)	(141,206)	0	0	0	(141,206)	2,202,692	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 5,770,229	$ 2,344,376	$ 2,355,651	$ 1,070,202	$ 602,090	$ 0	$ 0	$ 0	$ 602,090	$ 2,946,466	21
	Total A&G Expenses												
22	Labor		$ 67,916,329	$ 296	$ 15,274	$ 67,900,760	$ 38,200,642	$ 0	$ 0	$ 0	$ 38,200,642	$ 38,200,938	22
23	Labor Loadings		30,572,800	181	9,231	30,563,388	17,194,816	0	0	0	17,194,816	17,194,997	23
24	Materials and Expenses		72,084,236	5,264,867	5,013,578	61,805,791	42,707,244	603,187	0	(7,845,986)	35,464,445	40,729,312	24
25	Total A&G Expenses	Sum Lns 22-24	$ 170,573,366	$ 5,265,344	$ 5,038,082	$ 160,269,939	$ 98,102,702	$ 603,187	$ 0	$ (7,845,986)	$ 90,859,903	$ 96,125,247	25
												Sch C-1, Sh 4, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND AMORTIZATION EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Acct. No.	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e) (f) - (d)	(f)	
	AZ Direct Depreciation & Amort.			Sch C-2, Adj. 13, Sh 1		Sch C-2, Adj. 13, Sh 1	
1	Depreciation		403	$ 112,374,221	$ 7,425,469	$ 119,799,690	1
2	Amortization		404	90,096	1,534	91,629	2
3	Total AZ Direct Deprec. & Amort.	Ln 1 + Ln 2		$ 112,464,317	$ 7,427,002	$ 119,891,319	3
	AZ Regulatory Amortizations						
4	Amort. Of Gas Plant Acq.	Sch C-2, Adj. 16, Sh 1	406	$ (52,943)	$ 0	$ (52,943)	4
5	Regulatory Amortizations	Sch C-2, Adj. 16, Sh 1	407.3	2,673,464	1,376,684	4,050,147	5
6	Total AZ Regulatory Amortizations	Ln 4 + Ln 5		$ 2,620,521	$ 1,376,684	$ 3,997,205	6
7	Total AZ Depreciation & Amorts.	Ln 3 + Ln 6		$ 115,084,838	$ 8,803,686	$ 123,888,524	7
	System Allocable			Sch C-2, Adj. 13, Sh 2		Sch C-2, Adj. 13, Sh 2	
8	Depreciation			$ 8,585,542	$ (1,068,825)	$ 7,516,717	8
9	Amortization			15,591,724	6,493,126	22,084,850	9
10	Total System Allocable	Ln 8 + Ln 9		$ 24,177,266	$ 5,424,301	$ 29,601,567	10
11	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	56.26%	56.26%	11
12	Allocation to AZ	Ln 10 * Ln 11		$ 13,602,014	$ 3,051,686	$ 16,653,700	12
13	Total Depreciation and Amortization	Ln 7 + Ln 12		$ 128,686,852	$ 11,855,371	$ 140,542,223	13

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES OTHER THAN INCOME TAXES SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Company Records	Sch C-2, Adj. 14, Sh 1	(c) + (d)	
1	Property Taxes	408.1	$ 50,798,652	$ 18,093,781	$ 68,892,433	1
2	Miscellaneous Taxes [1]	408.1	420,796	(5,633)	415,163	2
3	Total Taxes Other than Income	Ln 1 + Ln 2	$ 51,219,448	$ 18,088,148	$ 69,307,596	3
			Sch C-1, Sh 1, Ln 15(c)		Sch C-1, Sh 1, Ln 15(e)	

[1] Allocation of System Allocable Miscellaneous Taxes

Modified Business Tax	Company Records	$ 545,226
AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%
Adjustment Allocated to AZ		$ 306,742
		added to Ln 2(c)

SOUTHWEST GAS CORPORATION
ARIZONA
INCOME TAXES ON OPERATIONS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded 8/31/2021	Adjusted 8/31/2021	After Rate Relief	Line No.
	(a)	(b)	(c)	(d)	(e)	
	State Income Tax					
1	Margin	Sch A-1, Sh 2, Ln 3	$ 565,018,312	$ 579,185,433	$ 669,915,616	1
2	Expenses	Sch A-1, Sh 2, Lns 4-16	419,641,348	448,132,011	448,326,671	2
3	Taxable Income Before Interest	Ln 1 - Ln 2	$ 145,376,964	$ 131,053,423	$ 221,588,945	3
4	Interest Expense	Ln 21	50,243,557	53,726,452	53,726,452	4
5	State Taxable Income	Ln 3 - Ln 4	$ 95,133,407	$ 77,326,971	$ 167,862,494	5
6	Effective State Income Tax Rate	Sch C-3, Sh 2, Ln 1	4.900%	4.900%	4.900%	6
7	State Income Tax Expense	Ln 5 * Ln 6	$ 4,661,537	$ 3,789,022	$ 8,225,262	7
	Federal Income Tax					
8	Margin	Ln 1	$ 565,018,312	$ 579,185,433	$ 669,915,616	8
9	Expenses	Ln 2	419,641,348	448,132,011	448,326,671	9
10	Taxable Income Before Interest	Ln 8 - Ln 9	$ 145,376,964	$ 131,053,423	$ 221,588,945	10
11	Interest Expense	Ln 21	50,243,557	53,726,452	53,726,452	11
12	Federal Taxable Income	Ln 10 - Ln 11	$ 95,133,407	$ 77,326,971	$ 167,862,494	12
13	Federal Income Tax Rate	Sch C-3, Sh 2, Ln 3	19.971%	19.971%	19.971%	13
14	Federal Income Tax Expense	Ln 12 * Ln 13	$ 18,999,093	$ 15,442,969	$ 33,523,819	14
15	ARAM Amortization	Sch B-6, Sh 6	0	(7,284,597)	(7,284,597)	15
16	Investment Tax Credit	Company Records	0	0	0	16
17	Federal Income Tax Expense	Sum Lns 14-16	$ 18,999,093	$ 8,158,372	$ 26,239,221	17
18	Total Federal and State Income Tax	Ln 7 + Ln 17	$ 23,660,630	$ 11,947,394	$ 34,464,483	18
			Sch A-1, Sh 2 Ln 17(c)	Sch A-1, Sh 2 Ln 17(e)	Sch A-1, Sh 2 Ln 17(g)	
	Interest Calculation					
19	Rate Base	Sch A-1, Sh 2, Ln 34	$ 2,470,792,097	$ 2,642,067,938	$ 3,414,416,189	19
20	Weighted Cost of Debt	Sch D-1, Sh 1	2.03%	2.03%	1.57%	20
21	Interest Expense	Ln 19 * Ln 20	$ 50,243,557	$ 53,726,452	$ 53,726,452	21
			Lns 4 and 11	Lns 4 and 11	Lns 4 and 11	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF 4-FACTOR AND A&G ALLOCATION RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	AZ	SCA	NCA	SLT	SNV	NNV	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i) Sum (c)-(h)	
	Factor I									
1	Direct Operating Expenses	Company Records	$ 142,631,117	$ 15,018,665	$ 2,870,081	$ 3,367,060	$ 68,238,379	$ 14,540,923	$ 246,666,225	1
2	Percent of Total	Ln 1 / Ln 1(i)	57.82%	6.09%	1.16%	1.37%	27.66%	5.89%	100.00%	2
	Factor II									
3	Avg Direct Gross Plant in Service	Company Records	$ 4,410,931,669	$ 546,507,322	$ 162,988,086	$ 91,710,334	$ 2,211,237,244	$ 312,427,809	$ 7,735,802,464	3
4	Percent of Total	Ln 3 / Ln 3(i)	57.02%	7.06%	2.11%	1.19%	28.58%	4.04%	100.00%	4
	Factor III									
5	Direct Labor	Company Records	$ 50,095,380	$ 8,242,958	$ 1,336,231	$ 1,615,701	$ 20,946,435	$ 5,830,062	$ 88,066,767	5
6	Percent of Total	Ln 5 / Ln 5(i)	56.88%	9.36%	1.52%	1.83%	23.78%	6.62%	100.00%	6
	Factor IV									
7	Average Number of Customers	Company Records	$ 1,129,365	$ 152,603	$ 27,770	$ 20,360	$ 688,359	$ 99,972	$ 2,118,429	7
8	Percent of Total	Ln 7 / Ln 7(i)	53.31%	7.20%	1.31%	0.96%	32.49%	4.72%	100.00%	8
9	4-Factor	(Ln 2+ Ln 4+ Ln 6 + Ln 8) / 4	**56.26%**	7.43%	1.52%	1.34%	28.13%	5.32%	100.00%	9
	A&G Transfer Rate									
10	SWG A&G Overheads	Company Records	51.74%	8.51%	1.14%	2.08%	31.78%	4.75%	100.00%	10

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF THE MODIFIED MASSACHUSETTS FORMULA (MMF)
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	AZ	NCA	SCA	SLT	NNV	SNV	Great Basin	SGTC	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k) Sum (c)-(j)	
1	Total Direct Labor	Sch C-1, Sh 17, Ln 5	$ 50,095,380	$ 1,336,231	$ 8,242,958	$ 1,615,701	$ 5,830,062	$ 20,946,435	$ 4,337,103	$ 14,183	$ 92,418,053	1
2	Percent of Total	Ln 1 / Ln 1(k)	54.21%	1.45%	8.92%	1.75%	6.31%	22.66%	4.69%	0.02%	100.00%	2
3	Margin	Company Records	$ 565,018,315	$ 23,152,863	$ 86,069,822	$ 14,981,810	$ 44,541,434	$ 284,080,031	$ 45,062,708	$ 425,945	$ 1,063,332,928	3
4	Percent of Total	Ln 3 / Ln 3(k)	53.14%	2.18%	8.09%	1.41%	4.19%	26.72%	4.24%	0.04%	100.00%	4
5	Gross Plant	Company Records	$ 4,491,251,647	$ 163,855,532	$ 567,389,184	$ 96,482,523	$ 319,593,638	$ 2,273,834,193	$ 292,049,198	$ 2,426,992	$ 8,206,882,907	5
6	Percent of Total	Ln 5 / Ln 5(k)	54.73%	2.00%	6.91%	1.18%	3.89%	27.71%	3.56%	0.03%	100.00%	6
7	MMF	(Ln 2+ Ln 4 + Ln 6) / 3	54.02%	1.87%	7.98%	1.44%	4.80%	25.70%	**4.16%**	**0.03%**	100.00%	7

SCHEDULE C-2

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Revenues & Volumes Adj. No. 1	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	Corporate Aircraft Adj. No. 8	Self-Insured Retention Adj. No. 9	Membership Dues Adj. No. 10	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
		Sch C-2, Adj. 1, Sh 1	Sch C-2, Adj. 2, Sh 1	Sch C-2, Adj. 3, Sh 1 Sch C-2, Adj. 3, Sh 2	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch B-2, Adj. 6, Sh 1 Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 8, Sh B-2, Adj. 8, Sh 1	Sch C-2, Adj. 9, Sh 1	Sch C-2, Adj. 10, Sh 1	
1	Operating Revenue	$ (143,408,188)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Gas Cost	0	(157,575,309)	0	0	0	0	0	0	0	0	2
3	Operating Margin	$ (143,408,188)	$ 157,575,309	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	3
	Operating Expenses											
4	Other Gas Costs	$ 0	$ 0	$ 28,691	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Storage	0	0	27,219	0	0	0	0	0	0	0	5
6	Distribution	0	0	1,294,349	0	(63,568)	(175)	0		0	0	6
7	Customer Accounts	0	0	276,669	(131,769)	(11,562)	0	(851,635)	0	0	0	7
8	Customer Service & Info.	0	0	0	0	(20,780)	0	0	0	0	0	8
9	Sales	0	0	0	0	(3,628)	0	0	0	0	0	9
	Administrative & General											
10	Direct	0	0	9	0	41,225	0	0	0	682,347	0	10
11	System Allocable	0	0	(1,704,792)	0	(234,953)	(1,679)	0	(426,608)	62,464	(20,081)	11
	Depreciation & Amortization											
12	Direct	0	0	0	0	0	0	0	0	0	0	12
13	System Allocable	0	0	0	0	0	0	0	0	0	0	13
14	Regulatory Amortizations	0	0	0	0	0	0	0	0	0	0	14
15	Taxes Other Than Income	0	0	0	0	0	0	0	0	0	0	15
16	Interest on Customer Deposits	0	0	0	0	0	0	0	0	0	0	16
17	Total Operating Expenses	$ 0	$ 0	$ (77,856)	$ (131,769)	$ (293,266)	$ (1,854)	$ (851,635)	$ (426,608)	$ 744,811	$ (20,081)	17
18	Net Operating Income	$ (143,408,188)	$ 157,575,309	$ 77,856	$ 131,769	$ 293,266	$ 1,854	$ 851,635	$ 426,608	$ (744,811)	$ 20,081	18
	Rate Base											
	Gas Plant in Service											
19	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ (229,604)	$ 0	$ 0	$ 0	$ 0	19
20	System Allocable	0	0	0	0	0	(911,293)	0	(4,940,407)	0	0	20
21	Total Gas Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ (1,140,897)	$ 0	$ (4,940,407)	$ 0	$ 0	21
	Accumulated Provision for Depr and Amorts											
22	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ (150,114)	$ 0	$ 0	$ 0	$ 0	22
23	System Allocable	0	0	0	0	0	(531,037)	0	(2,096,750)	0	0	23
24	Total Accumulated Provision	$ 0	$ 0	$ 0	$ 0	$ 0	$ (681,151)	$ 0	$ (2,096,750)	$ 0	$ 0	24
25	Net Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ (459,746)	$ 0	$ (2,843,656)	$ 0	$ 0	25
	Other Rate Base											
	Allowance for Working Capital											
26	Cash Working Capital	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	0	0	0	0	0	0	0	31
32	Total Other Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	32
33	Total Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ (459,746)	$ 0	$ (2,843,656)	$ 0	$ 0	33

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Great Basin Alloc. Annualization Adj. No. 11	Rate Case Expense Adj. No. 12	Dep/Amort Expense Adj. No. 13	Taxes Other Than Income Adj. No. 14	Insurance Annualization Adj. No. 15	Regulatory Amortizations Adj. No. 16	Corp HQ Adj. No. 17	SAP & CSS Adj Adj. No. 18	Post-Test Year Plant Adj. No. 19	Graham County (GCU) Adj. No. 20	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
		Sch C-2, Adj. 11, Sh 1	Sch C-2, Adj. 12, Sh 1	Sch C-2, Adj. 13, Sh 1-4	Sch C-2, Adj. 14, Sh 1	Sch C-2, Adj. 15, Sh 1	Sch C-2, Adj. 16, Sh 1	Sch C-2, Adj. 17, Sh 1 Sch B-2, Adj. 17, Sh 1	Sch C-2, Adj. 18, Sh 1	Sch B-2, Adj. 19, Sh 1 Sch B-2, Adj. 19, Sh 2	Sch B-2, Adj. 20, Sh 1 Sch C-2, Adj. 20, Sh 1	
1	Operating Revenue	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Gas Cost	0	0	0	0	0	0	0	0	0	0	2
3	Operating Margin	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	3
	Operating Expenses											
4	Other Gas Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Storage	0	0	0	0	0	0	0	0	0	0	5
6	Distribution	0	0	0	0	0	0	0	0	0	895,655	6
7	Customer Accounts	0	0	0	0	0	0	0	(662,858)	0	18,000	7
8	Customer Service & Info.	0	0	0	0	0	0	0	0	0	0	8
9	Sales	0	0	0	0	0	0	0	0	0	0	9
	Administrative & General											
10	Direct	0	86,609	0	0	0	0	0	0	0	0	10
11	System Allocable	13,266	0	0	0	1,202,101	0	(1,394,145)	0	0	0	11
	Depreciation & Amortization											
12	Direct	0	0	7,427,002	0	0	0	0	0	0	0	12
13	System Allocable	0	0	3,051,686	0	0	0	0	0	0	0	13
14	Regulatory Amortizations	0	0	0	0	0	1,695,436	0	0	0	0	14
15	Taxes Other Than Income	0	0	0	18,088,148	0	0	0	0	0	0	15
16	Interest on Customer Deposits	0	0	0	0	0	0	0	0	0	0	16
17	Total Operating Expenses	$ 13,266	$ 86,609	$ 10,478,688	$ 18,088,148	1,202,101	$ 1,695,436	$ (1,394,145)	$ (662,858)	$ 0	$ 913,655	17
18	Net Operating Income	$ (13,266)	$ (86,609)	$ (10,478,688)	$ (18,088,148)	(1,202,101)	$ (1,695,436)	$ 1,394,145	$ 662,858	$ 0	$ (913,655)	18
	Rate Base											
	Gas Plant in Service											
19	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 177,333,445	$ 6,269,535	19
20	System Allocable	0	0	0	0	0	0	(25,596,217)	0	19,766,467	0	20
21	Total Gas Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (25,596,217)	$ 0	$ 197,099,912	$ 6,269,535	21
	Accumulated Provision for Depr and Amorts											
22	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,615,674	$ 3,725,791	22
23	System Allocable	0	0	0	0	0	0	(5,386,295)	0	719,280	0	23
24	Total Accumulated Provisio	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (5,386,295)	$ 0	$ 3,334,953	$ 3,725,791	24
25	Net Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (20,209,922)	$ 0	$ 193,764,959	$ 2,543,744	25
	Other Rate Base											
	Allowance for Working Capital											
26	Cash Working Capital	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	0	0	0	0	0	0	0	31
32	Total Other Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	32
33	Total Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (20,209,922)	$ 0	$ 193,764,959	$ 2,543,744	33

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Variable Pay Adjustment Adj. No. 21	Interest on Customer Deposit Adj. No. 22	Remittance Processing and Print to Mail Assets Adj. No. 23	Deferred Taxes Adj. No. 24	Total of Adjustments	Line No.
	(a)	(l)	(m)	(n)	(o)	(p)	
		Sch C-2, Adj. 21, Sh 1	Sch C-2, Adj. 22, Sh 1	B-2, Adj. 23, Sh 1	B-2, Adj. 24, Sh 1		
1	Operating Revenue	$ 0	$ 0	0	$ 0	$ (143,408,188)	1
2	Gas Cost	0	0	0	0	(157,575,309)	2
3	Operating Margin	$ 0	$ 0	0	$ 0	$ 14,167,121	3
	Operating Expenses						
4	Other Gas Costs	$ 0	$ 0	0	$ 0	$ 28,691	4
5	Storage	0	0	0	0	27,219	5
6	Distribution	0	0	0	0	2,126,260	6
7	Customer Accounts	0	0	286,150	0	(1,077,005)	7
8	Customer Service & Info.	0	0	0	0	(20,780)	8
9	Sales	0	0	0	0	(3,628)	9
	Administrative & General					0	
10	Direct	0	0	0	0	810,190	10
11	System Allocable	(391,462)	0	0	0	(2,895,888)	11
	Depreciation & Amortization					0	
12	Direct	0	0	0	0	7,427,002	12
13	System Allocable	0	0	0	0	3,051,686	13
14	Regulatory Amortizations	0	0	0	0	1,695,436	14
15	Taxes Other Than Income	0	0	0	0	18,088,148	15
16	Interest on Customer Deposits	0	(766,669)	0	0	(766,669)	16
17	Total Operating Expenses	$ (391,462)	$ (766,669)	286,150	$ 0	$ 28,490,663	17
18	Net Operating Income	$ 391,462	$ 766,669	(286,150)	$ 0	$ (14,323,542)	18
						Sch C-1, Sh 1, Col (d)	
	Rate Base						
	Gas Plant in Service						
19	Direct	$ 0	$ 0	0	$ 0	$ 183,373,376	19
20	System Allocable	0	0	(2,262,982)	0	(13,944,432)	20
21	Total Gas Plant in Service	$ 0	$ 0	(2,262,982)	$ 0	$ 169,428,943	21
	Accumulated Provision for Depr and Amorts						
22	Direct	$ 0	$ 0	0	$ 0	$ 6,191,351	22
23	System Allocable	0	0	(2,004,985)	0	(9,299,788)	23
24	Total Accumulated Provision	$ 0	$ 0	(2,004,985)	$ 0	$ (3,108,437)	24
25	Net Plant in Service	$ 0	$ 0	(257,998)	$ 0	$ 172,537,381	25
	Other Rate Base						
	Allowance for Working Capital						
26	Cash Working Capital	$ 0	$ 0	0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	(1,261,540)	(1,261,540)	31
32	Total Other Rate Base	$ 0	$ 0	0	$ (1,261,540)	$ (1,261,540)	32
33	Total Rate Base	$ 0	$ 0	(257,998)	$ (1,261,540)	$ 171,275,840	33

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SALES, TRANSPORTATION QUANTITY AND REVENUES - ADJUSTMENT NO. 1
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded At 8/31/2021	Adjustment No. 1	Test Period Balance As Adjusted	Line No.
	(a)	(b)	(c)	(d)	
1	Sales Quantity (Therms)	571,813,620	(20,499,366)	551,314,254	1
2	Transportation Quantity (Therms)	168,733,241	6,330,050	175,063,291	2
3	Total Quantity	740,546,861	(14,169,316)	726,377,545	3
4	Revenue	$ 722,593,622	$ (143,408,188)	$ 579,185,433	4
5	Total Revenue Adjustment		$ (143,408,188)		5

Explanation:
To adjust for changes in number of bills and sales volumes, to adjust revenues to authorized levels, to reverse unbilled revenues, and to remove gas cost from the cost of service.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
PURCHASED GAS COST - ADJUSTMENT NO. 2
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	FERC Account Number	Amount	Line No.
	(a)	(b)	(c)	
1	Natural Gas Transmission Line Purchases	803.00	$ 312,371,683	1
2	Purchased Gas Cost Adjustments	805.10	(208,439,764)	2
3	Gas Withdrawn from Storage	808.10	1,045,270	3
4	Gas Delivered to Storage	808.20	(1,204,779)	4
5	Gas Used for Compressor Station Fuel	810.00	0	5
6	Transmission and Compression of Gas	858.00	53,802,899	6
7	Total Adjustment No. 2 - Recorded Cost of Purchased Gas		$ 157,575,309	7
8	Present Volume Adjustment		(5,649,033)	8
9	Present Rate Adjustment		57,615,859	9
10	Subtotal of Adjustments		51,966,826	10
11	Total Cost of Purchased Gas Adjusted at Present Rates		$ 209,542,135	11

Explanation:
To adjust for changes in sales volumes and to adjust the average cost of purchased gas to match the average cost of purchased gas included in currently effective base tariff sales rates.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
COST OF PURCHASED GAS - ADJUSTED AT PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded Total	Volume Adjustment Sales	Volume Adjustment Gas Engines	Volume Adjustment Optional	Rate Adjustment Sales	Rate Adjustment Gas Engines	Rate Adjustment Optional	Adjusted Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Sales Volumes (Therms)	571,813,620	(20,776,801)	32,491	244,944	521,410,643	17,322,965	12,580,646	551,314,254	1
2	Recorded Average Cost of Purchased Gas	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557		2
3	Cost of Purchased Gas [1]					$ 0.37836	$ 0.43302	$ 0.37836		3
4	Change in Average Cost of Purchased Gas					$ 0.10279	$ 0.15745	$ 0.10279		4
5	Cost of Purchased Gas	$ 157,575,309	$ (5,725,486)	$ 8,954	$ 67,499	$ 53,595,226	$ 2,727,482	$ 1,293,151	$ 209,542,135	5

[1] Cost of gas effective on January 31, 2019 excluding surcharges. Optional cost of purchased gas is average cost during test year.

SCHEDULE C-2
ADJUSTMENT NO. 2
SHEET 6 OF 31

SOUTHWEST GAS CORPORATION
ARIZONA
LABOR AND LABOR LOADING ANNUALIZATION
ADJUSTMENT NO. 3

Line No.	Description	Labor	Labor Loading	Total	Line No.
	(a)	(b)	(c)	(d)	
		WP C-2 Adj 3, Sh 1 thru 3, Col (h)	WP C-2 Adj 3, Sh 1 thru 3, Col (i)	(b) + (c)	
	Operations				
1	Account 813	$ 51,022	$ (22,331)	$ 28,691	1
2	Account 840	11,192	(2,018)	9,173	2
3	Account 841	22,009	(3,963)	18,046	3
4	Account 850	0	0	0	4
5	Account 851	0	0	0	5
6	Account 852	0	0	0	6
7	Account 853	0	0	0	7
8	Account 856	0	0	0	8
9	Account 857	0	0	0	9
10	Account 859	0	0	0	10
11	Account 870	227,556	(42,784)	184,772	11
12	Account 871	51,066	(22,235)	28,831	12
13	Account 874	129,104	(23,443)	105,661	13
14	Account 875	49,549	(8,999)	40,549	14
15	Account 878	166,386	(30,018)	136,369	15
16	Account 879	296,981	(75,766)	221,214	16
17	Account 880	156,744	(40,204)	116,540	17
18	Account 901	88,814	(36,131)	52,683	18
19	Account 902	28,149	(5,074)	23,075	19
20	Account 903	353,586	(154,147)	199,439	20
21	Account 905	1,797	(326)	1,472	21
22	Account 908	0	0	0	22
23	Account 910	0	0	0	23
24	Account 920	(280,693)	(1,341,103)	(1,621,796)	24
25	Account 922	37,950	181,318	219,267	25
26	Account 930.2	0	0	0	26
27	Total Operations	$ 1,391,211	$ (1,627,224)	$ (236,013)	27
	Maintenance				
28	Account 863	$ 0	$ 0	$ 0	28
29	Account 885	56,479	(11,108)	45,371	29
30	Account 886	18	(4)	14	30
31	Account 887	264,338	(47,724)	216,614	31
32	Account 889	33,787	(6,053)	27,735	32
33	Account 892	118,223	(21,249)	96,975	33
34	Account 893	84,672	(15,018)	69,654	34
35	Account 894	4,926	(875)	4,051	35
36	Account 935 - Direct	11	(2)	9	36
37	Account 935 - System Alloc.	(4,529)	(21,574)	(26,103)	37
38	Total Maintenance	$ 557,924	$ (123,606)	$ 434,318	38
39	Total O&M	$ 1,949,135	$ (1,750,830)	$ 198,305	39
				Sch C-2, Sh 1, Col (d)	
	Functionalization				
40	Other Gas Supply	$ 51,022	$ (22,331)	$ 28,691	40
41	Storage	33,200	(5,981)	27,219	41
42	Transmission	0	0	0	42
43	Distribution	1,639,828	(345,479)	1,294,349	43
44	Customer Accounts	472,347	(195,678)	276,669	44
45	Customer Service & Info.	0	0	0	45
46	Sales	0	0	0	46
47	A&G - Direct	11	(2)	9	47
48	A&G - Sys. Alloc.	(247,272)	(1,181,359)	(1,428,632)	48
49	Total	$ 1,949,135	$ (1,750,830)	$ 198,305	49

To annualize labor and labor-related loadings as of August 31, 2021 to reflect a 3% general wage increase effective June 2022.

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF NON-SERVICE RETIREMENT BENEFITS COSTS
LABOR AND BENEFITS ANNUALIZATION
ADJUSTMENT NO. 3

Line No.	Description	Reference	Pension	PBOP	SERP	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c)+(d)+(e)	
1	Normalized Total Retirement Benefits Cost	Actuarial Studies	$ 46,252,926	$ 1,983,402	$ 2,629,678		1
2	Normalized Current Service Cost	WP C-2 Adj 3, Sh 43	33,773,799	1,516,004	67,500		2
3	Normalized Non-Service Cost	Ln 1 - Ln 2	$ 12,479,128	$ 467,397	$ 2,562,178	$ 15,508,703	3
4	Recorded Non-Service Cost	Company Records				16,021,047	4
5	Adjustment	Ln 3 - Ln 4				$ (512,344)	5
6	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)				4.19%	6
7	Adjustment after MMF Allocation	Ln 5 * (1 - Ln 6)				$ (490,869)	7
8	Allocation to Arizona	Sch C-1, Sh 17, Ln 9(c)				56.26%	8
9	Amount After Allocation	Ln 7 * Ln 8				$ (276,161)	9
						Sch C-2, Sh 1, Col (d)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
CALL CENTER AND SUPPORT FUNCTION ALLOCATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 4

Line No.	Description	Reference	AZ	SCA	NCA	SLT	SNV	NNV	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i) Sum (c)-(h)	
	Account 903									
1	903001777 - Call Center	Company Records	$ 3,494,733	$ 448,856	$ 82,794	$ 65,777	$ 1,878,415	$ 298,672	$ 6,269,247	1
2	903001778 - Support Function	Company Records	1,318,864	181,642	33,414	25,938	777,539	175,389	2,512,785	2
3	Total as Recorded	Ln 1 + Ln 2	$ 4,813,597	$ 630,498	$ 116,208	$ 91,715	$ 2,655,953	$ 474,061	$ 8,782,033	3
4	Factor IV	Sch C-1, Sh 17, Ln 8	53.31%	7.20%	1.31%	0.96%	32.49%	4.72%	100.00%	4
5	Total as Allocated	Ln 4 * Ln 3(i)	$ 4,681,828	$ 632,622	$ 115,122	$ 84,403	$ 2,853,620	$ 414,438	$ 8,782,033	5
6	Adjustment	Ln 5 - Ln 3	$ (131,769)	$ 2,124	$ (1,086)	$ (7,312)	$ 197,666	$ (59,623)	$ 0	6
			Sch C-2, Sh 1 Col (e)							

SOUTHWEST GAS CORPORATION
ARIZONA
COST OF SERVICE ANALYSIS
ADJUSTMENT NO. 5

Line No.	Account Number	Reference	Expenses Removed: Donation/ Civic Activity	Employee Events	Employee Recognition	Other Emp. Welfare	Sponsorships, Ads, Promo.	Retirement Gift/Meals	Non-Utility Expense	Non-Recurring Expense	Out of Period Expenses	Expense Annualization	Accounting Corrections	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)		(m) Sum (c)-(l)	
1	870	WP C-2, Adj. 5, Sh 1	$ (98)	$ (1,257)	$ (50)	$ (7,955)	$ (150)	$ (479)	$ (653)	$ 0	$ 0	$ 0		$ (10,642)	1
2	874	WP C-2, Adj. 5, Sh 12	0	0	0	(375)	0	0	0	0	0	0		(375)	2
3	875	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	(158)	0	0	0	0		(158)	3
4	880	WP C-2, Adj. 5, Sh 2	(4,153)	(3,751)	(213)	(12,276)	(4,500)	(15,688)	(2,788)	0	1,029	0		(42,340)	4
5	881	WP C-2, Adj. 5, Sh 13	0	0	0	0	0	0	0	0	0	0		0	5
6	885	WP C-2, Adj. 5, Sh 12	(25)	0	0	(2,335)	0	(39)	(266)	0	0	0		(2,665)	6
7	887	WP C-2, Adj. 5, Sh 12	0	0	0	(12)	0	0	(6,423)	0	0	0		(6,435)	7
8	889	WP C-2, Adj. 5, Sh 12	0	0	0	(103)	0	0	0	0	103	0	(0)	(0)	8
9	901	WP C-2, Adj. 5, Sh 12	0	0	0	(322)	0	0	0	0	0	0		(322)	9
10	903	WP C-2, Adj. 5, Sh 3	(447)	0	0	(56)	0	0	(1,585)	(18,257)	0	0	(7,535)	(27,879)	10
11	908	WP C-2, Adj. 5, Sh 6	0	0	0	0	0	0	0	0	0	0		0	11
12	910	WP C-2, Adj. 5, Sh 4	(220)	0	0	0	0	0	(4,167)	0	0	0		(4,387)	12
13	913	WP C-2, Adj. 5, Sh 5	0	0	0	0	(1,942)	(85)	(1,399)	0	0	0		(3,425)	13
14	925	WP C-2, Adj. 5, Sh 12	0	0	0	(30)	0	0	0	0	0	0		(30)	14
15	930.1	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	(617)	0	0	24,879		24,261	15
16	921	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	0	0	16,994	0		16,994	16
	Total	Sum Lns 1-13	$ (4,943)	$ (5,008)	$ (263)	$ (23,463)	$ (6,592)	$ (16,448)	$ (17,898)	$ (18,257)	$ 18,125	$ 24,879	(7,535)	$ (57,403)	
														Sch C-2, Sh 1, Col (f)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
COST OF SERVICE ANALYSIS
ADJUSTMENT NO. 5

Line No.	Account Number	Reference	Expenses Removed: Donation/ Civic Activity	Employee Events	Employee Recognition	Other Emp. Welfare	Sponsorships, Ads, Promo.	Retirement Gift/Meals	Non-Utility Expense	Non-Recurring Expense	Out of Period Expenses	Expense Annualization	Accounting Adjustments	Total	MMF	Amount Before Alloc. to AZ	AZ Alloc. Factor	Amount After Alloc. to AZ
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)		(m)	(n)	(o)	(p)	(q)
															Sch C-1, Sh 18	(m) * [1- (n)]	Sch C-1, Sh 17	(o) * (p)
1	870	WP C-2, Adj. 5, Sh 12	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	0	$ 0	n/a	$ 0	53.31%	$ 0
2	880	WP C-2, Adj. 5, Sh 6	0	0	0	(1,567)	0	0	(220)	0	0	0	0	(1,787)	n/a	(1,787)	53.31%	(953)
3	901	WP C-2, Adj. 5, Sh 12	0	0	0	(2,344)	0	(1,905)	(560)	0	0	0	0	(4,809)	n/a	(4,809)	53.31%	(2,564)
4	903	WP C-2, Adj. 5, Sh 7	(2,715)	0	(1,667)	(2,071)	(1,790)	0	(9,288)	0	0	53,550	0	36,019	n/a	36,019	53.31%	19,202
5	908	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	0	0	0	0	0	0	n/a	0	53.31%	0
6	910	WP C-2, Adj. 5, Sh 8	0	0	0	(124)	0	0	(5,625)	0	(25,000)	0	0	(30,749)	n/a	(30,749)	53.31%	(16,393)
7	921	WP C-2, Adj. 5, Sh 13	0	0	0	0	0	0	0	0	0	129,000	0	129,000	n/a	129,000	56.26%	72,575
7	921	WP C-2, Adj 5, Sh 1	(16,051)	(1,602)	(919)	(24,741)	(25,781)	(27,029)	(137,400)	(4,810)	(57,795)	0	(42,990)	(339,117)	4.19%	(324,903)	56.26%	(182,789)
8	923	WP C-2, Adj. 5, Sh 10	0	0	0	0	0	0	0	(167,776)	(67,745)	0	0	(235,521)	4.19%	(225,649)	56.26%	(126,949)
9	930.2	WP C-2, Adj. 5, Sh 16	0	0	0	0	0	0	0	0	0	0	0	0	4.19%	0	56.26%	0
10	931	WP C-2, Adj. 5, Sh 11	0	0	0	0	0	0	(1,219)	0	0	0	0	(1,219)	4.19%	(1,168)	56.26%	(657)
11	913	WP C-2, Adj. 5, Sh 12	0	0	0	0	(376)	0	0	0	0	0	0	(376)	4.19%	(360)	56.26%	(203)
12	935	WP C-2, Adj. 5, Sh 12	0	0	0	(88)	0	(128)	(1,500)	0	0	7,037	0	5,321	4.19%	5,098	56.26%	2,868
13	Total	Sum Lns 1-10	$ (18,766)	$ (1,602)	$ (2,586)	$ (30,935)	$ (27,946)	$ (29,062)	$ (155,814)	$ (172,586)	$ (150,540)	$ 189,587	(42,990)	$ (443,239)		$ (419,310)		$ (235,862)
																		Sch C-2, Sh 1,

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY-OWNED VEHICLES
OPERATING EXPENSES
ADJUSTMENT NO. 6

Line No.	Description	Reference	Remove Vehicle O&M	Total Adjustment	Line No.
	(a)	(b)	(c)	(e)	
1	Arizona	Company Records	$ (175)	$ (175)	1
2	System Allocable	Company Records	$ (3,115)	$ (3,115)	2
3	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)	4.19%	4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * Ln 3	$ (2,985)	$ (2,985)	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5	$ (1,679)	$ (1,679)	6
7	Total Adjustment	Ln 1 + Ln 6	$ (1,854)	$ (1,854)	7
				Sch C-2, Sh 1, Col (g)	

Explanation:
To remove expenses related to company-owned vehicles used by Directors and above.

SOUTHWEST GAS CORPORATION
ARIZONA
UNCOLLECTIBLES EXPENSE ANNUALIZATION
ADJUSTMENT NO. 7

Line No.	Description	Reference	Account Number		Amount	Line No.
	(a)	(b)	(c)		(d)	
1	Revenue at Present Rates	Sch H-2, Sh 4		$	788,963,649	1
2	Write-Off Percent of Revenue	WP Sch C-2, Adj. 7, Sh 1			0.2145%	2
3	Annualized Uncollectible Expense	Ln 1 * Ln 2		$	1,692,711	3
4	Less: Recorded Uncollectible Expense	Sch C-1, Sh 3, Ln 29(c)	904		2,544,346	4
5	Adjustment	Ln 3 - Ln 4	904	$	(851,635)	5
					Sch C-2, Sh 1, Col (h)	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY OWNED AIRCRAFT
ADJUSTMENT NO. 8

Line No.	Description	Reference	Airplane	Airplane Hangar	Total
	(a)	(b)	(c)	(d)	(e)
					(c) + (d)
	Test Year Aircraft Costs				
1	Labor	Company Records	$ 274,448	$ -	$ 274,448
2	Labor-Related Loadings	Company Records	153,515	-	153,515
3	Fuel and Oil	Company Records	60,281	-	60,281
4	Repairs and Maintenance	Company Records	192,057	-	192,057
5	Licenses and Fees	Company Records	2,764	38,749	41,513
6	Other Business Expenses	Company Records	87,403	-	87,403
7	Insurance	Company Records	25,681	-	25,681
8	Total Costs [1]	Sum Lns 1 - 7	$ 796,148	$ 38,749	$ 834,897
9	Aircraft Expenses Cleared to Centuri	Company Records			(19,200)
10	Aircraft Expenses Cleared to HoldCo.	Company Records			(52,400)
11	HoldCo. Aircraft Expenses Allocated to Centuri	Ln 10 * 11%			$ (5,764)
12	Total Aircraft Expenses to SWG	Ln 8 + Ln 9 + Ln 11			$ 809,933
13	**Total SWG Aircraft Costs to be Removed [2]**	**- Ln 12**			(809,933)
14	Allowable Comparable Commercial Airfare	Company Records			18,473
15	Net Adjustment Before Allocation	Ln 13 + Ln 14			$ (791,460)
16	Less: MMF Allocation	Stmt N, Sh 10, Ln 7(i)+(j)			4.19%

SOUTHWEST GAS CORPORATION
ARIZONA
SELF-INSURED RETENTION NORMALIZATION
ADJUSTMENT NO. 9

Line No.	Description (a)	Reference (b)	Account Number (c)	Amount (d)	Line No.
1	Arizona	Sch C-2, Adj. 9, Sh 2, Ln 7(c)	925	$ 682,347	1
2	System Allocable	Sch C-2, Adj. 9, Sh 2, Ln 7(d)	925	$ 115,885	2
3	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)		4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * (1 - Ln 3)		$ 111,028	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5		$ 62,464	6
7	Total Adjustment	Ln 1 + Ln 6		$ 744,811	7
				Sch C-2, Sh 1, Col (j)	

SOUTHWEST GAS CORPORATION
ARIZONA
SELF-INSURED RETENTION NORMALIZATION
ADJUSTMENT NO. 9

Line No.	Description	Reference	AZ Direct	System Allocable	Line No.
	(a)	(b)	(c)	(d)	
	Claims Paid				
1	< $1,000,000	WP C-2, Adj. 9, Sh 1, Ln 14	$ 1,823,470	$ 1,658,854	1
2	at $1,000,000	WP C-2, Adj. 9, Sh 1, Ln 28	1,000,000	0	2
3	$4,000,000 Aggregate	WP C-2, Adj. 9, Sh 1, Ln 39	4,000,000	0	3
4	Total Claims Paid	Sum Ln 1 - Ln 3	$ 6,823,470	$ 1,658,854	4
5	10-Year Average	Ln 4 /10	$ 682,347	$ 165,885	5
6	Recorded During Test Year	Company Records	0	50,000	6
7	Adjustment	Ln 5 - Ln 6	$ 682,347	$ 115,885	7
			Sch C-2, Adj. 9, Sh 1, Ln 1(d)	Sch C-2, Adj. 9, Sh 1, Ln 2(d)	

SOUTHWEST GAS CORPORATION
ARIZONA
INDUSTRY DUES
REMOVE PERCENTAGE OF DUES IDENTIFIED AS LOBBYING IN NATURE
ADJUSTMENT NO. 10

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
1	2021 AGA Dues	Company Records	930.2	$ 664,594	1
2	Lobbying Percentage	AGA Records		-3.80%	2
3	Lobbying Portion of AGA Dues	Ln 1 * Ln 2		$ (25,255)	3
4	2021 Coalition for Renewable Natural Gas Dues	Company Records	930.2	$ 30,000	4
5	Lobbying Percentage	Company Records		-40.00%	5
6	Lobbying Portion of Renewable Natural Gas Dues	Ln 4 * Ln 5		$ (12,000)	6
7	Total Lobbying Costs to Remove	Ln 3 + Ln 6		$ (37,255)	7
8	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)		4.19%	8
9	Adjustment after MMF Allocation	Ln 7 * 1-Ln 8		$ (35,693)	9

SOUTHWEST GAS CORPORATION
ARIZONA
GREAT BASIN ALLOCATION ANNUALIZATION
ADJUSTMENT NO. 11

Line No.	Description	Ref/ Account Number	For The Twelve Months Ended August 31, 2021 Net Recorded	Charged to Great Basin	Gross Recorded	Great Basin MMF Allocation [1]	Great Basin Annualized	Change to Alloc. of Great Basin's A&G Expenses	AZ Allocation Factor [2]	Amount Allocated to AZ	Line No.
	(a)	(b)	(c) Sch C-1, Sh 9, Col (f)	(d) Company Records	(e) (c) + (d)	(f) Sch C-1, Sh 18, Ln 7(i)	(g) (e) * (f)	(h) (d) - (g)	(i) Sch C-1, Sh 17, Col (c)	(j) (h) * (i)	
1	A&G Salaries	920	$ 96,726,136	$ 4,152,092	$ 100,878,228	4.16%	$ 4,199,688	$ (47,596)	56.26%	$ (26,777)	1
2	Office Supplies and Expenses	921	11,638,418	513,889	12,152,307	4.16%	505,916	7,973	56.26%	4,486	2
3	A&G Expenses Transferred (Credit)	922	(15,577,244)	(686,814)	(16,264,058)	4.16%	(677,093)	(9,721)	51.74%	(5,030)	3
4	Outside Services	923	31,081,785	1,386,520	32,468,305	4.16%	1,351,697	34,823	56.26%	19,591	4
5	Property Insurance	924	872,486	165,005	1,037,491	11.05%	114,667	50,338	57.02%	28,702	5
6	Injuries and Damages	925	13,363,024	596,503	13,959,527	4.16%	581,153	15,350	56.26%	8,636	6
7	Misc. General Expenses	930.2	6,242,566	268,438	6,511,004	4.16%	271,061	(2,623)	56.26%	(1,476)	7
8	Rents	931	1,666,890	39,915	1,706,805	4.16%	71,056	(31,141)	56.26%	(17,520)	8
9	Maint. Of General Plant	935	3,584,845	160,647	3,745,492	4.16%	155,930	4,717	56.26%	2,654	9
10	Total	Sum Lns 1-9	$ 149,598,906	$ 6,596,195	$ 156,195,101		$ 6,574,075	$ 22,120		$ 13,266	10
										Sch C-2, Sh 2, Col (b)	

[1] Account 924 is allocated using the insurable property factor calculated on WP C-2, Adj. 11, Sh 3.

[2] All accounts are allocated using the 4-Factor except Account 924, which is allocated using Factor II.

Note: Account 493, Rent from Gas Property, changed by $317,271 due to annualizing the Great Basin rental charge at 8/31/2021 as calculated on WP C-2, Adj. 11, Sh 1.

SOUTHWEST GAS CORPORATION
ARIZONA
INCREMENTAL RATE CASE EXPENSE
ADJUSTMENT NO. 12

Line No.	Description	Ref/ Account Number		Amount	Line No.
	(a)	(b)		(c)	
1	Printing/Copying/Postage/Freight	Estimate	$	50,000	1
2	Professional Services	Estimate		360,000	2
3	Notice/Publication	Estimate		45,000	3
4	Court Reporting	Estimate		12,000	4
5	Travel/Transportation/Misc.	Estimate		125,000	5
6	Total Rate Case Expense	Sum Lns 1-5	$	592,000	6
7	Amortization Period (Years)	[1]		3	7
8	Annual Rate Case Expense	928	$	197,333	8
9	Test Year Recorded Rate Case Expense	Sch C-1, Sh 9, Ln 11(d)		110,725	9
10	Adjustment	Ln 8 - Ln 9	$	86,609	10
				Sch C-2, Sh 2, Col (c)	

[1] The Company proposes to amortize rate case expense over a typical rate case cycle.

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND AMORTIZATION EXPENSE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization Rate	Annualized Depreciation/ Amortization	Recorded Depreciation/ Amortization	Adjustment	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, Col (e)	Company Records	(c) * (d)	Company Records	(e) - (f)	
	Intangible Plant							
1	Organization	301	$ 85,175	Amortized	$ 0	$ 0	$ 0	1
2	Franchise and Consents	302	2,607,704	Amortized	84,750	[1] 83,217	1,534	2
3	Miscellaneous Intangible	303	1,968,623	Amortized	0	0	0	3
4	Total Intangible Plant		$ 4,661,502		$ 84,750	$ 83,217	$ 1,534	4
	Storage Plant							
5	Land and Land Rights	360	$ 1,772,673	N/A	$ 0	$ 0	$ 0	5
6	Structures and Improvements	361	14,907,302	4.75%	708,097	700,172	7,924	6
7	Liquifaction Equipment	362.0	32,984,650	4.75%	1,566,771	1,549,237	17,534	7
8	Vaporizing Equipment	363.2	9,108,497	4.75%	432,654	427,812	4,842	8
9	Compressor Maintenance	363.3	7,785,900	4.75%	369,830	365,691	4,139	9
10	Other Equipment	363.5	10,395,454	4.75%	493,784	389,068	104,716	10
11	Total Storage Plant		$ 76,954,475		$ 3,571,136	$ 3,431,981	$ 139,155	11
	Distribution Plant							
12	Land and Land Rights	374.1	$ 732,082	N/A	$ 0	$ 0	$ 0	12
13	Rights of Way	374.2	3,700,699	1.37%	50,700	48,716	1,983	13
14	Structures and Improvements	375	110,557	3.35%	3,704	3,704	(0)	14
15	Mains	376	2,637,793,932	1.81%	47,744,070	45,003,937	2,740,133	15
16	Measuring and Reg. Stations	378	100,018,050	3.87%	3,870,699	3,603,713	266,985	16
17	Services	380	1,272,833,677	2.82%	35,893,910	33,550,201	2,343,709	17
18	Meters	381	339,693,332	4.15%	14,097,273	13,710,410	386,864	18
19	Industrial Measuring and Reg. Sta.	385	13,902,414	1.78%	247,463	242,355	5,108	19
20	Miscellaneous Equipment	387	432,098	0.00%	0	0	0	20
21	Total Distribution Plant		$ 4,369,216,840		$ 101,907,818	$ 96,163,036	$ 5,744,781	21
	General Plant							
22	Land and Land Rights	389	$ 17,385,788	N/A	$ 0	$ 0	$ 0	22
23	Structures and Improv - Co. Owned	390.1	81,972,010	2.79%	2,287,019	2,002,021	284,998	23
24	Structures and Improv - Leasehold	390.2	125,749	Amortized	6,879	6,879	0	24
25	Office Furniture and Fixtures	391	6,111,146	7.29%	445,503	388,478	57,025	25
26	Computer Software and Hardware	391.1	11,080,676	21.94%	2,431,100	2,960,180	(529,080)	26
27	Transportation Equipment - Light	392.11	37,010,331	14.37%	5,318,385	4,026,190	1,292,195	27
28	Transportation Equipment - Heavy	392.12	22,098,330	4.07%	899,402	883,715	15,687	28
29	Stores Equipment	393	4,143,820	3.73%	154,564	43,728	110,837	29
30	Tool, Shop, and Garage Equip.	394	20,957,816	10.39%	2,177,517	1,904,580	272,937	30
31	Laboratory Equipment	395	542,420	5.48%	29,725	29,815	(90)	31
32	Power-Operated Equipment	396	10,108,170	3.46%	349,743	352,513	(2,770)	32
33	Communication Equipment	397	7,417,906	-1.11%	(82,339)	(63,520)	(18,819)	33
34	Telemetry Equipment	397.2	9,312	21.96%	2,045	7,728	(5,684)	34
35	Miscellaneous Equipment	398	4,828,732	6.38%	308,073	243,776	64,297	35
36	Total General Plant		$ 223,792,206		$ 14,327,615	$ 12,786,083	$ 1,541,533	36
37	Total Depreciation		$ 4,669,837,772		$ 119,799,690	$ 112,374,221	$ 7,425,469	37
38	Total Amortization		4,787,250		91,629	90,096	1,534	38
39	Total Depreciation and Amortization		$ 4,674,625,023		$ 119,891,319	$ 112,464,317	$ 7,427,002	39
							Sch C-2, Sh 2, Col (d)	

[1] Annualized amortization expense in Acct 302 based on January 2019 amortization * 12.

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
DEPRECIATION AND ANNUALIZATION EXPENSE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization Rate	Annualized Depreciation/ Amortization	Recorded Depreciation/ Amortization	Adjustment before Alloc. to AZ	Adjustment after Alloc. to AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
			WP B-2, Sh 5, Col (e)	Company Records	(c) * (d)	Company Records	(e) - (f)	(g) * Ln 23(c)	
	Intangible Plant								
1	Organization	301	$ 61,816	Amortized	$ 0	$ 0	$ 0	$ 0	1
2	Miscellaneous Intangible	303	393,597,857	Amortized	22,006,414	15,368,237	6,638,176 [1]	3,734,606	2
3	Total Intangible Plant		$ 393,659,673		$ 22,006,414	$ 15,368,237	$ 6,638,176	$ 3,734,606	3
	General Plant								
4	Land and Land Rights	389	$ 3,585,401	N/A	$ 0	$ 0	$ 0	$ 0	4
5	Structures and Improv - Co. Owned	390.1	46,986,710	2.30%	1,080,694	1,340,702	(260,008)	(146,279)	5
6	Structures and Improv - Leasehold	390.2	637,178	12.31%	78,437	223,486	(145,050)	(81,604)	6
7	Office Furniture and Fixtures	391	8,770,515	6.67%	584,993	759,939	(174,946)	(98,424)	7
8	Computer Software and Hardware	391.1	23,455,353	19.80%	4,644,160	4,828,518	(184,359)	(103,719)	8
9	Transportation Equipment - Light	392.11	516,464	10.13%	52,318	318,842	(266,524)	(149,945)	9
10	Transportation Equipment - Heavy	392.12	0	6.00%	0	1,673	(1,673)	(941)	10
11	Transportation Equipment - Aircraft	392.21	344,594	4.00%	13,784	328,854	(315,071)	(177,257)	11
12	Stores Equipment	393	34,168	6.67%	2,279	4,205	(1,926)	(1,083)	12
13	Tool, Shop, and Garage Equip.	394	1,317,387	6.67%	87,870	86,904	966	543	13
14	Laboratory Equipment	395	1,540,478	5.00%	77,024	71,884	5,140	2,892	14
15	Power-Operated Equipment	396	259,442	5.67%	14,710	14,710	(0)	(0)	15
16	Communication Equipment	397	7,817,989	6.67%	521,460	519,088	2,372	1,334	16
17	Telemetry Equipment	397.2	488,624	16.67%	81,454	93	81,360	45,773	17
18	Miscellaneous Equipment	398	5,336,899	6.67%	355,971	310,127	45,844	25,791	18
19	Total General Plant		$ 101,091,203		$ 7,595,153	$ 8,809,029	$ (1,213,875)	$ (682,920)	19
20	Total Depreciation		$ 100,454,025		$ 7,516,717	$ 8,585,542	$ (1,068,825)	$ (601,316)	20
21	Total Amortization		394,296,851		22,084,850	15,591,724	6,493,126	3,653,002	21
22	Total Depreciation and Amortization		$ 494,750,876		$ 29,601,567	$ 24,177,266	$ 5,424,301	$ 3,051,686	22
23	AZ 4-Factor		56.26%					Sch C-2, Sh 2, Col (d)	23

[1] WP B-2, Adj. 13, Sh 7, Ln 560(n) + WP B-2, Adj. 19, Sh 5, Ln (f)

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND ANNUALIZATION EXPENSE AT NEW RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization New Rates	Adjusted Depreciation/ Amortization	Annualized Depreciation/ Amortization	Adjustment	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, Col (e)	No study filed	(c) * (d)	Sch C-2, Adj. 13, Sh 1 Col(e)	(e) - (f)	
	Intangible Plant							
1	Organization	301	$ 85,175	Amortized	$ 0	$ 0	$ 0	1
2	Franchise and Consents	302	2,607,704	Amortized	84,750	84,750	0	2
3	Miscellaneous Intangible	303	1,968,623	Amortized	0	0	0	3
4	Total Intangible Plant		$ 4,661,502		$ 84,750	$ 84,750	$ 0	4
	Storage Plant							
5	Land and Land Rights	360	$ 1,772,673	N/A	$ 0	$ 0	$ 0	5
6	Structures and Improvements	361	14,907,302	4.75%	708,097	708,097	0	6
7	Gas Holders	362.0	32,984,650	4.75%	1,566,771	1,566,771	0	7
8	Vaporizing Equipment	363.2	9,108,497	4.75%	432,654	432,654	0	8
9	Compressor Maintenance	363.3	7,785,900	4.75%	369,830	369,830	0	9
10	Other Equipment	363.5	10,395,454	4.75%	493,784	493,784	0	10
11	Total Storage Plant		$ 76,954,475		$ 3,571,136	$ 3,571,136	$ 0	11
	Distribution Plant							
12	Land and Land Rights	374.1	$ 732,082	N/A	$ 0	$ 0	$ 0	12
13	Rights of Way	374.2	3,700,699	1.37%	50,700	50,700	0	13
14	Structures and Improvements	375	110,557	3.35%	3,704	3,704	0	14
15	Mains	376	2,637,793,932	1.81%	47,744,070	47,744,070	0	15
16	Measuring and Reg. Stations	378	100,018,050	3.87%	3,870,699	3,870,699	0	16
17	Services	380	1,272,833,677	2.82%	35,893,910	35,893,910	0	17
18	Meters	381	339,693,332	4.15%	14,097,273	14,097,273	0	18
19	Industrial Measuring and Reg. Sta.	385	13,902,414	1.78%	247,463	247,463	0	19
20	Miscellaneous Equipment	387	432,098	0.00%	0	0	0	20
21	Total Distribution Plant		$ 4,369,216,840		$ 101,907,818	$ 101,907,818	$ 0	21
	General Plant							
22	Land and Land Rights	389	$ 17,385,788	N/A	$ 0	$ 0	$ 0	22
23	Structures and Improv - Co. Owned	390.1	81,972,010	2.79%	2,287,019	2,287,019	0	23
24	Structures and Improv - Leasehold	390.2	125,749	Amortized	6,879	6,879	0	24
25	Office Furniture and Fixtures	391	6,111,146	7.29%	445,503	445,503	0	25
26	Computer Software and Hardware	391.1	11,080,676	21.94%	2,431,100	2,431,100	0	26
27	Transportation Equipment - Light	392.11	37,010,331	14.37%	5,318,385	5,318,385	0	27
28	Transportation Equipment - Heavy	392.12	22,098,330	4.07%	899,402	899,402	0	28
29	Stores Equipment	393	4,143,820	3.73%	154,564	154,564	0	29
30	Tool, Shop, and Garage Equip.	394	20,957,816	10.39%	2,177,517	2,177,517	0	30
31	Laboratory Equipment	395	542,420	5.48%	29,725	29,725	0	31
32	Power-Operated Equipment	396	10,108,170	3.46%	349,743	349,743	0	32
33	Communication Equipment	397	7,417,906	-1.11%	(82,339)	(82,339)	0	33
34	Telemetry Equipment	397.2	9,312	21.96%	2,045	2,045	0	34
35	Miscellaneous Equipment	398	4,828,732	6.38%	308,073	308,073	0	35
36	Total General Plant		$ 223,792,206		$ 14,327,615	$ 14,327,615	$ 0	36
37	Total Depreciation		$ 4,669,837,772		$ 119,799,690	$ 119,799,690	$ 0	37
38	Total Amortization		4,787,250		91,629	91,629	0	38
39	Total Depreciation and Amortization		$ 4,674,625,023		$ 119,891,319	$ 119,891,319	$ 0	39
							Sch C-2, Sh 2, Col (d)	

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES OTHER THAN INCOME ADJUSTMENT
ADJUSTMENT NO. 14

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Adjusted Net Plant in Service	Sch B-2, Sh 1, Ln 11(e)	$	3,139,900,728	1
2	Add: Materials and Supplies	Sch B-5, Sh 3, Ln 16(f)		30,847,268	2
3	Less: Transportation Equipment	[1]		(39,799,404)	3
4	Less: Land Rights	[2]		(18,117,870)	4
5	Estimated Full Cash Value	Sum Lns 1-4	$	3,112,830,723	5
6	2022 Assessment Ratio	Company Records		17.50%	6
7	Assessed Value	Ln 5 * Ln 6	$	544,745,376	7
8	Composite Property Tax Rate	Company Records		12.66%	8
9	Annualized Property Taxes	Ln 7 * Ln 8	$	68,964,765	9
10	Capitalized Property Taxes	Company Records		(2,399,031)	10
11	Annualized Property Tax Expense after Cap.	Ln 9 + Ln 10	$	66,565,734	11
12	Add: Salt River Tribe Assessment	Company Records		30,813	12
13	Adjusted Annualized Property Tax Expense	Ln 11 + Ln 12	$	66,596,547	13
14	Recorded Property Tax Expense	Sch C-1, Sh 15, Ln 1(c)		50,798,652	14
15	Adjustment	Ln 13 - Ln 14	$	15,797,895	15
16	Recorded Miscellaneous Taxes	Company Records	$	114,054	16
17	Adjusted Miscellaneous Taxes	Company Records		108,421	17
18	Adjustment	Ln 17 - Ln 16	$	(5,633)	18
19	Adjusted Property Tax Deferral			2,295,887	
20	Total Taxes Other Than Income Adjustment	Ln 15 + Ln 18	$	18,088,148	20
				Sch C-2, Sh 2, Col (e)	

Explanation:
To annualize Property Tax Expense to reflect adjusted investment requested in this GRC and to adjust misc. taxes to remove items expensed during the test year that should not be collected through base rates.

[1] Adjusted balance of Accounts 392.11 and 392.12 net of accumulated depreciation.
[2] Adjusted balance of Accounts 374.1 and 389.

SOUTHWEST GAS CORPORATION
ARIZONA
ANNUALIZE INSURANCE EXPENSE
ADJUSTMENT NO. 15

Line No.	Description	Account Number	Recorded	Current Monthly Premium	Annualized	Adjustment	MMF Allocatin	Adjustment After MMF Allocation	Arizona Allocation Factor	Allocated to AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)					
			Company Records	Company Records	(d) * 12	(e) - (c)					
1	Property	924	$ 1,036,581	$ 99,033	$ 1,188,393	$ 151,812	11.05%	135,033	57.02%	$ 76,995	1
2	Commercial General Liability	925	$ 11,043,364	$ 1,101,354	$ 13,216,249	$ 2,172,885	4.19%	2,081,810	56.26%	$ 1,171,216	2
3	D & O Liability	925	787,573	58,502	702,027	(85,546)	4.19%	(81,960)	56.26%	(46,110)	3
4	Total		$ 12,867,518	$	$ 15,106,669	$ 2,239,151		2,134,882		$ 1,202,101	4
										Sch C-2, Sh 2, Col (k)	

SOUTHWEST GAS CORPORATION
ARIZONA
REGULATORY AMORTIZATIONS AND ACQUISITION ADJUSTMENT
ADJUSTMENT NO. 16

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
1	Recorded Regulatory Amortization	Company Records	407.3	$ 2,673,464	1
	Add Items To Be Amortized				
2	COVID-19 Late Fees Waived and Suppressed	WP C-2, Adj. 16, Sh 1		847,717	2
3	LNG Deferral Amortizaton	WP C-2, Adj. 16, Sh 1		3,983,884	3
4	COYL Regulatory Amortization Balance	WP C-2, Adj. 16, Sh 1		348,902	4
5	VSP Regulatory Amortization Balance	WP C-2, Adj. 16, Sh 1		1,044,601	5
6	Subtotal New Amortizations	Sum Lns 2-6		$ 6,225,105	6
7					7
8	Remove Test Year Expense Collected Through a Surcharge				8
9	TRIMP/DOT	Company Records		$ (1,146,342)	9
10	DSM	Company Records		(3,702,079)	10
11	Subtotal Items to be Removed	Ln 8 + Ln 9	407.3	$ (4,848,421)	11
12					12
13	Adjustment	Ln 5 + Ln 10	407.3	$ 1,376,684	13
14				Sch C-2, Sh 2,	14
15				Col (g)	15
16					16
17	Adjusted Regulatory Amortizations	Ln 1 + Ln 12	407.3	$ 4,050,147	17
18					18
19	GCU Acquisition Adjustment	WP C-2, Adj. 16, Sh 1	406.0	$ 318,752	

Explanation:
To adjust regulatory amortizations by removing the portion of expense related to surcharges since the offsetting revenues are not included in revenue at present rates, add new regulatory amortizations.

SOUTHWEST GAS CORPORATION
ARIZONA
CORPORATE HEADQUARTERS ADJUSTMENTS - EXPENSES
ADJUSTMENT NO. 17

Line No.	Description	Reference	Account Number	Amount
	(a)	(b)	(c)	(d)
1	Test Year Durango Maintenance Expense	Company Records	935	$ 676,188
2	Remove: Durango Maintenance Expense allocated to Centuri [1]	Ln 1 * (-11%)		$ (74,381)
3	Remove: Spring Mountain Maintenance Expense [2]	Company Records	935	(2,795,458)
4	Add: Ongoing Durange Maintence Expense [3]	Company Records	935	283,368
5	Adjustment	Ln 2 + Ln 3 + Ln 4		$ (2,586,471)
6	Less: MMF Allocation	Sch C-1, Sh 18		4.19%
7	Adjustment after MMF Allocation	Ln 4 * (1 - Ln 5)		$ (2,478,060)
8	Arizona 4-Factor	Sch C-1, Sh 17		56.26%
	Adjustment Allocated to Arizona	Ln 6 * Ln 7		$ (1,394,145)
				Sch C-2, Col (h)

[1] To remove 11% of Test Year Durango campus maintenance expenses for allocation to Centuri.
[2] To remove Test Year Spring Mountain campus maintenance expenses.
[3] To Add in additional ongoing Durango maintenance expense

SOUTHWEST GAS CORPORATION
ARIZONA
SAP AND CSS O&M ADJUSMENT
ADJUSTMENT NO. 18

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Test Year SAP O&M	Company Records	$	9,679,064	1
2	Test Year CSS O&M	Company Records		3,520,387	2
3	Total Recorded	Ln 1 + Ln 2	$	13,199,451	3
4	Arizona Factor IV Allocation			53.31%	4
5	Recorded SAP and CSS O&M Allocated to AZ	Ln 3 * Ln 4	$	7,036,818	5
6	Ongoing SAP O&M	Company Records	$	5,583,733	6
7	Ongoing CSS O&M	Company Records		2,059,495	7
8	Total Ongoing	Ln 6 + Ln 7	$	7,643,228	8
9	Arizona Factor IV Allocation			53.31%	9
10	Ongoing SAP and CSS O&M Allocated to AZ	Ln 8 * Ln 9	$	4,074,715	10
11	Adjustment to Test Year Expenses	Ln 10 - Ln 5	$	(2,962,103)	11
12	Plus: AZ Allocation of Incremental SAP O&M	Company Records	$	6,897,735	12

SOUTHWEST GAS CORPORATION
ARIZONA
GRAHAM COUNTY UTILITIES (GCU) EXPENSES
ADJUSTMENT NO. 20

Line No.	Description	Account Number	Estimated Amount	Line No.
	(a)	(b)	(c)	
1	Distribution		Company Records	1
2	Operation Supervision and Engineering	870	99,225	2
3	Operation Mains and Services	874	140,500	3
4	Operation Meter and House Regulator	878	106,885	4
5	Customer Installation	879	3,000	5
6	Other	880	38,000	6
7	Maintenance Supervision and Engineering	885	15,265	7
8	Maintenance of Mains	887	266,436	8
9	Maintenance of Measuring and Reg. Station Eq.	889	2,000	9
10	Maintenance of Services	892	222,344	
11	Maintenance of Meters and House Regulators	893	2,000	
12	Total Distribution		$ 895,655	
13	Customer Accounts			
14	Meter Reading	902	18,000	
15	Customer Records and Collection	903.0	0	
16	Total Customer Accounts		18,000	
17	Total GCU O&M Adjustment		**$** 913,655	17
			Sch C-2, Sh 2, Col (k)	

Explanation: Adjustment to include the O&M costs related to the Graham County Utility acquistion in Docket No. G-0155
Depreciation expense is calculated in C-2 Depreciation & Amortization

SOUTHWEST GAS CORPORATION
ARIZONA
VARIABLE PAY NORMALIZATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 21

Line No.	Description		Reference	Account Number		Amount	Line No.
	(a)		(b)	(c)		(d)	
1	2019 Performance Share Plan Expense	[2]	Company Records	920		2,759,491	1
2	2020 Performance Share Plan Expense	[3]	Company Records	920		2,319,020	2
3	2021 Performance Share Plan Expense	[4]	Company Records	920		3,167,031	3
4	3-Year Average		Average Ln 1 - Ln 3		$	2,748,514	4
5	2019 Restricted Stock Plan Expense	[2]	Company Records	920	$	2,573,195	5
6	2020 Restricted Stock Plan Expense	[3]	Company Records	920	$	2,537,090	6
7	2021 Restricted Stock Plan Expense	[4]	Company Records	920		2,973,781	7
8	3-Year Average		Average Ln 5 - Ln 7		$	2,694,689	8
9	Management Incentive Plan [1]		Company Records		$	10,336,200	9
10	Less: Non-Utility Measure - PS		Company Records	920	$	(251,049)	10
11	Less: Non-Utility Measure - RSU		Company Records	920		(142,605)	11
12	Less: Non-Utility Measure - MIP		Company Records	920	$	(240,228)	12
13	Less: Non-Utility Measure Total		Ln 10 + Ln 11 + Ln 12		$	(633,882)	13
14	Total Employee Variable Pay		Ln 4 + Ln 8 +Ln 9 +Ln 13		$	15,145,520	14
15	Recorded Employee Variable Pay		Company Records	920		15,871,775	15
16	Adjustment		Ln 14 - Ln 15		$	(726,255)	16
17	Less: MMF Allocation		Stmt N, Sh 10, Ln 7(i)+(j)			4.19%	17
18	Adjustment after MMF Allocation		Ln 16 * (1 - Ln 17)		$	(695,814)	18
19	AZ 4-Factor		Stmt N, Sh 8, Ln 9(g)			56.26%	19
20	Adjustment Allocated to AZ		Ln 18 * Ln 19	920	$	(391,462)	20
						Sch C-2, Sh 1 Col (b)	

Purpose: to normalize employee variable pay based on current plans.

[1] Based on three year average of awarded percent of target of 120.3 percent on test year salaries of eligible participants.

[2] For the 12 months ended August 31, 2019.

[3] For the 12 months ended August 31, 2020.

[4] For the 12 months ended August 31, 2021.

SOUTHWEST GAS CORPORATION
ARIZONA
INTEREST ON CUSTOMER DEPOSITS
ADJUSTMENT NO. 22

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Customer Deposits in Rate Base	Sch B-6, Sh 1, Ln 16(c)	$	33,750,043	1
2	Customer Deposits Interest Rate	US Treasury 1Y CMT at 11/10/2021		0.11%	2
3	Adjusted Interest on Customer Deposits	Ln 1 * Ln 2	$	37,125	3
4	Recorded Interest on Customer Deposits	Company Records		803,794	4
5	Adjustment	Ln 3 - Ln 4	$	(766,669)	5
				Sch C-2, Sh 2 Col (m)	

Explanation:
This adjustment also synchronizes interest on customer deposits expense with the balance of customer deposits included as a rate base reduction.

SOUTHWEST GAS CORPORATION
ARIZONA
BILL PROCESSING EXPENSE ADJUSTMENT
ADJUSTMENT NO. 23

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Annualized Outsourced Bill Processing Cost	Company Estimates	$	9,500,000	1
2	Recorded Bill Processing Cost	Company Records		8,963,248	2
3	Adjustment	Ln 1 - Ln 2	$	536,753	3
	AZ Factor IV			53.31%	
4	Adjustment	Ln 3 - Ln 4	$	286,150	4
				Sch C-2, Sh 2	
5				Col (n)	5

Explanation:

Explanation: Adjustment to include costs associated with the outsourcing of the bill processing function not included in the test year. See Rate Base Adjustment No. 23, which removes the associated assets no longer in use.

SCHEDULE C-3

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF GROSS REVENUE CONVERSION FACTOR

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Gross Operating Revenues		$	1,000.00	1
2	Less: Uncollectibles	Sch C-2, Adj. 7, Sh 1		0.2145%	2
3	Subtotal	Ln 1 * (1 - Ln 2)	$	997.85	3
4	Less: State Income Tax	Sch C-3, Sh 2, Ln 1(c)		4.9000%	4
5	Subtotal	Ln 3 * (1 - Ln 4)	$	948.96	5
6	Less: Federal Income Tax	Sch C-3, Sh 2, Ln 3(c)		19.9710%	6
7	Total	Ln 5 - (Ln 3 * Ln 6)	$	749.68	7
8	Gross Revenue Conversion Factor	Ln 1 / Ln 7		1.3339	8
				Sch A-1, Sh 1, Ln 7(e)	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF STATE AND FEDERAL INCOME TAX RATES

Line No.	Description	Reference	Amount	Line No.
	(a)	(b)	(c)	
1	State Income Tax Rate	Current Statutory Rate	4.9000% Sch C-1, Sh 16, Ln 6	1
2	Federal Income Tax Rate	Current Statutory Rate	21.0000%	2
3	Effective Federal Income Tax Rate	Ln 2 * (1 - Ln 1)	19.9710% Sch C-1, Sh 16, Ln 13	3
4	Total Effective Income Tax Rate	Ln 1 + Ln 3	24.8710%	4

SCHEDULE D

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF CAPITAL AT AUGUST 31, 2021

ORIGINAL COST RATE BASE (OCRB) COST OF CAPITAL

Line No.	Description	Capital Ratio[1]	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	49.00%	4.15%	[2]	2.03%	1
2	Common Equity	51.00%	9.90%	[1]	5.05%	2
3	Total	100.00%			7.08%	3

[1] Reference Schedule D-4, Sheet 1 of 1
[2] Reference Schedule D-2, Sheet 1 of 6

FAIR VALUE RATE OF RETURN [3]

Line No.	Description	Capital Ratio	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	37.92%	4.15%	[2]	1.57%	1
2	Common Equity	39.46%	9.90%	[1]	3.91%	2
3	FVRB Increment Above OCRB	22.62%	0.00%	[3]	0.00%	3
4	Total	100.00%			5.48%	4

[1] Reference Schedule D-4, Sheet 1 of 1
[2] Reference Schedule D-2, Sheet 1 of 6
[3] FVROR is based on FVRB/OCRB = 1.29 - FVRB Increment Return = 0% - See the Prepared Direct Testimony of Company witness Ann E. Bulkley.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
NET CAPITAL AT AUGUST 31, 2021

Line No.	Description	Net System Balance at 8/31/2021	Adjustments	Pro Forma Net Capital Amounts	Capital Ratio	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Debt					
	Long-Term Debt:					
1	Debentures & Medium Term Notes	$ 2,379,482,958	$ -	$ 2,379,482,958	46.83%	1
2	Term Facilities	(411,464)	-	(411,464)	-0.01%	2
3	Clark County IDRB's	147,373,769		147,373,769	2.90%	3
4	Big Bear IDRB's	49,789,602		49,789,602	0.98%	4
5	Total Long-Term Debt	$ 2,576,234,865	$ -	$ 2,576,234,865	50.71%	5
	Equity					
6	Preferred Equity	$ -	-	$ -	0.00%	6
7	Common Equity	2,504,476,216	-	2,504,476,216	49.29%	7
8	Total Equity	$ 2,504,476,216	$ -	$ 2,504,476,216	49.29%	8
9	Total Capital	$ 5,080,711,081	$ -	$ 5,080,711,081	100.00%	9

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF CAPITAL AT AUGUST 31, 2022

ORIGINAL COST RATE BASE (OCRB) COST OF CAPITAL

Line No.	Description	Capital Ratio	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	50.58%	3.70%	[1]	1.87%	1
2	Common Equity	49.42%	9.90%	[2]	4.89%	2
3	Total	100.00%			6.76%	3

[1] Reference Schedule D-2, Sheet 4 of 6
[2] Reference Schedule D-4, Sheet 1 of 1

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED NET CAPITAL AT AUGUST 31, 2022

Line No.	Description	Net System Balance at 8/31/2022	Adjustments	Pro Forma Net Capital Amounts	Capital Ratio	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Debt					
	Long-Term Debt:					
1	Debentures & Medium Term Notes	$ 2,702,680,323	$ -	$ 2,702,680,323	46.12%	1
2	Term Facilities	64,701,837	-	64,701,837	1.10%	2
3	Clark County IDRB's	147,219,947		147,219,947	2.51%	3
4	Big Bear IDRB's	49,643,501		49,643,501	0.85%	4
5	Total Long-Term Debt	$ 2,964,245,608	$ -	$ 2,964,245,608	50.58%	5
	Equity					
6	Preferred Equity	$ -	-	$ -	0.00%	6
7	Common Equity	2,896,476,216	-	2,896,476,216	49.42%	7
8	Total Equity	$ 2,896,476,216	$ -	$ 2,896,476,216	49.42%	8
9	Total Capital	$ 5,860,721,824	$ -	$ 5,860,721,824	100.00%	9

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF DEBT AT AUGUST 31, 2021

Line No.	Description	Net Principal Amount Outstanding	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	
1	Fixed Rate Debt [1]	$ 2,379,482,958	4.14%	$ 98,446,885	1
2	Variable Rate Debt [2]	(411,464)	-67.03%	275,801	2
3	Total Long-Term Debt	$ 2,379,071,494	4.15%	$ 98,722,686	3

[1] Reference Schedule D-2, Sheet 2 of 6
[2] Reference Schedule D-2, Sheet 3 of 6

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF LONG-TERM FIXED RATE DEBT
AT AUGUST 31, 2021

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Effective Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Debentures						
1	3.875% Notes, Due 2022	250,000,000	1,422,117	248,577,882.93	4.88%	12,119,794	1
2	8.0% Debenture, Due 2026	75,000,000	2,606,894	72,393,106.46	8.89%	6,434,455	2
3	3.70% Notes, Due 2028	300,000,000	2,339,423	297,660,576.67	3.84%	11,415,795	3
4	6.1% Notes, Due 2041	125,000,000	138,028	124,861,971.97	6.11%	7,628,804	4
5	4.875% Notes, Due 2043	250,000,000	2,399,283	247,600,717	4.95%	12,248,616	5
6	3.80% Notes, Due 2046	300,000,000	3,893,014	296,106,986	3.88%	11,493,114	6
7	4.15% Notes, Due 2049	300,000,000	3,412,606	296,587,394	4.22%	12,515,875	7
8	2.2% Notes, Due 2030	450,000,000	4,119,499	445,880,501	2.32%	10,328,911	8
9	3.18% Notes, Due 2051	300,000,000	3,788,868	296,211,133	3.25%	9,615,892	9
10	Total Debentures	$ 2,350,000,000	$ 24,119,731	$ 2,325,880,269	4.03%	$ 93,801,256	10
	Medium Term Notes						
11	7.78% MTN, Due 2022	$ 25,000,000	$ 8,375	$ 24,991,625	7.86%	$ 1,964,664	11
12	7.92% MTN, Due 2027	25,000,000	93,654	24,906,346	8.00%	1,993,131	12
13	6.76% MTN, Due 2027	7,500,000	-	7,500,000	6.88%	515,972	13
14	Total Medium Term Notes	$ 57,500,000	$ 102,029	$ 57,397,971	7.79%	$ 4,473,767	14
15	Unamortized Loss on Reacquired Debt[1]	$ -	$ 3,795,281	$ (3,795,281)	-4.53%	$ 171,862	15
16	Total Debentures and MTNs	$ 2,407,500,000	$ 28,017,042	$ 2,379,482,958	4.14%	$ 98,446,885	16
					Sch D-2, Sheet 1		
	Tax Exempt Clark County Amortization of Loss/(Gain) from:						
17	1999 Clark County, Series A	$ -	$ 322,894	$ (322,894)	-5.80%	$ 18,718	17
18	1999 Clark County, Series C	-	440,140	(440,140)	-5.80%	25,515	18
19	1999 Clark County, Series D	-	254,760	(254,760)	-5.80%	14,769	19
20	2003 Clark County, Series C	-	812,296	(812,296)	-6.06%	49,230	20
21	2003 Clark County, Series D	-	969,652	(969,652)	-6.06%	58,767	21
22	2003 Clark County, Series E	-	128,079	(128,079)	-6.06%	7,762	22
23	2004 Clark County, Series A	-	769,390	(769,390)	-7.79%	59,952	23
24	2004 Clark County, Series B	-	(2,753,010)	2,753,010	-8.16%	(224,736)	24
25	2005 Series A, Due 2034		840,027	(840,027)	-7.10%	59,647	25
26	2006 Clark County, Series A	-	(3,669,810)	3,669,810	-6.67%	(244,654)	26
27	Total Amortization of Loss/ (Gain) from retirement of Industrial Revenue Bonds	$ -	$ (1,885,582)	$ 1,885,582	-9.28%	$ (175,030)	27
28	Total Fixed-Rate Debt	$ 2,407,500,000	$ 26,131,460	$ 2,381,368,540	4.13%	$ 98,271,855	28

[1] In March 2010, the Company redeemed the $100 million, 7.70% Subordinated Debentures (Trust Originated Preferred Securities), due 9/15/2043, at par. The unamortized debt expenses were recorded as a reacquisition loss and will be amortized over the remaining life of the retired securities.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
VARIABLE RATE DEBT COST OF DEBT
AT AUGUST 31, 2021

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
1	Term Facility[1]	$ -	$ 411,464	$ (411,464)	-67.03%	$ 275,801	1
					Sch D-2, Sheet 1		
2	Big Bear 1993 Series A IDRB	$ 50,000,000	$ 210,398	$ 49,789,602	0.97%	$ 484,297	2
3	Clark Co.2003 Series A IDRB	$ 50,000,000	$ 1,326,151	$ 48,673,849	1.01%	493,284	3
4	Clark Co.2008 Series A IDRB	50,000,000	2,764,640	47,235,360	1.14%	540,818	4
5	Clark Co.2009 Series A IDRB	50,000,000	421,022	49,578,978	0.79%	392,671	5
6	Total Clark Co. Tax Exempt	$ 150,000,000	$ 4,511,813	$ 145,488,187	0.98%	$ 1,426,772	6

[1] Based on $150 million designated long-term of the $400 million Bank Facility

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF DEBT AT AUGUST 31, 2022

Line No.	Description	Net Principal Amount Outstanding	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	
1	Fixed Rate Debt [1]	$ 2,702,680,323	3.75%	$ 101,369,807	1
2	Variable Rate Debt [2]	64,701,837	1.53%	987,100	2
3	Total Long-Term Debt	$ 2,767,382,160	3.70%	$ 102,356,907	3

[1] Reference Schedule D-2, Sheet 5 of 6
[2] Reference Schedule D-2, Sheet 6 of 6

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF LONG-TERM FIXED RATE DEBT
AT AUGUST 31, 2022

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Effective Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Debentures						
1	8.0% Debenture, Due 2026	75,000,000	2,162,784	72,837,215.67	8.89%	6,473,929	1
2	3.70% Notes, Due 2028	300,000,000	2,020,601	297,979,399	3.84%	11,428,022	2
3	6.1% Notes, Due 2041	125,000,000	134,166	124,865,834	6.11%	7,629,040	3
4	4.875% Notes, Due 2043	250,000,000	2,337,411	247,662,589	4.95%	12,251,676	4
5	3.80% Notes, Due 2046	300,000,000	3,798,996	296,201,004	3.88%	11,496,763	5
6	4.15% Notes, Due 2049	300,000,000	3,346,035	296,653,965	4.22%	12,518,684	6
7	2.2% Notes, Due 2030	450,000,000	3,687,924	446,312,076	2.32%	10,338,908	7
8	3.18% Notes, Due 2051	300,000,000	3,713,250	296,286,750	3.25%	9,618,346	8
9	*2.75% Notes, Due 2032*[1]	600,000,000	4,914,829	595,085,171	2.85%	16,932,402	9
10	Total Debentures	$ 2,700,000,000	$ 26,115,998	$ 2,673,884,002	3.69%	$ 98,687,770	10
	Medium Term Notes						
11	7.92% MTN, Due 2027	25,000,000	80,260	24,919,740	8.00%	1,994,203	11
12	6.76% MTN, Due 2027	7,500,000	-	7,500,000	6.88%	515,972	12
13	Total Medium Term Notes	$ 32,500,000	$ 80,260	$ 32,419,740	7.74%	$ 2,510,175	13
14	Unamortized Loss on Reacquired Debt[2]	$ -	$ 3,623,419	$ (3,623,419)	-4.74%	$ 171,862	14
15	Total Debentures and MTNs	$ 2,732,500,000	$ 29,819,677	$ 2,702,680,323	3.75%	$ 101,369,807	15
					Sch D-2, Sheet 4		
	Tax Exempt Clark County Amortization of Loss/(Gain) from:						
16	1999 Clark County, Series A	$ -	$ 304,175	$ (304,175)	-6.15%	$ 18,718	16
17	1999 Clark County, Series C	-	414,625	(414,625)	-6.15%	25,515	17
18	1999 Clark County, Series D	-	239,992	(239,992)	-6.15%	14,769	18
19	2003 Clark County, Series C	-	763,066	(763,066)	-6.45%	49,230	19
20	2003 Clark County, Series D	-	910,885	(910,885)	-6.45%	58,767	20
21	2003 Clark County, Series E	-	120,317	(120,317)	-6.45%	7,762	21
22	2004 Clark County, Series A	-	709,438	(709,438)	-8.45%	59,952	22
23	2004 Clark County, Series B	-	(2,528,274)	2,528,274	-8.89%	(224,736)	23
24	2005 Series A, Due 2034		780,380	(780,380)	-7.64%	59,647	24
25	2006 Clark County, Series A	-	(3,425,156)	3,425,156	-7.14%	(244,654)	25
26	Total Amortization of Loss/ (Gain) from retirement of Industrial Revenue Bonds	$ -	$ (1,710,553)	$ 1,710,553	-10.23%	$ (175,030)	26
27	Total Fixed-Rate Debt	$ 2,732,500,000	$ 28,109,124	$ 2,704,390,876	3.74%	$ 101,194,777	27

[1] Projected issuance on March 15, 2022

[2] In March 2010, the Company redeemed the $100 million, 7.70% Subordinated Debentures (Trust Originated Preferred Securities), due 9/15/2043, at par. The unamortized debt expenses were recorded as a reacquisition loss and will be amortized over the remaining life of the retired securities.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED VARIABLE RATE DEBT COST OF DEBT
AT AUGUST 31, 2022

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
1	Term Facility[1]	$ 65,000,000	$ 298,163	$ 64,701,837	1.53%	$ 987,100	1
2	Big Bear 1993 Series A IDRB	$ 50,000,000	$ 356,499	$ 49,643,501	1.09%	$ 542,147	2
3	Clark Co.2003 Series A IDRB	$ 50,000,000	$ 1,435,410	$ 48,564,590	1.15%	559,293	3
4	Clark Co.2008 Series A IDRB	50,000,000	2,628,959	47,371,041	1.17%	553,503	4
5	Clark Co.2009 Series A IDRB	50,000,000	426,237	49,573,763	0.82%	407,358	5
6	Total Clark Co. Tax Exempt	$ 150,000,000	$ 4,490,606	$ 145,509,394	1.04%	$ 1,520,154	6

[1] Based on $150 million designated long-term of the $400 million Bank Facility

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF PREFERRED SECURITIES[1]
AT AUGUST 31, 2021

Line No.	Description	Net Proceeds Per Security	Number of Securities	Net Proceeds	Effective Cost	Annual Cost	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	

[1] The Company has no outstanding preferred securities

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF PREFERRED SECURITIES[1]
AT AUGUST 31, 2022

Line No.	Description	Net Proceeds Per Security	Number of Securities	Net Proceeds	Effective Cost	Annual Cost	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	

[1] The Company has no outstanding preferred securities and has no plan to issue preferred securities

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF COMMON EQUITY

Line No.	Description	Line No.
	(a)	
1	The cost of common equity requested is 9.90% associated with a target common equity ratio of 51%.	1
	[1] Prepared Direct Testimony of Southwest Gas witness Ann E. Bulkley	

SCHEDULE E

SOUTHWEST GAS CORPORATION
COMPARATIVE BALANCE SHEETS [1]

Line No.	Description	Balance at 08/31/2021 Arizona	Balance at 08/31/2021 Other	Balance at 08/31/2021 Total	Balance at 12/31/2020 Arizona	Balance at 12/31/2020 Other	Balance at 12/31/2020 Total	Balance at 12/31/2019 Arizona	Balance at 12/31/2019 Other	Balance at 12/31/2019 Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
		Company Records	(d) - (b)	Company Records	Company Records	(g) - (e)	Company Records	Company Records	(j) - (h)	Company Records	
	Assets and Other Debits										
	Utility Plant										
1	Utility Plant (101, 105, 114, 118)	$ 4,304,142,583	$ 3,992,516,934	$ 8,296,659,517	$ 4,067,430,894	$ 3,791,595,687	$ 7,859,026,581	$ 3,757,626,478	$ 3,588,423,294	$ 7,346,049,772	1
2	Completed Construction Not Classified (106)	187,109,065	242,738,630	429,847,694	315,366,411	198,216,440	513,582,851	361,959,643	93,820,694	455,780,337	2
3	Construction Work in Progress (107)	72,472,209	70,334,085	142,806,294	56,053,002	157,433,009	213,486,011	75,600,265	109,425,321	185,025,586	3
4	Total Utility Plant	$ 4,563,723,856	$ 4,305,589,648	$ 8,869,313,505	$ 4,438,850,307	$ 4,147,245,136	$ 8,586,095,443	$ 4,195,186,386	$ 3,791,669,309	$ 7,986,855,695	4
5	Less: Accumulated Provision for Depreciation and Amortization (108, 111 119)	1,522,111,122	1,379,613,799	2,901,724,920	1,483,109,478	1,328,848,583	2,811,958,061	1,440,122,801	1,256,536,633	2,696,659,434	5
6	Net Utility Plant	$ 3,041,612,735	$ 2,925,975,850	$ 5,967,588,585	$ 2,955,740,829	$ 2,818,396,553	$ 5,774,137,382	$ 2,755,063,585	$ 2,535,132,675	$ 5,290,196,260	6
	Other Property and Investments										
7	Northern California Surcharge (120)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	7
8	Non-Utility Property (121)	0	1,366,551	1,366,551	0	973,034	973,034	0	201,337	201,337	8
9	Non-Utility Accumulated Depreciation (122)	0	(394,485)	(394,485)	0	0	0	0	0	0	9
10	Investment in Subsidiary and Associated Companies (123, 123.1)	0	150,098,574	150,098,574	0	142,615,990	142,615,990	0	130,579,833	130,579,833	10
11	Other Investments (124)	0	0	0	0	0	0	0	0	0	11
12	Special Funds (125,128)	0	146,794,182	146,794,182	0	140,873,523	140,873,523	0	132,071,926	132,071,926	12
13	Total Other Property and Investments	$ 0	$ 297,864,822	$ 297,864,822	$ 0	$ 284,462,547	$ 284,462,547	$ 0	$ 262,853,097	$ 262,853,097	13
							142,615,990			130,579,833	
	Current and Accrued Assets										
14	Cash (131)	$ 0	$ 96,862,940	$ 96,862,940	$ 0	$ 21,193,470	$ 21,193,470	$ 0	$ (3,313,960)	$ (3,313,960)	14
15	Working Funds (135)	0	5,629	5,629	0	532,304	532,304	0	440,716	440,716	15
16	Temporary Cash Investments (136)	0	40,300	40,300	0	40,300	40,300	0	23,542,776	23,542,776	16
17	Notes and Accounts Receivables Less Accumulated Provision for Uncollectible Accounts (141-144)	6,828,076	67,103,410	73,931,486	6,109,361	140,751,125	146,860,486	11,875,477	139,443,747	151,319,224	17
18	Receivables from Associated Companies (145-146)	0	9,076,261	9,076,261	0	12,887,422	12,887,422	0	18,455,519	18,455,519	18
19	Materials and Supplies (151,154, 155, 163)	28,030,899	23,836,888	51,867,787	29,011,338	21,789,774	50,801,112	34,753,483	21,977,972	56,731,455	19
20	Liquefied Natural Gas Stored (164.1, 164.2)	2,254,397	7,361,434	9,615,831	2,192,993	7,036,397	9,229,391	0	7,687,730	7,687,730	20
21	Prepayments (165)	0	30,784,761	30,784,761	0	28,594,223	28,594,223	0	23,094,221	23,094,221	21
22	Interest and Dividends Receivable (171)	0	0	0	0	0	0	0	0	0	22
23	Accrued Utility Revenue (173)	0	38,000,000	38,000,000	0	82,400,000	82,400,000	0	79,100,000	79,100,000	23
24	Miscellaneous Current and Accrued Assets (174)	0	4,488,711	4,488,711	0	7,513,669	7,513,669	0	8,131,591	8,131,591	24
25	Total Current and Accrued Assets	$ 37,113,371	$ 277,560,335	$ 314,673,705	$ 37,313,693	$ 322,738,684	$ 360,052,377	$ 46,628,960	$ 318,560,312	$ 365,189,272	25
	Deferred Debits										
26	Unamortized Debt Discount and Expenses (181)	$ 0	$ 17,353,597	$ 17,353,597	$ 0	$ 14,216,812	$ 14,216,812	$ 0	$ 11,091,071	$ 11,091,071	26
27	Other Regulatory Assets (182)	23,886,019	428,804,442	452,690,461	30,521,983	478,075,186	508,597,169	45,273,380	442,871,671	488,145,052	27
28	Preliminary Survey and Investigative Charges (183)	0	1,899,865	1,899,865	0	1,830,588	1,830,588	0	2,046,642	2,046,642	28
29	Clearing Accounts (184)	300,359	1,003,010	1,303,368	101,727	996,588	1,098,315	234,154	534,275	768,429	29
30	Miscellaneous Deferred Debits (186)	5,598,015	5,105,233	10,703,248	6,072,385	6,025,052	12,097,438	5,920,991	5,567,662	11,488,654	30
31	Research and Development (188)	0	0	0	0	0	0	0	0	0	31
32	Loss on Reacquired Debt (189)	0	16,216,765	16,216,765	0	17,123,968	17,123,968	0	18,248,700	18,248,700	32
33	Accumulated Deferred Income Taxes (190)	0	0	0	0	0	0	0	22,218,656	22,218,656	33
34	Unrecovered Purchased Gas Costs (191)	192,961,907	47,106,135	240,068,042	(3,900,959)	(48,681,714)	(52,582,673)	(59,259,247)	42,915,909	(16,343,338)	34
35	Total Deferred Debits	$ 222,746,300	$ 517,489,046	$ 740,235,346	$ 32,795,137	$ 469,586,481	$ 502,381,618	$ (7,830,722)	$ 545,494,587	$ 537,663,865	35
36	Total Assets and Other Debits	$ 3,301,472,406	$ 4,018,890,052	$ 7,320,362,458	$ 3,025,849,658	$ 3,895,184,266	$ 6,921,033,924	$ 2,793,861,824	$ 3,662,040,671	$ 6,455,902,495	36

NOTE: The Arizona columns above reflect only those amounts separately identified in the Southwest Gas general ledger as pertaining solely to Arizona. Allocations are not included, thus the debits and credits in the Arizona columns do not balance. The financial statements appearing herein are unaudited, and were prepared solely for the purposes of complying with the filing requirements for this general rate case.

SOUTHWEST GAS CORPORATION
COMPARATIVE BALANCE SHEETS [1]

Line No.	Description	Balance at 08/31/2021 Arizona	Balance at 08/31/2021 Other	Balance at 08/31/2021 Total	Balance at 12/31/2020 Arizona	Balance at 12/31/2020 Other	Balance at 12/31/2020 Total	Balance at 12/31/2019 Arizona	Balance at 12/31/2019 Other	Balance at 12/31/2019 Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
		Company Records	(d) - (b)	Company Records	Company Records	(g) - (e)	Company Records	Company Records	(j) - (h)	Company Records	
	Liabilities and Other Credits										
	Proprietary Capital										
1	Common Stock Issued (201)	$ 0	$ 49,111,954	$ 49,111,954	$ 0	$ 49,111,954	$ 49,111,954	$ 0	$ 49,111,954	$ 49,111,954	1
2	Preferred Stock Issued (204)	0	0	0	0	0	0	0	0	0	2
3	Premium on Capital Stock (207)	0	1,589,015,133	1,589,015,133	0	1,421,677,667	1,421,677,667	0	1,240,416,354	1,240,416,354	3
4	Other Paid in Capital (208-211)	0	0	0	0	0	0	0	0	0	4
5	Reacquired Capital Stock (217)	0	0	0	0	0	0	0	0	0	5
6	Capital Stock Expense (214)	0	(11,333,051)	(11,333,051)	0	(11,333,051)	(11,333,051)	0	(11,333,051)	(11,333,051)	6
7	Retained Earnings (216)	0	961,502,611	961,502,611	0	835,145,862	835,145,862	0	819,751,614	819,751,614	7
8	Total Proprietary Capital	$ 0	$ 2,588,296,647	$ 2,588,296,647	$ 0	$ 2,294,602,432	$ 2,294,602,432	$ 0	$ 2,097,946,870	$ 2,097,946,870	8
	Long-Term Debt										
9	Bonds and Swaps (219, 221, 222)	$ 0	$ 2,550,223,583	$ 2,550,223,583	$ 0	$ 2,246,365,392	$ 2,246,365,392	$ 0	$ 1,927,348,615	$ 1,927,348,615	9
10	Other Long-Term Debt (223, 224, 226)	0	4,812,432	4,812,432	0	144,922,256	144,922,256	0	144,924,192	144,924,192	10
11	Other Preferred Securities (224.1)	0	0	0	0	0	0	0	0	0	11
12	Total Long-Term Debt	$ 0	$ 2,555,036,015	$ 2,555,036,015	$ 0	$ 2,391,287,648	$ 2,391,287,648	$ 0	$ 2,072,272,807	$ 2,072,272,807	12
	Current and Accrued Liabilities										
13	Notes Payable (231)	$ 0	$ 250,000,000	$ 250,000,000	$ 0	$ 57,000,000	$ 57,000,000	$ 0	$ 194,000,000	$ 194,000,000	13
14	Accounts Payable (232)	0	53,124,997	53,124,997	0	142,341,904	142,341,904	0	129,548,495	129,548,495	14
15	Payables to Associated Companies (233, 234)	0	8,740,904	8,740,904	0	12,709,449	12,709,449	0	19,076,085	19,076,085	15
16	Customer Deposits (235)	29,237,043	27,303,690	56,540,733	35,572,817	32,347,163	67,919,980	36,947,355	32,217,499	69,164,853	16
17	Taxes Accrued (236)	36,199,026	(7,854,491)	28,344,535	23,455,401	(794,228)	22,661,173	21,265,172	538,060	21,803,232	17
18	Interest Accrued (237)	216,538	26,789,196	27,005,735	1,115,078	19,380,021	20,495,099	1,160,489	20,095,729	21,256,219	18
19	Dividends Declared (238)	0	28,500,000	28,500,000	0	26,000,000	26,000,000	0	25,200,000	25,200,000	19
20	Tax Collections Payable (241)	5,915,986	4,530,083	10,446,069	8,702,508	7,900,736	16,603,244	10,244,942	8,006,091	18,251,033	20
21	Miscellaneous Current and Accrued Liabilities (242)	(6,369,130)	(115,550,506)	(121,919,636)	(6,147,398)	(39,709,087)	(45,856,485)	(6,428,667)	3,328,489	(3,100,177)	21
22	Obligations Under Capital Leases (243)	0	666,241	666,241	0	648,976	648,976	0	723,071	723,071	22
23	Total Current and Accrued Liabilities	$ 65,199,463	$ 275,583,874	$ 341,449,578	$ 62,698,407	$ 257,175,958	$ 320,523,341	$ 63,189,291	$ 432,010,449	$ 495,922,811	23
	Deferred Credits										
24	Customer Advances for Construction (252)	$ 64,730,332	$ 69,174,257	$ 133,904,589	$ 58,901,460	$ 62,936,930	$ 121,838,390	$ 50,486,860	$ 58,863,668	$ 109,350,528	24
25	Other Deferred Credits (253)	0	559,235,035	559,235,035	0	581,794,576	581,794,576	0	554,302,913	554,302,913	25
26	Other Regulatory Liabilities (254)	(5,105,112)	452,111,910	447,006,798	(981,247)	463,083,092	462,101,844	(816,528)	460,430,813	459,614,285	26
27	Accumulated Deferred Investment Tax Credit (255)	0	35,870	35,870	5,371,310	(5,300,899)	70,411	0	122,222	122,222	27
28	Unamortized Gain on Reacquired Debt (257)	0	7,286,906	7,286,906	0	7,644,375	7,644,375	0	8,180,577	8,180,577	28
29	Accumulated Deferred Income Taxes (282, 283)	399,486,367	218,353,893	617,840,260	368,421,376	210,571,846	578,993,222	353,498,996	189,578,658	543,077,654	29
30	Total Deferred Credits	$ 459,111,587	$ 1,306,197,872	$ 1,765,309,459	$ 431,712,899	$ 1,320,729,920	$ 1,752,442,818	$ 403,169,328	$ 1,271,478,852	$ 1,674,648,179	30
	Other Long-Term Liabilities										
31	Obligations Under Leases (227)	$ 0	$ 1,672,525	$ 1,672,525	$ 0	$ 1,586,120	$ 1,586,120	$ 0	$ 729,698	$ 729,698	
32	Injuries and Damages Reserve (228)	0	4,400,000	4,400,000	0	4,650,000	4,650,000	0	5,660,000	5,660,000	32
33	Provision for Rate Refunds (229)	0	0	0	0	0	0	0	662,565	662,565	33
34	Total Other Long-Term Liabilities	$ 0	$ 6,072,525	$ 6,072,525	$ 0	$ 6,236,120	$ 6,236,120	$ 0	$ 7,052,263	$ 7,052,263	34
35	Total Liabilities and Other Credits	$ 524,311,051	$ 6,731,186,933	$ 7,256,164,224	$ 494,411,305	$ 6,270,032,078	$ 6,765,092,360	$ 466,358,619	$ 5,880,761,241	$ 6,347,842,931	35

NOTE: The Arizona columns above reflect only those amounts separately identified in the Southwest Gas general ledger as pertaining solely to Arizona. Allocations are not included, thus the debits and credits in the Arizona columns do not balance. The financial statements appearing herein are unaudited, and were prepared solely for the purposes of complying with the filing requirements for this general rate case.

SOUTHWEST GAS CORPORATION
ARIZONA
COMPARATIVE INCOME STATEMENTS

Line No.	Description	Test Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-6, Sh 1	Sch E-6, Sh 1	Sch E-6, Sh 1	
1	Operating Revenue	$ 722,593,620	$ 603,406,659	$ 635,764,607	1
2	Operating Expenses and Taxes	600,877,287	492,428,775	518,160,685	2
3	Operating Income	$ 121,716,333	$ 110,977,884	$ 117,603,922	3
4	Other Income and Deductions	0	0	0	4
5	Income Before Interest Deductions	$ 121,716,333	$ 110,977,884	$ 117,603,922	5
6	Net Interest Deductions	50,243,557	55,794,384 [1]	52,165,576 [1]	6
7	Net Income	$ 71,472,776	$ 55,183,500	$ 65,438,346	7
		Sch A-2, Sh 1	Sch A-2, Sh 1	Sch A-2, Sh 1	

[1] Source: Company Records

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
STATEMENTS OF INCOME [1]

Line No.	Description	Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
	Utility Operating Income				
1	Operating Revenues (400)	$ 1,426,586,982	$ 1,350,585,255	$ 1,368,939,322	1
	Operating Expenses:				
2	Operating Expenses (401)	$ 721,900,525	$ 688,889,810	$ 736,814,181	2
3	Maintenance Expenses (402)	80,269,106	80,351,745	85,582,883	3
4	Depreciation Expense (403)	209,142,042	201,598,119	183,705,095	4
5	Amortization of Other Limited Term Gas Plant (404.3)	15,747,696	14,047,809	13,705,474	5
6	Amortization of Utility Plant Acquisition Adjustment (406)	0	(9,429)	(52,943)	6
7	Amortization of Property Losses (407.1)	0	0	0	7
8	Amortization of Regulatory Assets (407.3)	22,928,938	19,658,164	18,262,186	8
9	Amortization of Regulatory Liabilities (407.4)	0	0	0	9
10	Taxes Other than Income Taxes (408.1)	74,857,441	63,459,910	62,328,400	10
11	Income Taxes - Federal (409.1)	(3,383,810)	(2,653,675)	7,036,497	11
12	Income Taxes - Other (409.1)	(2,910,569)	74,296	663,136	12
13	Provision for Deferred Income Taxes (410.1)	131,419,339	111,069,227	143,308,288	13
14	Provision for Deferred Income Taxes - Credit (411.1)	(90,156,397)	(73,716,360)	(117,539,413)	14
15	Investment Tax Credit Adjustment - Net (411.4)	(51,811)	(51,811)	(245,634)	15
16	Total Operating Expenses	$ 1,159,762,501	$ 1,102,717,806	$ 1,133,568,149	16
17	Net Utility Operating Income	$ 266,824,481	$ 247,867,450	$ 235,371,174	17
	Other Income and Deductions				
	Other Income:				
18	Non-Utility Operating Income (415-418)	$ 0	$ 0	$ 0	18
19	Equity in Earnings of Subsidiary Companies (418.1)	(132,558)	85,328	7,160	19
20	Interest and Dividend Income (419)	4,026,323	4,274,681	6,975,599	20
21	Allowance for Equity Funds Used During Construction (419.1)	1,793,241	4,724,172	4,160,538	21
22	Amortization of Investment Tax Credits (420)	0	0	0	22
23	Miscellaneous Non-Operating Income (421)	653,530	469,397	336,181	23
24	Gain on Disposition of Property (421.1)	0	0	15,751	24
25	Total Other Income	$ 6,340,536	$ 9,553,578	$ 11,495,230	25
	Other (Income) Deductions				
26	Miscellaneous Amortizations (425)	$ 6,136	$ 0	$ 0	26
27	Miscellaneous (Income) Deductions (426)	(798,415)	(4,176,874)	(13,716,715)	27
28	Total Other (Income) Deductions	$ (792,279)	$ (4,176,874)	$ (13,716,715)	28
	Taxes Applicable to Other Income and Deductions				
29	Taxes Other than Income Taxes (408.2)	$ 62,507	$ 62,507	$ 15,213	29
30	Income Taxes (409.2)	(2,196,979)	(2,321,428)	(3,346,559)	30
31	Provision for Deferred Income Taxes (410.2, 411.2)	2,859,395	3,330,527	5,098,437	31
32	Investment Tax Credit Adjustment - Net (411.5)	0	0	0	32
33	Total Taxes Applicable to Other Income and Deductions	$ 724,923	$ 1,071,606	$ 1,767,091	33
34	Net Other Income and (Deductions)	$ 6,407,893	$ 12,658,846	$ 23,444,854	34
	Interest Charges				
35	Interest on Long-Term Debt (427)	$ 92,266,740	$ 94,279,198	$ 89,149,053	35
36	Amortization of Debt Discount and Expense (428)	3,227,181	3,039,305	2,699,124	36
37	Amortization of Gain on Reacquired Debt (429)	(536,203)	(536,203)	(536,203)	37
38	Other Interest Expense (430-431)	4,091,448	7,828,013	8,891,073	38
39	Total Interest Charges	$ 99,049,167	$ 104,610,314	$ 100,203,047	39
40	Allowance for Borrowed Funds Used During Construction (432)	(1,986,649)	(3,202,278)	(4,557,906)	40
41	Interest and Dividends (438)	0	0		41
42	Net Interest Charges	$ 97,062,517	$ 101,408,036	$ 95,645,141	42
43	Net Income	$ 176,169,857	$ 159,118,260	$ 163,170,886	43

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
COMPARATIVE STATEMENT OF CASH FLOWS
($ THOUSANDS)

Line No.	Description	Test Year Ended 08/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
	CASH FLOWS FROM OPERATING ACTIVITIES:				
1	Net Income	$ 190,401	$ 159,118	$ 163,171	1
2	Adjustments to reconcile net income to net cash				2
3	provided by operating activities:				3
4	Depreciation and amortization	247,819	235,295	215,620	4
5	Other Amortization	6,000	6,545	6,784	5
6	Change in deferred charges	(26,395)	(36,815)	(20,432)	6
7	Change in deferred credits	(61,588)	(63,339)	(13,357)	7
8	Change in deferred taxes	59,253	43,219	33,685	8
9	Change in accrued taxes	(15,478)	(1,526)	8,897	9
10	Undistributed earnings of subsidiaries	133	(85)	(7)	10
11	Allowance for funds used during construction	(1,754)	(4,724)	(4,161)	11
12	Change in deferred purchased gas costs	(316,621)	36,239	(58,491)	12
13	Change in receivable and payables	(28,759)	8,245	(37,872)	13
14	Other	(9,968)	43,731	73,523	14
15	Net cash provided by operating activities	$ 43,043	$ 425,903	$ 367,360	15
	CASH FLOWS FROM INVESTING ACTIVITIES:				
16	Construction expenditures	$ (600,036)	$ (693,961)	$ (778,721)	16
17	Investment in SWGT/UFCO	0	0	340	17
18	Change in customer advances	18,967	14,033	19,001	18
19	Miscellaneous inflows	674	674	0	19
20	Net cash used in investing activities	$ (580,395)	$ (679,254)	$ (759,380)	20
	CASH FLOWS FROM FINANCING ACTIVITIES:				
21	Change in notes payable	$ 250,000	$ (137,000)	$ 42,000	21
22	Dividends paid	(106,900)	(104,500)	(95,900)	22
23	Withholding remittance - share-based compensation	(1,254)	(2,736)	(1,858)	23
24	Issuance of long-term debt, net	297,318	446,508	297,222	24
25	Retirement of long-term debt	(125,000)	(125,000)	0	25
26	Change in credit facility	(5,000)	0	0	26
27	Capital contribution from parent	209,158	177,922	159,936	27
28	Other	(1,012)	(1,262)	(825)	28
29	Net cash provided by (used in) financing activities	$ 517,310	$ 253,932	$ 400,575	29
30	Change in cash and cash equivalents	$ (20,042)	$ 581	$ 8,555	30
31	Cash at beginning of period	133,950	40,489	31,934	31
32	Cash at end of period	$ 113,908	$ 41,070	$ 40,489	32
		Sch A-5, Sh 1	Sch A-5, Sh 1	Sch A-5, Sh 1	

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY AND PREFERRED SECURITIES

Line No.	Description	Preferred Securities		Common		Additional Paid-In Capital	Retained Earnings	Capital Stock Expense/AOCI	Line No.
		Shares/Units	Amount	# Shares	Amount				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
1	Balance December 31, 2018 [1]	0	$ 0	47,482,068	$ 49,111,944	$ 1,076,574,690	$ 717,154,837	$ (60,382,258)	1
2	Net Earnings	0	0				163,170,885		2
3	Equity Adjustment	0	0						3
4	Cash Dividend Declared - Common	0	0				(98,217,317)		4
5	Common Stock Issue	0	0	0	0	163,841,664	0	(6,102,178)	5
6	Balance December 31, 2019	0	$ 0	47,482,068	$ 49,111,944	$ 1,240,416,354	$ 782,108,405	$ (66,484,436)	6
7	Net Earnings	0	0				159,118,259		7
8	Equity Adjustment	0	0						8
9	Cash Dividend Declared - Common	0	0				(106,080,802)		9
10	Common Stock Issue	0	0	0	0	181,261,313	0	(5,983,223)	10
11	Balance December 31, 2020	0	$ 0	47,482,068	$ 49,111,944	$ 1,421,677,667	$ 835,145,862	$ (72,467,659)	11
12	Net Earnings	0	0				114,299,028		12
13	Cash Dividend Declared - Common	0	0				(56,517,076)		13
14	Common Stock Issue	0	0	0	0	152,091,842	0	3,858,191	14
15	Balance August 31, 2021	0	$ 0	47,482,068	$ 49,111,944	$ 1,573,769,509	$ 892,927,814	$ (68,609,468)	15

[1] Beginning in 2017, shares of Common Stock were distributed at the Holding Company level and not the Southwest Gas level. Common Stock shares issued at the Holding Company level for 2017 were 608,402 shares, in 2018 was 4,936,378 shares and for January 31, 2019, 50,425 shares.

SOUTHWEST GAS CORPORATION
ARIZONA
DETAIL OF UTILITY PLANT - NET ADDITIONS
FOR THE YEAR ENDED AUGUST 31, 2021

Line No.	Description	Account Number	Balance at 8/31/2021	Net Plant Additions (Deletions)	Balance at 12/31/2020	Line No.
	(a)	(b)	(c)	(d)	(e)	
			WP B-2, Sh 1, Col Company Records	(c) - (e)	Company Records	
	Intangible Plant					
1	Organization	301	$ 42,653	$ 0	$ 42,653	1
2	Franchise and Consents	302	2,607,704	7,519	2,600,185	2
3	Miscellaneous Intangible	303	1,968,623	0	1,968,623	3
4	Total Intangible Plant		$ 4,618,980	$ 7,519	$ 4,611,461	4
	Storage Plant					
5	Land and Land Rights	360	$ 1,772,673	$ 0	$ 1,772,673	5
6	Structures and Improvements	361	14,907,302	288,810	14,618,492	6
7	Gas Holders	362	32,984,650	639,036	32,345,614	7
8	Vaporizing Equipment	363.2	9,108,497	176,466	8,932,031	8
9	Compressor Equipment	363.2	7,785,900	150,842	7,635,059	9
10	Equipment	363.5	8,466,104	379,106	8,086,998	10
12	Total Storage Plant		$ 75,025,126	$ 1,634,259	$ 73,390,867	12
	Distribution Plant					
13	Land and Land Rights	374.1	$ 730,666	$ 325,000	$ 405,666	13
14	Rights of Way	374.2	3,700,699	233,638	3,467,061	14
15	Structures and Improvements	375	110,557	0	110,557	15
16	Mains	376	2,541,488,489	58,608,979	2,482,879,509	16
17	Measuring and Reg. Stations	378	94,788,559	2,235,510	92,553,049	17
18	Services	380	1,220,381,301	33,327,440	1,187,053,860	18
19	Meters	381	337,697,754	10,510,576	327,187,179	19
20	Industrial Measuring and Reg. Sta.	385	13,871,253	276,641	13,594,611	20
21	Miscellaneous Equipment	387	432,098	0	432,098	21
22	Total Distribution Plant		$ 4,213,201,374	$ 105,517,785	$ 4,107,683,590	22
	General Plant					
23	Land and Land Rights	389	$ 17,385,788	$ 0	$ 17,385,788	23
24	Structures and Improv - Co. Owned	390.1	71,583,751	26,159	71,557,592	24
25	Structures and Improv - Leasehold	390.2	125,749	0	125,749	25
26	Office Furniture and Fixtures	391	5,308,396	(3,153)	5,311,549	26
27	Computer Software and Hardware	391.1	11,080,676	(3,439,150)	14,519,825	27
28	Transportation Equipment - Light	392.11	29,344,254	1,898,490	27,445,764	28
29	Transportation Equipment - Heavy	392.12	22,098,330	915,891	21,182,440	29
30	Stores Equipment	393	1,174,565	0	1,174,565	30
31	Tool, Shop, and Garage Equip.	394	19,375,129	1,142,504	18,232,625	31
32	Laboratory Equipment	395	542,420	(1,803)	544,223	32
33	Power-Operated Equipment	396	9,989,860	(529,407)	10,519,267	33
34	Communication Equipment	397	5,709,206	(6,826)	5,716,031	34
35	Telemetry Equipment	397.2	9,312	(31,057)	40,369	35
36	Miscellaneous Equipment	398	4,678,732	1,323,132	3,355,601	36
37	Total General Plant		$ 198,406,168	$ 1,294,779	$ 197,111,388	37
38	Total Plant in Service		$ 4,491,251,647	$ 108,454,342	$ 4,382,797,305	38
39	Construction Work in Progress		72,472,209	17,448,892	55,023,317	39
40	Less: Accumulated Depreciation/Amort.		1,528,532,944	35,198,869	1,493,334,075	40
41	Total Net Plant		$ 3,035,190,913	$ 90,704,365	$ 2,944,486,547	41

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
DETAIL OF UTILITY PLANT - NET ADDITIONS
FOR THE YEAR ENDED AUGUST 31, 2021

Line No.	Description	Account Number	Balance at 8/31/2021	Net Plant Additions (Deletions)	Balance at 12/31/2020	Line No.
	(a)	(b)	(c) WP B-2, Sh 5, Col (c)	(d) (c) - (e)	(e) Company Records	
	Intangible Plant					
1	Organization	301	$ 61,816	$ 0	$ 61,816	1
2	Miscellaneous Intangible	303	371,082,250	105,290,392	265,791,858	2
3	Total Intangible Plant		$ 371,144,066	$ 105,290,392	$ 265,853,674	3
	General Plant					
4	Land and Land Rights	389	$ 8,026,922	$ 1,802,975	$ 6,223,947	4
5	Structures and Improv - Co. Owned	390.1	75,861,022	17,126,716	58,734,306	5
6	Structures and Improv - Leasehold	390.2	2,347,609	0	2,347,609	6
7	Office Furniture and Fixtures	391	12,529,817	978,870	11,550,946	7
8	Computer Software and Hardware	391.1	22,420,424	(2,483,035)	24,903,459	8
9	Transportation Equipment - Light	392.11	3,040,958	(44,882)	3,085,840	9
10	Transportation Equipment - Heavy	392.12	0	(66,922)	66,922	10
11	Transportation Equipment - Aircraft	392.21	8,221,361	0	8,221,361	11
12	Stores Equipment	393	63,037	0	63,037	12
13	Tool, Shop, and Garage Equip.	394	1,320,531	7,699	1,312,833	13
14	Laboratory Equipment	395	1,540,478	78,533	1,461,944	14
15	Power-Operated Equipment	396	259,442	0	259,442	15
16	Communication Equipment	397	7,817,989	59,397	7,758,592	16
17	Telemetry Equipment	397.2	0	0	0	17
18	Miscellaneous Equipment	398	4,943,126	111,430	4,831,696	18
19	Total General Plant		$ 148,392,717	$ 17,570,782	$ 130,821,935	19
20	Total Plant in Service		$ 519,536,782	$ 122,861,174	$ 396,675,609	20
21	Construction Work in Progress		23,752,357	(90,330,855)	114,083,212	21
22	Less: Accumulated Depreciation/Amort.		267,490,156	12,667,567	254,822,590	22
23	Total Net Plant		$ 275,798,983	$ 19,862,752	$ 255,936,231	23

SOUTHWEST GAS CORPORATION
ARIZONA
COMPARATIVE DEPARTMENTAL OPERATING INCOME STATEMENTS

Line No.	Description	Test Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
		Company Records	Company Records	Company Records	
	Revenues				
1	Residential	$ 484,833,503	$ 438,233,900	$ 457,314,549	1
2	Small Commercial	132,370,790	111,869,527	130,913,540	2
3	Large Commercial	20,048,084	16,284,029	20,451,971	3
4	Small Industrial	10,606,718	8,079,074	7,334,676	4
5	Commercial-Compressed Nat. Gas	4,739,470	3,050,608	1,727,151	5
6	Irrigation/Water Pumping	8,908,310	6,328,373	5,454,476	6
7	Industrial-Essential Agriculture	2,000,076	1,486,609	1,570,303	7
8	Procurement Sales	8,983,514	2,922,664	1,132,978	8
9	Other Gas Sales	835,048	942	938	9
10	Miscellaneous Service Revenues	8,148,823	7,855,019	9,936,727	10
11	Transportation of Gas for Others	40,560,946	36,523,262	38,835,233	11
12	Rent from Gas Property	0	0	0	12
13	Accrued Unbilled Revenues	1,627,000	519,000	1,142,000	13
14	Decoupling Revenues (DCA)	(5,041,387)	(31,702,191)	(42,289,176)	14
15	LIRA Program Recovery	739,258	259,164	(457,369)	15
16	Tax Reform Savings	3,233,467	1,696,679	2,696,610	16
17	Total Revenues	$ 722,593,620	$ 603,406,659	$ 635,764,607	17
	Operating Expenses				
18	Other Gas Supply and Gas Cost	$ 158,881,993	$ 78,423,845	$ 120,482,742	18
19	Storage	1,973,882	1,719,633	610	19
20	Distribution	109,198,435	105,081,823	107,169,480	20
21	Customer Accounts	28,049,178	25,974,852	25,815,539	21
22	Customer Service & Info.	188,705	282,497	278,979	22
23	Sales	3,425	6,757	10,909	23
24	Administrative and General	98,210,946	97,575,674	92,692,543	24
25	Depreciation and Amortization	128,686,852	120,780,950	108,128,934	25
26	Interest on Customer Deposits	803,794	2,018,375	2,212,712	26
27	Taxes Other than Income	51,219,448	42,165,241	42,062,310	27
28	Income Taxes - Federal	18,999,093	14,774,194	15,464,152	28
29	Income Taxes - State	4,661,537	3,624,934	3,841,775	29
30	Total Operating Expenses	$ 600,877,287	$ 492,428,775	$ 518,160,685	30
31	Operating Income	$ 121,716,333	$ 110,977,884	$ 117,603,922	31
		Sch E-2, Sh 1,	Sch E-2, Sh 1,	Sch E-2, Sh 1,	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Average Customers [1]	Sales (Therms) [1]	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	1,014,587	289,445,329	285	1
2	Multi-Family Residential Gas Service	G-6	37,635	6,174,345	164	2
3	Single-Family Low Income Residential Gas Service	G-10	42,094	11,067,918	263	3
4	Multi-Family Low Income Residential Gas Service	G-11	3,211	579,804	181	4
5	Special Residential Gas Service for Air Conditioning	G-15	50	55,580	1,112	5
6	Master-Metered Mobile Home Park Gas Service	G-20	97	1,255,848	12,947	6
	General Gas Service	G-25				
7	Small		17,112	3,604,882	211	7
8	Medium		16,380	46,695,857	2,851	8
9	Large-1		6,591	96,984,769	14,715	9
10	Large-2		322	26,018,206	80,697	10
11	Transportation Eligible		62	23,156,600	373,494	11
12	Optional Gas Service	G-30	2	12,580,646	6,290,323	12
13	Air Conditioning Gas Service	G-40	18	233,886	12,994	13
14	Street Lighting Gas Service	G-45	4	9,324	2,331	14
15	Compression Gas Service	G-50	25	48	2	15
	Gas Service for Compression on Customer's Premises	G-55				
16	Residential		28	10,686	382	16
17	Small		9	10,153	1,128	17
18	Large		13	9,142,972	703,306	18
19	Electric Generation Gas Service	G-60	18	1,566,814	87,045	19
20	Biogas and Renewable Natural Gas Service	G-65	1	380,867	380,867	20
21	Small Essential Agriculture User Gas Service	G-75	61	2,798,803	45,882	21
22	Natural Gas Engine Gas Service	G-80	415	17,322,965	41,717	22
23	Total Gas Sales		1,138,735	549,096,302	482	23
24	Transportation Service	B-1/T-1	542	174,682,424	322,292	24
25	Total Arizona		1,139,277	723,778,726	635	25

[1] Workpapers, Schedule H-2, Sheets 5-15.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2020

Line No.	Description	Schedule Number	Average Customers	Sales (Therms)	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	998,555	304,765,894	305	1
2	Multi-Family Residential Gas Service	G-6	37,481	6,417,448	171	2
3	Single-Family Low Income Residential Gas Service	G-10	35,429	9,645,440	272	3
4	Multi-Family Low Income Residential Gas Service	G-11	2,826	529,667	187	4
5	Special Residential Gas Service for Air Conditioning	G-15	54	57,765	1,073	5
6	Master-Metered Mobile Home Park Gas Service	G-20	100	1,385,315	13,830	6
	General Gas Service	G-25				
7	Small		16,106	3,359,106	209	7
8	Medium		16,224	42,694,991	2,632	8
9	Large-1		7,357	99,048,698	13,464	9
10	Large-2		387	28,708,660	74,231	10
11	Transportation Eligible		62	24,499,865	392,521	11
12	Optional Gas Service	G-30	2	15,735,254	7,867,627	12
13	Air Conditioning Gas Service	G-40	18	229,370	12,922	13
14	Street Lighting Gas Service	G-45	5	11,151	2,230	14
	Gas Service for Compression on Customer's Premises	G-55				
15	Residential		34	13,333	392	15
16	Small		9	10,162	1,129	16
17	Large		13	8,234,750	650,112	17
18	Electric Generation Gas Service	G-60	17	1,372,356	79,174	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0	0	19
20	Small Essential Agriculture User Gas Service	G-75	62	2,862,306	46,542	20
21	Natural Gas Engine Gas Service	G-80	407	15,986,286	39,262	21
22	Total Gas Sales		1,115,147	565,567,817	507	22
23	Transportation Service	B-1/T-1	538	162,711,424	302,578	23
24	Total Arizona		1,115,685	728,279,241	653	24

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2019

Line No.	Description	Schedule Number	Average Customers	Sales (Therms)	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	977,461	306,952,959	314	1
2	Multi-Family Residential Gas Service	G-6	36,629	6,385,760	174	2
3	Single-Family Low Income Residential Gas Service	G-10	34,050	9,772,029	287	3
4	Multi-Family Low Income Residential Gas Service	G-11	2,765	539,234	195	4
5	Special Residential Gas Service for Air Conditioning	G-15	61	59,971	986	5
6	Master-Metered Mobile Home Park Gas Service	G-20	103	1,460,101	14,176	6
	General Gas Service	G-25				
7	Small		16,314	4,431,000	272	7
8	Medium		15,922	47,282,434	2,970	8
9	Large-1		7,242	111,936,463	15,458	9
10	Large-2		369	30,690,486	83,134	10
11	Transportation Eligible		64	22,132,683	344,925	11
12	Optional Gas Service	G-30	2	10,895,383	5,447,692	12
13	Air Conditioning Gas Service	G-40	18	248,950	14,226	13
14	Street Lighting Gas Service	G-45	5	11,106	2,221	14
	Gas Service for Compression on Customer's Premises	G-55				
15	Residential		38	18,421	490	15
16	Small		10	12,687	1,279	16
17	Large		15	4,575,256	303,332	17
18	Electric Generation Gas Service	G-60	18	3,309,060	186,426	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0	0	19
20	Small Essential Agriculture User Gas Service	G-75	68	2,779,037	41,171	20
21	Natural Gas Engine Gas Service	G-80	391	14,591,345	37,358	21
22	Total Gas Sales		1,091,542	578,084,365	530	22
23	Transportation Service	B-1/T-1	535	171,537,722	320,531	23
24	Total Arizona		1,092,078	749,622,087	686	24

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES CHARGED TO OPERATIONS
AS RECORDED AT AUGUST 31, 2021

Line No.	Description	Year Ended 12/31/2019	Year Ended 12/31/2020	Test Year Ended 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-6, Sh 1, Col (d), Lns 27-29	Sch E-6, Sh 1, Col (c), Lns 27-29	Sch E-6, Sh 1, Col (b), Lns 27-29	
	Federal Taxes				
1	Federal Income Tax	$ 15,464,152	$ 14,774,194	$ 18,999,093	1
	State Taxes				
2	State Income Tax	$ 3,841,775	$ 3,624,934	$ 4,661,537	2
	Local Taxes				
3	Property and Miscellaneous	$ 42,062,310	$ 42,165,241	$ 51,219,448	3

SOUTHWEST GAS CORPORATION
ARIZONA
NOTES TO FINANCIAL STATEMENTS

1. The Company uses the accrual method of accounting as prescribed by the Uniform System of Accounts.

2. The Company uses the straight-line method for calculating depreciation expense. Depreciation rates by major classification can be found in the Workpapers, Schedule C-2.

3. The Allowance for Funds Used During Construction (AFUDC) rate used in 2020 was 5.51% and 2021 is 0.96%.

4. The Notes to the Financial Statements included in the 2018-2020 Annual Reports can be found at the following location on the Company's website:

https://investors.swgasholdings.com/financial-information/annual-reports

SCHEDULE F

SOUTHWEST GAS CORPORATION
ARIZONA
PROJECTED INCOME STATEMENTS - PRESENT AND PROPOSED RATES

Line No.	Description	Test Year Ended 8/31/2021	Projected Year Present Rates 8/31/2022	Projected Year Proposed Rates 8/31/2022	Line No.
	(a)	(b)	(c)	(d)	
		Sch A-1, Sh 2, Col (c)		Sch A-1, Sh 2, Col (g)	
1	Operating Margin	$ 565,018,312	$ 575,753,660	$ 669,915,616	1
	Operating Expenses				
2	Other Gas Supply Expenses	$ 1,306,683	$ 1,337,991	$ 1,335,375	2
3	Storage	1,973,882	2,077,143	2,001,101	3
4	Distribution Expenses	109,198,435	112,940,612	111,324,695	4
5	Customer Accounts Expenses	28,049,178	27,520,241	27,166,834	5
6	Customer Service & Info. Expenses	188,705	174,307	167,925	6
7	Sales Expenses	3,425	(203)	(203)	7
8	Administrative and General Expenses	98,210,946	97,672,961	96,125,247	8
9	Depreciation and Amortization Expenses	128,686,852	137,392,359	140,860,975	9
10	Taxes Other than Income	51,219,448	53,165,787	69,307,596	10
11	Interest on Customer Deposits	803,794	803,794	37,125	11
12	Federal Income Taxes	18,999,093	18,458,219	26,239,221	12
13	State Income Taxes	4,661,537	4,528,830	8,225,262	13
14	Total Operating Expenses	$ 443,301,978	$ 456,072,041	$ 482,791,154	14
15	Operating Income	$ 121,716,335	$ 119,681,619	$ 187,124,462	15
16	Less: Interest Expense	50,243,557	50,243,557	53,726,452	16
17	Net Income	$ 71,472,777	$ 69,438,062	$ 133,398,010	17
			Sch A-2, Sh 1, Ln 5(f)	Sch A-2, Sh 1, Ln 5(g)	
18	Earnings per Share of Average Common Stock Outstanding [1]	N/A	N/A	N/A	18
19	Percent Return on Common Equity [1]	N/A	N/A	N/A	19

[1] Projections of earnings per share and return on common equity were not performed because these statistics do not pertain solely to Arizona.

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
COMPARATIVE STATEMENT OF CASH FLOWS
PROJECTED CHANGES IN FINANCIAL POSITION
($ THOUSANDS)

Line No.	Description	Test Year Ended 8/31/2021	Projected Year At Present Rates Year Ending [1] 8/31/2022	Projected Year At Proposed Rates Year Ending [1] 8/31/2022	Line No.
	(a)	(b) Sch E-3, Sh 1 Col (b)	(c)	(d)	
	CASH FLOWS FROM OPERATING ACTIVITIES:				
1	Net Income	$ 190,401	$ 190,401	$ 258,419	1
2	Adjustments to reconcile net income to net cash				2
3	provided by operating activities:				3
4	Depreciation and amortization	247,819	257,567	257,567	4
5	Other Amortization	6,000	6,000	6,000	5
6	Change in deferred charges	(26,395)	(26,395)	(26,395)	6
7	Change in deferred credits	(61,588)	(61,588)	(61,588)	7
8	Change in deferred taxes	59,253	59,253	59,253	8
9	Change in accrued taxes	(15,478)	(15,478)	(15,478)	9
10	Undistributed earnings of subsidiaries	133	133	133	10
11	Allowance for funds used during construction	(1,754)	(1,754)	(1,754)	11
12	Change in deferred purchased gas costs	(316,621)	(316,621)	(316,621)	12
13	Change in receivable and payables	(28,759)	(28,759)	(28,759)	13
14	Other	(9,968)	(9,968)	(9,968)	14
15	Net cash provided by operating activities	$ 43,043	$ 52,791	$ 120,809	15
			Sch A-5, Sh 1, Ln 1(e)	Sch A-5, Sh 1, Ln 1(f)	
	CASH FLOWS FROM INVESTING ACTIVITIES:				
16	Construction expenditures	$ (600,036)	$ (324,930)	$ (324,930)	16
17	Investment in SWGT/UFCO	0	0	0	17
18	Change in customer advances	18,967	18,967	18,967	18
19	Miscellaneous inflows	674	674	674	19
20	Net cash used in investing activities	$ (580,395)	$ (305,289)	$ (305,289)	20
			Sch A-5, Sh 1, Ln 2(e)	Sch A-5, Sh 1, Ln 2(f)	
	CASH FLOWS FROM FINANCING ACTIVITIES:				
21	Change in notes payable	$ 250,000	$ (250,000)	$ (250,000)	21
22	Dividends paid	(106,900)	(117,000)	(117,000)	22
23	Withholding remittance - share-based compensation	(1,254)	0	0	23
24	Issuance of long-term debt, net	297,318	600,000	600,000	24
25	Retirement of long-term debt	(125,000)	(275,000)	(275,000)	25
26	Change in credit facility	(5,000)	65,000	65,000	26
27	Capital contribution from parent	209,158	330,000	330,000	27
28	Other	(1,012)	0	0	28
29	Net cash provided by (used in) financing activities	$ 517,310	$ 353,000	$ 353,000	29
			Sch A-5, Sh 1, Ln 3(e)	Sch A-5, Sh 1, Ln 3(f)	
30	Change in cash and cash equivalents	$ (20,042)	$ 100,502	$ 168,521	30
31	Cash at beginning of period	133,950	113,908	113,908	31
32	Cash at end of period	$ 113,908	$ 214,410	$ 282,429	32

[1] Prepared based on year ended December 31 consistent with historical cash flows provided on Schedule E-3.

SOUTHWEST GAS CORPORATION
ARIZONA
CONSTRUCTION EXPENDITURES BY PROPERTY CLASSIFICATION
TEST YEAR AND PROJECTED YEARS

Line No.	Description	Test Year Ended 8/31/2021	Projected [2] Year Ending 8/31/2022	Year Ending 8/31/2023	Year Ending 8/30/2024	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Intangible Plant					
1	Arizona Direct	$ 155,759	$ 15,000	$ 0	$ 20,000	1
2	System Allocable [1]	62,018,550	9,669,436	17,440,451	15,302,590	2
3	Total Intangible Plant	$ 62,174,308	$ 9,684,436	$ 17,440,451	$ 15,322,590	3
4	Storage					
5	Arizona Direct	1,475,544	$ 130,000	$ 0	$ 6,930,000	
6	System Allocable [1]	0	0	0	0	
7	Total Storage	1,475,544	$ 130,000	$ 0	$ 6,930,000	
	Distribution Plant					
8	Arizona Direct	$ 232,282,786	$ 294,518,378	$ 262,881,265	$ 303,412,870	8
9	System Allocable [1]	0				9
10	Total Distribution Plant	$ 232,282,786	$ 294,518,378	$ 262,881,265	$ 303,412,870	10
	General Plant					
11	Arizona Direct	$ 14,402,834	$ 16,557,225	$ 17,405,935	$ 23,773,848	11
12	System Allocable [1]	19,012,558	3,044,079	2,060,712	4,146,552	12
13	Total General Plant	$ 33,415,393	$ 19,601,304	$ 19,466,647	$ 27,920,400	13
14	Total Arizona Plant Construction	$ 329,348,031	$ 323,934,118	$ 299,788,363	$ 346,655,859	14

[1] After 4-Factor allocation to AZ. Schedule C-1,Sheet 17, Ln 9(c)

[2] Projections are based on budgets which are compiled on an annual basis.

SOUTHWEST GAS CORPORATION
ARIZONA
ASSUMPTIONS USED IN DEVELOPING PROJECTIONS

1. Customer Growth

Margin related to customer growth is anticipated to increase by 1.9% in the year following the test year.

2. Growth in Consumption and Customer Demand

Margin related to growth in consumption is anticipated to increase by 1.9% in the year following the test year.

3. Changes in Expenses

Operation and Maintenance Expenses – The actual amounts for the recorded test year were adjusted to give the annual effect for known and measurable changes occurring during the test year. The operation and maintenance expenses for the projected year were calculated by taking the adjusted test year and generally increasing the non-labor expenses by 3.8%.

Depreciation and Amortization Expenses – The actual amounts for the recorded test year were adjusted to annualize depreciation expense at the end of the test period plant balances, and to reflect depreciation expense on projected construction expenditures.

4. Construction Requirements, Including Production Reserves and Changes in Plant Capacity Additions to gas plant were based upon anticipated construction expenditures.

SCHEDULE G

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Rate Base									
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564
2	Total Common Systems Allocable Net Plant		$ 142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448
6	Other	1.1	0	0	0	0	0	0	0	0
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)
10	Other	1.1	0	0	0	0	0	0	0	0
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258
	Margin									
12	Net Operating Margin	Direct	$ 564,241,682	$ 401,324,683	$ 11,336,627	$ 712,032	$ 9,736,567	$ 31,952,797	$ 51,052,458	$ 12,906,300
13	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	4,752,048	134,236	8,431	115,290	378,350	604,507	152,822
14	Other Revenue	Various	8,262,618	6,913,105	773,100	770	133,954	208,691	135,781	30,615
15	Total Revenue		$ 579,185,433	$ 412,989,836	$ 12,243,963	$ 721,233	$ 9,985,811	$ 32,539,838	$ 51,792,746	$ 13,089,738
	Operating Expenses									
16	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)
17	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)
18	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)
19	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0
20	Regulatory Amortizations	Various	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)
21	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)
22	Total Operating Deductions		$ (448,132,011)	$ (335,800,084)	$ (11,852,192)	$ (366,441)	$ (6,564,024)	$ (34,902,935)	$ (27,151,366)	$ (8,969,424)
	Taxable Income									
23	Taxable Income before Interest Expense		$ 131,053,423	$ 77,189,751	$ 391,771	$ 354,792	$ 3,421,787	$ (2,363,096)	$ 24,641,380	$ 4,120,313
24	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
25	Total Taxable Income		$ 77,326,971	$ 36,151,796	$ (1,003,201)	$ 300,839	$ 2,610,946	$ (5,581,574)	$ 21,475,724	$ 3,125,599
	State Income Tax									
26	State Income Tax	4.90%	$ 3,789,022	$ 1,771,438	$ (49,157)	$ 14,741	$ 127,936	$ (273,497)	$ 1,052,310	$ 153,154
27	Total State Income Tax		$ 3,789,022	$ 1,771,438	$ (49,157)	$ 14,741	$ 127,936	$ (273,497)	$ 1,052,310	$ 153,154
	Federal Income Tax									
28	Federal Income Tax	19.97%	$ 15,442,969	$ 7,219,875	$ (200,349)	$ 60,080	$ 521,432	$ (1,114,696)	$ 4,288,917	$ 624,213
28	ARAM Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)
29	Total Federal Income Tax		$ 8,158,372	$ 1,655,670	$ (389,489)	$ 52,765	$ 411,493	$ (1,551,079)	$ 3,859,696	$ 489,343
30	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
31	Net Income		$ 119,106,029	$ 73,762,643	$ 830,416	$ 287,286	$ 2,882,358	$ (538,520)	$ 19,729,374	$ 3,477,816
32	Rate of Return on Rate Base		3.49%	2.84%	1.02%	8.16%	5.57%	-0.26%	9.57%	5.36%

SCHEDULE G-1
SHEET 1 OF 2

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	Rate Base										
1	Total Direct Net Plant		$ 3,971,364,293	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		$ 142,424,093	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin										
12	Net Operating Margin	Direct	$ 564,241,682	$ 33,502,947	$ 53,239	$ 7,725	$ 3,367,986	$ 2,500,772	$ 1,493,167	$ 4,294,383	12
13	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	396,705	630	91	39,880	29,611	17,680	50,849	13
14	Other Revenue	Various	8,262,618	41,861	21	90	2,755	651	1,434	19,789	14
15	Total Revenue		$ 579,185,433	$ 33,941,513	$ 53,891	$ 7,906	$ 3,410,621	$ 2,531,034	$ 1,512,282	$ 4,365,021	15
	Operating Expenses										
16	Operations & Maintenance Expense		$ (141,801,067)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	16
17	Administrative & General Expense	Total O&M	(96,125,247)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	17
18	Depreciation Expense	Deprec Exp	(136,545,019)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	18
19	Interest on Customer Deposits	8.0	(37,125)	0	0	0	0	0	0	0	19
20	Regulatory Amortizations	Various	(4,315,957)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	20
21	Taxes Other Than Income	1.1	(69,307,596)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	21
22	Total Operating Deductions		$ (448,132,011)	$ (17,225,734)	$ (32,025)	$ (11,758)	$ (1,822,732)	$ (1,523,816)	$ (596,847)	$ (1,312,633)	22
	Taxable Income										
23	Taxable Income before Interest Expense		$ 131,053,423	$ 16,715,779	$ 21,866	$ (3,851)	$ 1,587,889	$ 1,007,218	$ 915,435	$ 3,052,388	23
24	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	24
25	Total Taxable Income		$ 77,326,971	$ 14,343,202	$ 17,971	$ (5,372)	$ 1,352,691	$ 794,809	$ 833,931	$ 2,909,611	25
	State Income Tax										
26	State Income Tax	4.90%	$ 3,789,022	$ 702,817	$ 881	$ (263)	$ 66,282	$ 38,946	$ 40,863	$ 142,571	26
27	Total State Income Tax		$ 3,789,022	$ 702,817	$ 881	$ (263)	$ 66,282	$ 38,946	$ 40,863	$ 142,571	27
	Federal Income Tax										
28	Federal Income Tax	19.97%	$ 15,442,969	$ 2,864,481	$ 3,589	$ (1,073)	$ 270,146	$ 158,731	$ 166,544	$ 581,079	28
28	ARAM Federal	1.1	(7,284,597)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	28
29	Total Federal Income Tax		$ 8,158,372	$ 2,542,791	$ 3,061	$ (1,279)	$ 238,256	$ 129,931	$ 155,493	$ 561,720	29
30	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	30
31	Net Income		$ 119,106,029	$ 13,470,172	$ 17,924	$ (2,309)	$ 1,283,351	$ 838,341	$ 719,079	$ 2,348,097	31
32	Rate of Return on Rate Base		3.49%	8.69%	7.05%	-2.35%	8.35%	6.04%	13.52%	25.26%	32

SCHEDULE G-1
SHEET 2 OF 2

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATE SCHEDULES AT SYSTEM RATE OF RETURN
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
	Rate Base																	
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin																	
12	Net Operating Margin	Direct	$ 654,971,681	$ 492,641,786	$ 16,161,937	$ 588,896	$ 9,695,313	$ 47,751,195	$ 40,026,270	$ 13,029,455	$ 27,005,097	$ 48,077	$ 17,877	$ 2,791,944	$ 2,402,775	$ 932,242	$ 1,878,818	12
13	Other Revenue		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
14	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	5,025,263	164,862	6,007	98,898	487,093	408,294	132,909	275,469	490	182	28,480	24,510	9,509	19,165	14
15	Late Charges	12.0	848,431	583,069	48,737	266	29,565	64,644	65,327	28,883	5,525	21	1	2,658	646	871	18,217	15
16	Service Establishment Charges	9.0	6,845,361	5,917,579	693,282	502	87,979	106,046	35,556	1,707	444	0	89	91	0	524	1,563	16
17	Reconnect / Reread Charges	9.0	100	86	10	0	1	2	1	0	0	0	0	0	0	0	0	17
18	Other Revenue - Labor	Net Op Margin	1,050	790	26	1	16	77	64	21	43	0	0	4	4	1	3	18
19	Other Revenue - Parts & Material	Net Op Margin	68	51	2	0	1	5	4	1	3	0	0	0	0	0	0	19
20	Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
21	Other Revenue - Returned Item Fee	13.0	567,609	411,576	31,048	0	16,389	37,936	34,797	0	35,825	0	0	0	0	37	0	21
22	Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
23	Other Revenue	Various	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
24	Total Revenue		$ 669,915,432	$ 504,580,200	$ 17,099,904	$ 595,673	$ 9,928,163	$ 48,446,997	$ 40,570,312	$ 13,192,975	$ 27,322,406	$ 48,589	$ 18,149	$ 2,823,177	$ 2,427,935	$ 943,185	$ 1,917,766	24
	Operating Deductions																	
25	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	25
26	Incremental Uncollectible Expense		(194,660)	(180,577)	(6,947)	(16)	(2,932)	(2,822)	(1,155)	(68)	(35)	(3)	(8)	(10)	(4)	(11)	(71)	26
27	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	27
28	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	28
29	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0	0	0	0	0	0	0	0	29
30	Regulatory Amortizations	Various	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	
31	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	31
32	Total Operating Deductions		$ (448,326,671)	$ (335,980,661)	$ (11,859,139)	$ (366,458)	$ (6,566,956)	$ (34,905,757)	$ (27,152,520)	$ (8,969,492)	$ (17,225,769)	$ (32,029)	$ (11,766)	$ (1,822,742)	$ (1,523,820)	$ (596,858)	$ (1,312,704)	32
	State Income Tax																	
33	Taxable Income before Interest Expense		$ 221,588,761	$ 168,599,539	$ 5,240,766	$ 229,216	$ 3,361,207	$ 13,541,240	$ 13,417,791	$ 4,223,483	$ 10,096,638	$ 16,560	$ 6,383	$ 1,000,434	$ 904,115	$ 346,326	$ 605,062	33
34	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,216,478)	(3,165,656)	(994,715)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	34
35	Total State Taxable Income		$ 167,862,309	$ 127,561,584	$ 3,845,794	$ 175,262	$ 2,550,365	$ 10,322,762	$ 10,252,135	$ 3,228,768	$ 7,724,061	$ 12,666	$ 4,862	$ 765,236	$ 691,705	$ 264,822	$ 462,285	35
36	State Income Tax	4.90%	$ 8,225,253	$ 6,250,518	$ 188,444	$ 8,588	$ 124,968	$ 505,815	$ 502,355	$ 158,210	$ 378,479	$ 621	$ 238	$ 37,497	$ 33,894	$ 12,976	$ 22,652	36
37	Total State Income Tax		$ 8,225,253	$ 6,250,518	$ 188,444	$ 8,588	$ 124,968	$ 505,815	$ 502,355	$ 158,210	$ 378,479	$ 621	$ 238	$ 37,497	$ 33,894	$ 12,976	$ 22,652	37
	Federal Income Tax																	
38	Taxable Income before Interest Expense		$ 221,588,761	$ 168,599,539	$ 5,240,766	$ 229,216	$ 3,361,207	$ 13,541,240	$ 13,417,791	$ 4,223,483	$ 10,096,638	$ 16,560	$ 6,383	$ 1,000,434	$ 904,115	$ 346,326	$ 605,062	38
39	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,216,478)	(3,165,656)	(994,715)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	39
40	Total Federal Taxable Income		$ 167,862,309	$ 127,561,584	$ 3,845,794	$ 175,262	$ 2,550,365	$ 10,322,762	$ 10,252,135	$ 3,228,768	$ 7,724,061	$ 12,666	$ 4,862	$ 765,236	$ 691,705	$ 264,822	$ 462,285	40
40	Federal Income Tax	19.97%	$ 33,523,782	$ 25,475,324	$ 768,044	$ 35,002	$ 509,333	$ 2,061,559	$ 2,047,454	$ 644,817	$ 1,542,572	$ 2,529	$ 971	$ 152,825	$ 138,140	$ 52,888	$ 92,323	40
41	ARAM Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	41
42	Total Federal Income Tax		$ 26,239,184	$ 19,911,119	$ 578,904	$ 27,686	$ 399,394	$ 1,625,176	$ 1,618,233	$ 509,947	$ 1,220,882	$ 2,001	$ 765	$ 120,936	$ 109,341	$ 41,837	$ 72,964	42
43	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	43
44	Net Income		$ 187,124,323	$ 142,437,902	$ 4,473,418	$ 192,942	$ 2,836,845	$ 11,410,249	$ 11,297,204	$ 3,555,327	$ 8,497,277	$ 13,938	$ 5,380	$ 842,002	$ 760,881	$ 291,513	$ 509,448	44
45	Rate of Return on Rate Base		5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	45

SCHEDULE G-2
SHEET 1 OF 3

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Rate Base									
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564
2	Total Common Systems Allocable Net Plant		142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448
6	Other	1.1	0	0	0	0	0	0	0	0
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)
10	Other	1.1	0	0	0	0	0	0	0	0
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258
	Margin									
12	Net Operating Margin	Direct	$ 654,971,681	$ 469,568,174	$ 13,575,468	$ 793,609	$ 11,079,616	$ 38,567,559	$ 56,597,120	$ 14,711,213
13	Special Contract & Optional Margin	Net Op Margin	6,682,250	5,026,104	164,890	6,008	98,915	487,174	408,362	132,931
14	Other Revenue	Various	8,261,501	6,912,310	773,078	769	133,935	208,628	135,680	30,590
15	Total Revenue		$ 669,915,432	$ 481,506,588	$ 14,513,436	$ 800,386	$ 11,312,466	$ 39,263,362	$ 57,141,162	$ 14,874,734
	Operating Deductions									
16	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)
17	Incremental Uncollectible Expense		(194,660)	(180,577)	(6,947)	(16)	(2,932)	(2,822)	(1,155)	(68)
18	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)
19	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)
20	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0
21	Regulatory Amortizations	1.1	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)
22	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)
23	Total Operating Deductions		$ (448,326,671)	$ (335,980,661)	$ (11,859,139)	$ (366,458)	$ (6,566,956)	$ (34,905,757)	$ (27,152,520)	$ (8,969,492)
	State Income Tax									
24	Taxable Income before Interest Expense		$ 221,588,761	$ 145,525,927	$ 2,654,297	$ 433,929	$ 4,745,510	$ 4,357,605	$ 29,988,641	$ 5,905,242
25	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
26	Total State Taxable Income		$ 167,862,309	$ 104,487,972	$ 1,259,326	$ 379,975	$ 3,934,669	$ 1,139,127	$ 26,822,985	$ 4,910,527
27	State Income Tax	4.90%	$ 8,225,253	$ 5,119,911	$ 61,707	$ 18,619	$ 192,799	$ 55,817	$ 1,314,326	$ 240,616
28	Total State Income Tax		$ 8,225,253	$ 5,119,911	$ 61,707	$ 18,619	$ 192,799	$ 55,817	$ 1,314,326	$ 240,616
	Federal Income Tax									
29	Taxable Income before Interest Expense		$ 221,588,761	$ 145,525,927	$ 2,654,297	$ 433,929	$ 4,745,510	$ 4,357,605	$ 29,988,641	$ 5,905,242
30	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
31	Total Federal Taxable Income		$ 167,862,309	$ 104,487,972	$ 1,259,326	$ 379,975	$ 3,934,669	$ 1,139,127	$ 26,822,985	$ 4,910,527
32	Federal Income Tax	19.97%	$ 33,523,782	$ 20,867,293	$ 251,500	$ 75,885	$ 785,793	$ 227,495	$ 5,356,818	$ 980,681
33	South Georgia Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)
34	Total Federal Income Tax		$ 26,239,184	$ 15,303,088	$ 62,360	$ 68,569	$ 675,853	$ (208,888)	$ 4,927,597	$ 845,811
35	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
36	Net Income		$ 187,124,323	$ 125,102,928	$ 2,530,230	$ 346,740	$ 3,876,858	$ 4,510,676	$ 23,746,718	$ 4,818,815
37	Rate of Return on Rate Base		5.48%	4.81%	3.10%	9.85%	7.49%	2.17%	11.52%	7.43%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	Rate Base										
1	Total Direct Net Plant		$ 3,971,364,293	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		142,424,093	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin										
12	Net Operating Margin	Direct	$ 654,971,681	$ 37,243,844	$ 59,899	$ 9,865	$ 3,754,742	$ 2,833,618	$ 1,622,306	$ 4,554,647	12
13	Special Contract & Optional Margin	Net Op Margin	6,682,250	275,515	491	182	28,484	24,514	9,511	19,168	13
14	Other Revenue	Various	8,261,501	41,794	21	90	2,749	646	1,431	19,780	14
15	Total Revenue		$ 669,915,432	$ 37,561,153	$ 60,411	$ 10,138	$ 3,785,975	$ 2,858,778	$ 1,633,249	$ 4,593,596	15
	Operating Deductions										
16	Operations & Maintenance Expense		$ (141,801,067)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	16
17	Incremental Uncollectible Expense		(194,660)	(35)	(3)	(8)	(10)	(4)	(11)	(71)	17
18	Administrative & General Expense	Total O&M	(96,125,247)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	18
19	Depreciation Expense	Deprec Exp	(136,545,019)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	19
20	Interest on Customer Deposits	8.0	(37,125)	0	0	0	0	0	0	0	20
21	Regulatory Amortizations	1.1	(4,315,957)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	
22	Taxes Other Than Income	1.1	(69,307,596)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	22
23	Total Operating Deductions		$ (448,326,671)	$ (17,225,769)	$ (32,029)	$ (11,766)	$ (1,822,742)	$ (1,523,820)	$ (596,858)	$ (1,312,704)	23
	State Income Tax										
24	Taxable Income before Interest Expense		$ 221,588,761	$ 20,335,385	$ 28,382	$ (1,628)	$ 1,963,232	$ 1,334,958	$ 1,036,390	$ 3,280,891	24
25	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	25
26	Total State Taxable Income		$ 167,862,309	$ 17,962,808	$ 24,488	$ (3,149)	$ 1,728,034	$ 1,122,548	$ 954,886	$ 3,138,115	26
27	State Income Tax	4.90%	$ 8,225,253	$ 880,178	$ 1,200	$ (154)	$ 84,674	$ 55,005	$ 46,789	$ 153,768	27
28	Total State Income Tax		$ 8,225,253	$ 880,178	$ 1,200	$ (154)	$ 84,674	$ 55,005	$ 46,789	$ 153,768	28
	Federal Income Tax										
29	Taxable Income before Interest Expense		$ 221,588,761	$ 20,335,385	$ 28,382	$ (1,628)	$ 1,963,232	$ 1,334,958	$ 1,036,390	$ 3,280,891	29
30	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	30
31	Total Federal Taxable Income		$ 167,862,309	$ 17,962,808	$ 24,488	$ (3,149)	$ 1,728,034	$ 1,122,548	$ 954,886	$ 3,138,115	31
32	Federal Income Tax	19.97%	$ 33,523,782	$ 3,587,352	$ 4,890	$ (629)	$ 345,106	$ 224,184	$ 190,700	$ 626,713	32
33	South Georgia Federal	1.1	(7,284,597)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	33
34	Total Federal Income Tax		$ 26,239,184	$ 3,265,662	$ 4,362	$ (835)	$ 313,216	$ 195,384	$ 179,649	$ 607,354	34
35	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	35
36	Net Income		$ 187,124,323	$ 16,189,545	$ 22,820	$ (639)	$ 1,565,343	$ 1,084,569	$ 809,952	$ 2,519,770	36
37	Rate of Return on Rate Base		5.48%	10.44%	8.97%	-0.65%	10.19%	7.81%	15.23%	27.11%	37

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 17,988	$ 46,962	$ 109
2	302.00	Franchises & Consents	1.1	1,378,298	291,088	759,932	1,767
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 309,077	$ 806,894	$ 1,876
5		Allocation Percentage	Intang. Plant	100%	21.12%	1	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 951,279	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	7,487,036	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	16,566,194	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	4,574,647	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	3,910,387	0	0
11	363.50	Other Equipment	2.0	9,812,144	5,265,543	0	0
12		Total Storage Plant		$ 72,218,669	$ 38,755,086	$ 0	$ 0
		Allocation Percentage		100%	54%	0.00%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 444,521	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	1,563,941	0	0
15	375.00	Structures	1.0	455,882	276,812	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	740,383,206	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	1,131,120,036	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	23,492,480	35,890,623	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	739,734,632	0
21	381.00	Meters	6.0	323,771,492	0	189,159,046	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	4,874,022
23	387.00	Other Equipment	1.0	(3,442,867)	(2,090,513)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 764,070,447	$ 2,095,904,337	$ 4,874,022
23		Allocation Percentage	Net Dist Plant	100.00%	20.49%	56.20%	0.13%
		Total Direct Plant		$ 3,801,367,146	$ 802,825,533	$ 2,095,904,337	$ 4,874,022
25		Allocation Percentage	Net Dist Plant	100.00%	21.12%	55.14%	0.13%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 35,593,283	$ 92,921,952	$ 216,090
27		Total Direct Net Plant		$ 3,971,364,293	$ 838,727,892	$ 2,189,633,183	$ 5,091,989
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 19,325,240	$ 50,451,628	$ 117,325
29	389-398	Total Common General Plant	1.1	50,919,363	10,753,859	28,074,666	65,288
30		Total Systems Allocable		$ 142,424,093	$ 30,079,099	$ 78,526,294	$ 182,613
31		Total Net Plant		$ 4,113,788,386	$ 868,806,991	$ 2,268,159,477	$ 5,274,601
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (1,955,267)	$ (10,196,803)	$ (169,297)
33		Materials & Supplies	1.1	30,847,268	6,514,755	17,007,808	39,552
34		Prepayments	1.1	14,121,283	2,982,329	7,785,846	18,106
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(29,175,748)	0
37		Customer Advances	9.0	(59,445,400)	0	(51,388,498)	0
38		Deferred Taxes	1.1	(634,525,981)	(134,008,013)	(349,849,332)	(813,574)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 742,340,795	$ 1,852,342,750	$ 4,349,388

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 307	$ 1,902	$ 2
2	302.00	Franchises & Consents	1.1	1,378,298	4,975	30,772	39
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,282	$ 32,674	$ 42
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 18,215	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	143,363	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	317,213	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	87,596	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	74,877	0	0
11	363.50	Other Equipment	2.0	9,812,144	100,826	0	0
12		Total Storage Plant		$ 72,218,669	$ 742,090	$ 0	$ 0
		Allocation Percentage		100%	1.03%	0.00%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,550	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,564	0	0
15	375.00	Structures	1.0	455,882	4,702	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,575,841	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	43,512,658	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	399,033	1,380,664	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	32,700,795	0
21	381.00	Meters	6.0	323,771,492	0	7,276,693	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	108,885
23	387.00	Other Equipment	1.0	(3,442,867)	(35,509)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 12,978,182	$ 84,870,809	$ 108,885
23		Allocation Percentage	Net Dist Plant	100.00%	0.35%	2.28%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 13,720,273	$ 84,870,809	$ 108,885
25		Allocation Percentage	Net Dist Plant	100.00%	0.36%	2.23%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 608,289	$ 3,762,749	$ 4,827
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,333,843	$ 88,666,232	$ 113,754
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 330,268	$ 2,042,970	$ 2,621
29	389-398	Total Common General Plant	1.1	50,919,363	183,783	1,136,846	1,459
30		Total Systems Allocable		$ 142,424,093	$ 514,051	$ 3,179,816	$ 4,080
31		Total Net Plant		$ 4,113,788,386	$ 14,847,894	$ 91,846,048	$ 117,834
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (33,484)	$ (402,959)	$ (3,782)
33		Materials & Supplies	1.1	30,847,268	111,337	688,708	884
34		Prepayments	1.1	14,121,283	50,968	315,277	404
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(3,418,126)	0
37		Customer Advances	9.0	(59,445,400)	0	(6,020,493)	0
38		Deferred Taxes	1.1	(634,525,981)	(2,290,194)	(14,166,675)	(18,175)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 12,686,522	$ 68,841,781	$ 97,165

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 76	$ 9	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	1,233	144	7
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 1,309	$ 153	$ 8
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 4,001	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	31,493	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	69,683	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	19,242	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	16,448	0	0
11	363.50	Other Equipment	2.0	9,812,144	22,149	0	0
12		Total Storage Plant		$ 72,218,669	$ 163,016	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 1,883	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	6,625	0	0
15	375.00	Structures	1.0	455,882	1,173	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	3,136,170	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	103,332	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	99,511	3,279	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	162,370	0
21	381.00	Meters	6.0	323,771,492	0	128,697	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	20,246
23	387.00	Other Equipment	1.0	(3,442,867)	(8,855)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 3,236,506	$ 397,677	$ 20,246
23		Allocation Percentage	Net Dist Plant	100.00%	0.09%	0.01%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 3,399,522	$ 397,677	$ 20,246
25		Allocation Percentage	Net Dist Plant	100.00%	0.09%	0.01%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 150,718	$ 17,631	$ 898
27		Total Direct Net Plant		$ 3,971,364,293	$ 3,551,549	$ 415,462	$ 21,151
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 81,832	$ 9,573	$ 487
29	389-398	Total Common General Plant	1.1	50,919,363	45,537	5,327	271
30		Total Systems Allocable		$ 142,424,093	$ 127,368	$ 14,900	$ 759
31		Total Net Plant		$ 4,113,788,386	$ 3,678,917	$ 430,361	$ 21,910
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (8,279)	$ (2,749)	$ (703)
33		Materials & Supplies	1.1	30,847,268	27,586	3,227	164
34		Prepayments	1.1	14,121,283	12,629	1,477	75
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,477)	0
37		Customer Advances	9.0	(59,445,400)	0	(4,363)	0
38		Deferred Taxes	1.1	(634,525,981)	(567,450)	(66,381)	(3,379)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 3,143,404	$ 359,095	$ 18,067

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 238	$ 1,047	$ 1
2	302.00	Franchises & Consents	1.1	1,378,298	3,845	16,935	21
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 4,083	$ 17,981	$ 23
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 12,225	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	96,218	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	212,897	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	58,790	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	50,254	0	0
11	363.50	Other Equipment	2.0	9,812,144	67,669	0	0
12		Total Storage Plant		$ 72,218,669	$ 498,053	$ 0	$ 0
		Allocation Percentage		100%	1%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 5,880	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	20,687	0	0
15	375.00	Structures	1.0	455,882	3,662	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	9,793,552	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	18,367,884	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	310,751	582,816	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	24,684,434	0
21	381.00	Meters	6.0	323,771,492	0	3,071,691	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	58,584
23	387.00	Other Equipment	1.0	(3,442,867)	(27,653)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 10,106,880	$ 46,706,825	$ 58,584
23		Allocation Percentage	Net Dist Plant	100.00%	0.27%	1.25%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 10,604,933	$ 46,706,825	$ 58,584
25		Allocation Percentage	Net Dist Plant	100.00%	0.28%	1.23%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 470,170	$ 2,070,748	$ 2,597
27		Total Direct Net Plant		$ 3,971,364,293	$ 11,079,185	$ 48,795,554	$ 61,204
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 255,277	$ 1,124,305	$ 1,410
29	389-398	Total Common General Plant	1.1	50,919,363	142,053	625,639	785
30		Total Systems Allocable		$ 142,424,093	$ 397,330	$ 1,749,943	$ 2,195
31		Total Net Plant		$ 4,113,788,386	$ 11,476,515	$ 50,545,497	$ 63,399
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (25,816)	$ (198,891)	$ (2,035)
33		Materials & Supplies	1.1	30,847,268	86,057	379,016	475
34		Prepayments	1.1	14,121,283	39,395	173,506	218
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(433,766)	0
37		Customer Advances	9.0	(59,445,400)	0	(764,010)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,770,180)	(7,796,325)	(9,779)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 9,805,971	$ 41,905,027	$ 52,278

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 1,887	$ 3,199	$ 17
2	302.00	Franchises & Consents	1.1	1,378,298	30,530	51,760	277
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 32,416	$ 54,959	$ 294
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 114,978	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	904,934	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	2,002,304	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	552,923	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	472,636	0	0
11	363.50	Other Equipment	2.0	9,812,144	636,430	0	0
12		Total Storage Plant		$ 72,218,669	$ 4,684,205	$ 0	$ 0
		Allocation Percentage		100%	6%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 46,262	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	162,760	0	0
15	375.00	Structures	1.0	455,882	28,808	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	77,052,161	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	17,675,894	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	2,444,878	560,859	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	53,896,991	0
21	381.00	Meters	6.0	323,771,492	0	70,622,002	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	763,279
23	387.00	Other Equipment	1.0	(3,442,867)	(217,561)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 79,517,307	$ 142,755,746	$ 763,279
23		Allocation Percentage	Net Dist Plant	100.00%	2.13%	3.83%	0.02%
		Total Direct Plant		$ 3,801,367,146	$ 84,201,512	$ 142,755,746	$ 763,279
25		Allocation Percentage	Net Dist Plant	100.00%	2.22%	3.76%	0.02%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 3,733,075	$ 6,329,078	$ 33,840
27		Total Direct Net Plant		$ 3,971,364,293	$ 87,967,004	$ 149,139,783	$ 797,412
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 2,026,859	$ 3,436,349	$ 18,373
29	389-398	Total Common General Plant	1.1	50,919,363	1,127,880	1,912,215	10,224
30		Total Systems Allocable		$ 142,424,093	$ 3,154,740	$ 5,348,565	$ 28,597
31		Total Net Plant		$ 4,113,788,386	$ 91,121,743	$ 154,488,347	$ 826,010
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (205,600)	$ (1,242,556)	$ (26,512)
33		Materials & Supplies	1.1	30,847,268	683,277	1,158,432	6,194
34		Prepayments	1.1	14,121,283	312,791	530,308	2,835
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(522,844)	0
37		Customer Advances	9.0	(59,445,400)	0	(920,908)	0
38		Deferred Taxes	1.1	(634,525,981)	(14,054,956)	(23,828,856)	(127,407)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 77,857,256	$ 129,661,922	$ 681,120

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 3,695	$ 1,287	$ 36
2	302.00	Franchises & Consents	1.1	1,378,298	59,800	20,826	586
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 63,495	$ 22,113	$ 623
5		Allocation Percentage	Intang. Plant	100%	4.34%	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 231,076	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	1,818,683	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	4,024,111	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	1,111,232	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	949,876	0	0
11	363.50	Other Equipment	2.0	9,812,144	1,279,058	0	0
12		Total Storage Plant		$ 72,218,669	$ 9,414,037	$ 0	$ 0
		Allocation Percentage		100%	13%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 90,475	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	318,315	0	0
15	375.00	Structures	1.0	455,882	56,341	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	150,692,889	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	7,232,920	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	4,781,510	229,502	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	17,691,293	0
21	381.00	Meters	6.0	323,771,492	0	32,284,395	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	1,616,990
23	387.00	Other Equipment	1.0	(3,442,867)	(425,490)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 155,514,039	$ 57,438,109	$ 1,616,990
23		Allocation Percentage	Net Dist Plant	100.00%	4.17%	1.54%	0.04%
		Total Direct Plant		$ 3,801,367,146	$ 164,928,076	$ 57,438,109	$ 1,616,990
25		Allocation Percentage	Net Dist Plant	100.00%	4.34%	1.51%	0.04%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 7,312,089	$ 2,546,519	$ 71,689
27		Total Direct Net Plant		$ 3,971,364,293	$ 172,303,660	$ 60,006,741	$ 1,689,302
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 3,970,071	$ 1,382,623	$ 38,923
29	389-398	Total Common General Plant	1.1	50,919,363	2,209,214	769,384	21,660
30		Total Systems Allocable		$ 142,424,093	$ 6,179,285	$ 2,152,007	$ 60,583
31		Total Net Plant		$ 4,113,788,386	$ 178,482,945	$ 62,158,749	$ 1,749,885
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (402,919)	$ (573,094)	$ (56,166)
33		Materials & Supplies	1.1	30,847,268	1,338,355	466,098	13,122
34		Prepayments	1.1	14,121,283	612,673	213,371	6,007
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(175,302)	0
37		Customer Advances	9.0	(59,445,400)	0	(308,766)	0
38		Deferred Taxes	1.1	(634,525,981)	(27,529,872)	(9,587,596)	(269,909)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 152,501,184	$ 52,193,459	$ 1,442,939

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 1,184	$ 382	$ 12
2	302.00	Franchises & Consents	1.1	1,378,298	19,152	6,174	193
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 20,335	$ 6,556	$ 204
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 75,441	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	593,757	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	1,313,776	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	362,791	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	310,112	0	0
11	363.50	Other Equipment	2.0	9,812,144	417,582	0	0
12		Total Storage Plant		$ 72,218,669	$ 3,073,458	$ 0	$ 0
		Allocation Percentage		100%	4%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 28,942	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	101,826	0	0
15	375.00	Structures	1.0	455,882	18,023	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	48,205,191	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	424,427	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	1,529,559	13,467	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	3,970,114	0
21	381.00	Meters	6.0	323,771,492	0	12,620,098	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	531,168
23	387.00	Other Equipment	1.0	(3,442,867)	(136,110)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 49,747,430	$ 17,028,106	$ 531,168
23		Allocation Percentage	Net Dist Plant	100.00%	1.33%	0.46%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 52,820,888	$ 17,028,106	$ 531,168
25		Allocation Percentage	Net Dist Plant	100.00%	1.39%	0.45%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 2,341,815	$ 754,941	$ 23,549
27		Total Direct Net Plant		$ 3,971,364,293	$ 55,183,039	$ 17,789,603	$ 554,922
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 1,271,480	$ 409,893	$ 12,786
29	389-398	Total Common General Plant	1.1	50,919,363	707,536	228,092	7,115
30		Total Systems Allocable		$ 142,424,093	$ 1,979,016	$ 637,984	$ 19,901
31		Total Net Plant		$ 4,113,788,386	$ 57,162,055	$ 18,427,587	$ 574,823
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (129,091)	$ (205,104)	$ (18,450)
33		Materials & Supplies	1.1	30,847,268	428,630	138,179	4,310
34		Prepayments	1.1	14,121,283	196,219	63,256	1,973
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(8,416)	0
37		Customer Advances	9.0	(59,445,400)	0	(14,824)	0
38		Deferred Taxes	1.1	(634,525,981)	(8,816,887)	(2,842,339)	(88,663)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 48,840,925	$ 15,558,339	$ 473,994

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 3,505	$ 210	$ 46
2	302.00	Franchises & Consents	1.1	1,378,298	56,710	3,406	750
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 60,215	$ 3,616	$ 796
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 266,179	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	2,094,958	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	4,635,410	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	1,280,038	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	1,094,171	0	0
11	363.50	Other Equipment	2.0	9,812,144	1,473,359	0	0
12		Total Storage Plant		$ 72,218,669	$ 10,844,114	$ 0	$ 0
		Allocation Percentage		100%	15%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 84,686	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	297,948	0	0
15	375.00	Structures	1.0	455,882	52,736	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	141,051,233	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	219,448	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	4,475,579	6,963	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	3,202,686	0
21	381.00	Meters	6.0	323,771,492	0	5,964,150	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	2,068,294
23	387.00	Other Equipment	1.0	(3,442,867)	(398,266)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 145,563,916	$ 9,393,248	$ 2,068,294
23		Allocation Percentage	Net Dist Plant	100.00%	3.90%	0.25%	0.06%
		Total Direct Plant		$ 3,801,367,146	$ 156,408,030	$ 9,393,248	$ 2,068,294
25		Allocation Percentage	Net Dist Plant	100.00%	4.11%	0.25%	0.05%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 6,934,353	$ 416,450	$ 91,698
27		Total Direct Net Plant		$ 3,971,364,293	$ 163,402,597	$ 9,813,314	$ 2,160,788
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 3,764,981	$ 226,110	$ 49,787
29	389-398	Total Common General Plant	1.1	50,919,363	2,095,088	125,823	27,705
30		Total Systems Allocable		$ 142,424,093	$ 5,860,068	$ 351,933	$ 77,492
31		Total Net Plant		$ 4,113,788,386	$ 169,262,666	$ 10,165,246	$ 2,238,280
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (383,739)	$ (121,588)	$ (71,841)
33		Materials & Supplies	1.1	30,847,268	1,269,217	76,224	16,784
34		Prepayments	1.1	14,121,283	581,023	34,894	7,683
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,191)	0
37		Customer Advances	9.0	(59,445,400)	0	(3,858)	0
38		Deferred Taxes	1.1	(634,525,981)	(26,107,701)	(1,567,925)	(345,241)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 144,621,465	$ 8,580,802	$ 1,845,665

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 5	$ 1	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	83	15	2
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 88	$ 16	$ 2
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 695	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	5,471	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	12,105	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	3,343	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	2,857	0	0
11	363.50	Other Equipment	2.0	9,812,144	3,847	0	0
12		Total Storage Plant		$ 72,218,669	$ 28,318	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 116	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	410	0	0
15	375.00	Structures	1.0	455,882	73	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	193,925	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	20,240	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	6,153	642	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	17,658	0
21	381.00	Meters	6.0	323,771,492	0	3,385	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	5,186
23	387.00	Other Equipment	1.0	(3,442,867)	(548)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 200,129	$ 41,926	$ 5,186
23		Allocation Percentage	Net Dist Plant	100.00%	0.01%	0.00%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 228,447	$ 41,926	$ 5,186
25		Allocation Percentage	Net Dist Plant	100.00%	0.01%	0.00%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 10,128	$ 1,859	$ 230
27		Total Direct Net Plant		$ 3,971,364,293	$ 238,663	$ 43,801	$ 5,418
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 5,499	$ 1,009	$ 125
29	389-398	Total Common General Plant	1.1	50,919,363	3,060	562	69
30		Total Systems Allocable		$ 142,424,093	$ 8,559	$ 1,571	$ 194
31		Total Net Plant		$ 4,113,788,386	$ 247,222	$ 45,371	$ 5,612
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (571)	$ (387)	$ (180)
33		Materials & Supplies	1.1	30,847,268	1,854	340	42
34		Prepayments	1.1	14,121,283	849	156	19
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	0	0
37		Customer Advances	9.0	(59,445,400)	0	0	0
38		Deferred Taxes	1.1	(634,525,981)	(38,133)	(6,998)	(866)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 211,221	$ 38,482	$ 4,628

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 0	$ 2	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	4	35	0
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 4	$ 38	$ 0
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 20	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	157	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	347	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	96	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	82	0	0
11	363.50	Other Equipment	2.0	9,812,144	110	0	0
12		Total Storage Plant		$ 72,218,669	$ 811	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 5	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	19	0	0
15	375.00	Structures	1.0	455,882	3	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	8,919	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	51,134	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	283	1,622	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	44,708	0
21	381.00	Meters	6.0	323,771,492	0	0	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	150
23	387.00	Other Equipment	1.0	(3,442,867)	(25)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 9,204	$ 97,464	$ 150
23		Allocation Percentage	Net Dist Plant	100.00%	0.00%	0.00%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 10,016	$ 97,464	$ 150
25		Allocation Percentage	Net Dist Plant	100.00%	0.00%	0.00%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 444	$ 4,321	$ 7
27		Total Direct Net Plant		$ 3,971,364,293	$ 10,464	$ 101,823	$ 157
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 241	$ 2,346	$ 4
29	389-398	Total Common General Plant	1.1	50,919,363	134	1,306	2
30		Total Systems Allocable		$ 142,424,093	$ 375	$ 3,652	$ 6
31		Total Net Plant		$ 4,113,788,386	$ 10,839	$ 105,475	$ 163
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (25)	$ (368)	$ (5)
33		Materials & Supplies	1.1	30,847,268	81	791	1
34		Prepayments	1.1	14,121,283	37	362	1
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(438)	0
37		Customer Advances	9.0	(59,445,400)	0	(772)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,672)	(16,269)	(25)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 9,261	$ 88,780	$ 134

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 313	$ 55	$ 5
2	302.00	Franchises & Consents	1.1	1,378,298	5,057	894	83
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,369	$ 950	$ 88
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 26,652	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	209,764	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	464,134	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	128,168	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	109,557	0	0
11	363.50	Other Equipment	2.0	9,812,144	147,524	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,085,799	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,482	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,325	0	0
15	375.00	Structures	1.0	455,882	4,659	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,462,427	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	64,982	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	395,435	2,062	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	1,350,748	0
21	381.00	Meters	6.0	323,771,492	0	1,048,768	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	227,741
23	387.00	Other Equipment	1.0	(3,442,867)	(35,188)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 12,861,140	$ 2,466,560	$ 227,741
23		Allocation Percentage	Net Dist Plant	100.00%	0.34%	0.07%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 13,946,939	$ 2,466,560	$ 227,741
25		Allocation Percentage	Net Dist Plant	100.00%	0.37%	0.06%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 618,338	$ 109,355	$ 10,097
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,570,646	$ 2,576,865	$ 237,925
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 335,724	$ 59,374	$ 5,482
29	389-398	Total Common General Plant	1.1	50,919,363	186,819	33,040	3,051
30		Total Systems Allocable		$ 142,424,093	$ 522,544	$ 92,413	$ 8,533
31		Total Net Plant		$ 4,113,788,386	$ 15,093,190	$ 2,669,278	$ 246,458
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (34,320)	$ (20,723)	$ (7,910)
33		Materials & Supplies	1.1	30,847,268	113,176	20,016	1,848
34		Prepayments	1.1	14,121,283	51,810	9,163	846
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(448)	0
37		Customer Advances	9.0	(59,445,400)	0	(790)	0
38		Deferred Taxes	1.1	(634,525,981)	(2,328,030)	(411,719)	(38,015)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 12,895,827	$ 2,264,776	$ 203,227

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 322	$ 10	$ 5
2	302.00	Franchises & Consents	1.1	1,378,298	5,205	161	83
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,526	$ 171	$ 88
5		Allocation Percentage	Intang. Plant	100%	0.38%	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 29,867	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	235,064	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	520,115	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	143,627	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	122,771	0	0
11	363.50	Other Equipment	2.0	9,812,144	165,318	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,216,762	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,643	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,892	0	0
15	375.00	Structures	1.0	455,882	4,760	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,730,718	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	26,632	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	403,948	845	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	105,145	0
21	381.00	Meters	6.0	323,771,492	0	311,725	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	229,728
23	387.00	Other Equipment	1.0	(3,442,867)	(35,946)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 13,138,014	$ 444,347	$ 229,728
23		Allocation Percentage	Net Dist Plant	100.00%	0.35%	0.01%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 14,354,776	$ 444,347	$ 229,728
25		Allocation Percentage	Net Dist Plant	100.00%	0.38%	0.01%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 636,419	$ 19,700	$ 10,185
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,996,722	$ 464,218	$ 240,001
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 345,541	$ 10,696	$ 5,530
29	389-398	Total Common General Plant	1.1	50,919,363	192,282	5,952	3,077
30		Total Systems Allocable		$ 142,424,093	$ 537,824	$ 16,648	$ 8,607
31		Total Net Plant		$ 4,113,788,386	$ 15,534,546	$ 480,866	$ 248,608
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (35,408)	$ (6,172)	$ (7,980)
33		Materials & Supplies	1.1	30,847,268	116,486	3,606	1,864
34		Prepayments	1.1	14,121,283	53,325	1,651	853
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	0	0
37		Customer Advances	9.0	(59,445,400)	0	0	0
38		Deferred Taxes	1.1	(634,525,981)	(2,396,106)	(74,171)	(38,346)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 13,272,843	$ 405,780	$ 205,000

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 121	$ 7	$ 2
2	302.00	Franchises & Consents	1.1	1,378,298	1,950	113	27
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 2,071	$ 120	$ 29
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 10,274	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	80,860	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	178,916	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	49,406	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	42,232	0	0
11	363.50	Other Equipment	2.0	9,812,144	56,868	0	0
12		Total Storage Plant		$ 72,218,669	$ 418,557	$ 0	$ 0
		Allocation Percentage		100%	1%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 2,886	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	10,154	0	0
15	375.00	Structures	1.0	455,882	1,797	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	4,807,096	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	71,374	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	152,530	2,265	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	62,004	0
21	381.00	Meters	6.0	323,771,492	0	176,486	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	75,175
23	387.00	Other Equipment	1.0	(3,442,867)	(13,573)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 4,960,890	$ 312,130	$ 75,175
23		Allocation Percentage	Net Dist Plant	100.00%	0.13%	0.01%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 5,379,447	$ 312,130	$ 75,175
25		Allocation Percentage	Net Dist Plant	100.00%	0.14%	0.01%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 238,498	$ 13,838	$ 3,333
27		Total Direct Net Plant		$ 3,971,364,293	$ 5,620,016	$ 326,088	$ 78,536
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 129,492	$ 7,513	$ 1,810
29	389-398	Total Common General Plant	1.1	50,919,363	72,058	4,181	1,007
30		Total Systems Allocable		$ 142,424,093	$ 201,549	$ 11,694	$ 2,817
31		Total Net Plant		$ 4,113,788,386	$ 5,821,565	$ 337,782	$ 81,353
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (13,237)	$ (4,176)	$ (2,611)
33		Materials & Supplies	1.1	30,847,268	43,653	2,533	610
34		Prepayments	1.1	14,121,283	19,984	1,159	279
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,581)	0
37		Customer Advances	9.0	(59,445,400)	0	(4,547)	0
38		Deferred Taxes	1.1	(634,525,981)	(897,940)	(52,101)	(12,548)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 4,974,025	$ 278,069	$ 67,083

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 173	$ 47	$ 6
2	302.00	Franchises & Consents	1.1	1,378,298	2,806	756	101
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 2,979	$ 802	$ 108
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 31,771	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	250,056	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	553,286	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	152,786	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	130,601	0	0
11	363.50	Other Equipment	2.0	9,812,144	175,861	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,294,362	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 3,749	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	13,190	0	0
15	375.00	Structures	1.0	455,882	2,335	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	6,244,255	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	446,620	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	198,131	14,171	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	519,079	0
21	381.00	Meters	6.0	323,771,492	0	1,104,357	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	279,405
23	387.00	Other Equipment	1.0	(3,442,867)	(17,631)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 6,444,029	$ 2,084,227	$ 279,405
23		Allocation Percentage	Net Dist Plant	100.00%	0.17%	0.06%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 7,738,391	$ 2,084,227	$ 279,405
25		Allocation Percentage	Net Dist Plant	100.00%	0.20%	0.05%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 343,082	$ 92,404	$ 12,387
27		Total Direct Net Plant		$ 3,971,364,293	$ 8,084,452	$ 2,177,434	$ 291,900
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 186,275	$ 50,171	$ 6,726
29	389-398	Total Common General Plant	1.1	50,919,363	103,656	27,918	3,743
30		Total Systems Allocable		$ 142,424,093	$ 289,931	$ 78,089	$ 10,468
31		Total Net Plant		$ 4,113,788,386	$ 8,374,382	$ 2,255,523	$ 302,368
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (19,632)	$ (19,189)	$ (9,705)
33		Materials & Supplies	1.1	30,847,268	62,795	16,913	2,267
34		Prepayments	1.1	14,121,283	28,747	7,742	1,038
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(7,705)	0
37		Customer Advances	9.0	(59,445,400)	0	(13,570)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,291,696)	(347,900)	(46,638)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 7,154,596	$ 1,891,814	$ 249,330

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 17,899	$ 46,728	$ 109
2	360 - 363.50	Storage Plant	2.0	3,571,136	1,916,397	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	30,785	0	0
	375.00	Structures	1.0	3,704	2,249	0	0
	376.00	Mains	2.2	47,744,070	14,495,128	22,144,923	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	1,175,146	1,795,329	0
	380.00	Services	7.0	35,893,910	0	30,236,509	0
	381.00	Meters	6.0	14,097,273	0	8,236,138	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	111,074
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	15,703,308	62,412,899	111,074
4	389 - 398	General Plant	1.1	14,327,615	3,025,905	7,899,608	18,371
5		Total Direct Depreciation Expense		$ 119,891,319	$ 20,663,509	$ 70,359,235	$ 129,554
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 2,614,729	$ 6,826,168	$ 15,874
7		General Plant	1.1	4,272,997	902,431	2,355,940	5,479
8		Total System Allocable Amortization		$ 16,653,700	$ 3,517,160	$ 9,182,107	$ 21,353
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 902,431	$ 2,355,940	$ 5,479
10		Total Depreciation Expense		$ 136,545,019	$ 24,180,668	$ 79,541,343	$ 150,907
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 24,180,668	$ 79,541,343	$ 150,907
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	599,386
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 599,386
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 1,073,862	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 1,087,821	$ 5,372,119	$ 119,489
22		Materials & Expenses	5.5	1,271,396	142,255	702,515	15,626
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	567,921
24		Materials & Expenses	3.0	51,869	0	0	23,281
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	1,249,661	3,157,735	0
26		Materials & Expenses	4.4	14,594,880	3,257,883	8,232,258	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	652,446	996,774	0
28		Materials & Expenses	2.2	732,095	222,264	339,564	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	4,205,684	0
30		Materials & Expenses	6.0	3,556,774	0	2,077,997	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	6,545,897	0
32		Materials & Expenses	6.0	1,752,586	0	1,023,924	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	668,849	3,303,059	73,468
34		Materials & Expenses	5.5	4,526,461	506,460	2,501,113	55,631
35	881.00	Rents	5.5	(838,690)	(93,840)	(463,421)	(10,308)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 7,693,800	$ 37,995,218	$ 845,109
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 8,767,662	$ 37,995,218	$ 1,444,495

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 442,159	$ 1,375,769	$ 0
2		Materials & Expenses	6.6	249,786	46,453	144,538	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	495	0	0
4		Materials & Expenses	1.0	6,846	4,157	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	3,473,056	5,305,959	0
6		Materials & Expenses	2.2	10,664,855	3,237,856	4,946,633	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	442,649	676,256	0
8		Materials & Expenses	2.2	697,186	211,666	323,373	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	4,302,703	0
10		Materials & Expenses	3.3	5,366,958	0	4,521,047	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	2,126,871	0
12		Materials & Expenses	6.0	1,246,741	0	728,392	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	39,401	122,595	0
14		Materials & Expenses	6.6	93,400	17,370	54,045	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 7,915,261	$ 24,628,180	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 16,682,923	$ 62,623,398	$ 1,444,495
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 2,156,389	$ 0
18		Materials & Expenses	10.1	54,104	0	48,589	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	1,129,392	0
20		Materials & Expenses	11.0	407,223	0	377,761	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	7,492,468	0
22		Materials & Expenses	4.0	12,265,589	0	11,378,189	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	1,570,246	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	69,954	0
27		Materials & Expenses	10.1	237	0	213	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 24,223,200	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	155,776	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 155,776	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(188)	0
42		Total Sales Expense		$ (203)	$ 0	$ (188)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 16,682,923	$ 87,002,187	$ 1,444,495
44		Allocation Percentage	Total O&M	1	0	1	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 11,309,154	$ 58,977,742	$ 979,206
2		Interest on Customer Deposits	8.0	37,125	0	34,683	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 553,438	$ 1,444,838	$ 3,360
5		GCU Acquisition Adjustment	1.1	318,752	67,318	175,746	409
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	786,386	0
7		LNG Deferral Amortizaton	2.0	3,983,884	2,137,893	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	293,910	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	317,141	484,513	0
10		TRIMP/DOT	2.2	(1,146,342)	(348,030)	(531,703)	0
11		DSM	1.1	(3,702,079)	(781,856)	(2,041,161)	(4,747)
12		Total Regulatory Amortizations		4,315,957	1,945,904	612,529	(978)
13		Taxes Other Than Income	1.1	69,307,596	14,637,341	38,213,118	88,865
14		Total Allocated Operating Deductions		$ 315,902,948	$ 46,521,226	$ 185,452,787	$ 2,510,609
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 11,346,699	$ 29,622,370	$ 68,887
16		South Georgia - Federal	1.1	(7,284,597)	(1,538,462)	(4,016,402)	(9,340)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 838,727,892	$ 2,189,633,183	$ 5,091,989
18		Total Common Systems Allocable Net Plant		142,424,093	30,079,099	78,526,294	182,613
19		Cash Working Capital	11.2	(16,619,324)	(1,955,267)	(10,196,803)	(169,297)
20		Materials & Supplies	1.1	30,847,268	6,514,755	17,007,808	39,552
21		Prepayments	1.1	14,121,283	2,982,329	7,785,846	18,106
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(29,175,748)	0
24		Customer Advances	9.0	(59,445,400)	0	(51,388,498)	0
25		Deferred Taxes	1.1	(634,525,981)	(134,008,013)	(349,849,332)	(813,574)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 742,340,795	$ 1,852,342,750	$ 4,349,388
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 136,840,429	$ 264,484,254
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,620,315	3,131,733
30		Late Charges	12.0	848,431	0	583,069	0
31		Service Establishment Charges	9.0	6,845,361	0	5,917,579	0
32		Reconnect / Reread Charges	9.0	100	0	86	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	255	492
34		Other Revenue - Parts & Material	Net Op Margin	68	0	16	32
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	411,576	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 145,373,325	$ 267,616,511
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (16,682,923)	$ (87,002,187)	$ (1,444,495)
40		A & G	Total O&M	(96,125,247)	(11,309,154)	(58,977,742)	(979,206)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(24,180,668)	(79,541,343)	(150,907)
42		Interest on Customer Deposits	8.0	(37,125)	0	(34,683)	0
43		Regulatory Amortizations	Various	(4,315,957)	(1,945,904)	(612,529)	978
44		Taxes Other Than Income	1.1	(69,307,596)	(14,637,341)	(38,213,118)	(88,865)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (68,755,990)	$ (119,008,275)	$ 264,954,017
46		Interest Expense	1.1	(53,726,452)	(11,346,699)	(29,622,370)	(68,887)
47		State Taxable Income		$ 77,326,971	$ (80,102,689)	$ (148,630,645)	$ 264,885,130
48		State Income Tax	4.90%	$ 3,789,022	$ (3,925,032)	$ (7,282,902)	$ 12,979,371
49		Total State Income Tax		$ 3,789,022	$ (3,925,032)	$ (7,282,902)	$ 12,979,371
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (68,755,990)	$ (119,008,275)	$ 264,954,017
51		Interest Expense	1.1	(53,726,452)	(11,346,699)	(29,622,370)	(68,887)
52		Federal Taxable Income		$ 77,326,971	$ (80,102,689)	$ (148,630,645)	$ 264,885,130
53		Federal Income Tax	19.97%	$ 15,442,969	$ (15,997,308)	$ (29,683,026)	$ 52,900,209
54		South Georgia Federal	1.1	(7,284,597)	(1,538,462)	(4,016,402)	(9,340)
55		Total Federal Income Tax		$ 8,158,372	$ (17,535,771)	$ (33,699,428)	$ 52,890,869
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (47,295,188)	$ (78,025,945)	$ 199,083,776
58		Rate of Return on Rate Base		3.49%	-6.37%	-4.21%	4577%
59		Rate of Return by Class Total				2.84%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 306	$ 1,892	$ 2
2	360 - 363.50	Storage Plant	2.0	3,571,136	36,696	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	523	0	0
	375.00	Structures	1.0	3,704	38	0	0
	376.00	Mains	2.2	47,744,070	246,208	851,885	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	19,961	69,064	0
	380.00	Services	7.0	35,893,910	0	1,336,639	0
	381.00	Meters	6.0	14,097,273	0	316,833	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	2,481
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	266,730	2,574,421	2,481
4	389 - 398	General Plant	1.1	14,327,615	51,713	319,884	410
5		Total Direct Depreciation Expense		$ 119,891,319	$ 355,444	$ 2,896,197	$ 2,894
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 44,686	$ 276,416	$ 355
7		General Plant	1.1	4,272,997	15,423	95,401	122
8		Total System Allocable Amortization		$ 16,653,700	$ 60,108	$ 371,817	$ 477
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 15,423	$ 95,401	$ 122
10		Total Depreciation Expense		$ 136,545,019	$ 415,552	$ 3,268,014	$ 3,371
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 415,552	$ 3,268,014	$ 3,371
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	13,390
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 13,390
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 20,563	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,477	$ 211,881	$ 2,669
22		Materials & Expenses	5.5	1,271,396	2,416	27,708	349
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	12,687
24		Materials & Expenses	3.0	51,869	0	0	520
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,226	128,637	0
26		Materials & Expenses	4.4	14,594,880	55,337	335,359	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	11,082	38,345	0
28		Materials & Expenses	2.2	732,095	3,775	13,063	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	161,787	0
30		Materials & Expenses	6.0	3,556,774	0	79,938	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	251,812	0
32		Materials & Expenses	6.0	1,752,586	0	39,389	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,361	130,275	1,641
34		Materials & Expenses	5.5	4,526,461	8,603	98,646	1,243
35	881.00	Rents	5.5	(838,690)	(1,594)	(18,278)	(230)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 130,684	$ 1,498,561	$ 18,880
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 151,246	$ 1,498,561	$ 32,270

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,510	$ 55,961	$ 0
2		Materials & Expenses	6.6	249,786	789	5,879	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	8	0	0
4		Materials & Expenses	1.0	6,846	71	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	58,992	204,113	0
6		Materials & Expenses	2.2	10,664,855	54,997	190,290	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,519	26,015	0
8		Materials & Expenses	2.2	697,186	3,595	12,440	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	190,206	0
10		Materials & Expenses	3.3	5,366,958	0	199,858	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	81,818	0
12		Materials & Expenses	6.0	1,246,741	0	28,020	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	669	4,987	0
14		Materials & Expenses	6.6	93,400	295	2,198	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 134,445	$ 1,001,785	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 285,692	$ 2,500,346	$ 32,270
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 82,953	$ 0
18		Materials & Expenses	10.1	54,104	0	1,869	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	43,446	0
20		Materials & Expenses	11.0	407,223	0	14,532	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	288,225	0
22		Materials & Expenses	4.0	12,265,589	0	437,704	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	60,405	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	2,691	0
27		Materials & Expenses	10.1	237	0	8	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 931,834	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	5,993	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 5,993	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(7)	0
42		Total Sales Expense		$ (203)	$ 0	$ (7)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 285,692	$ 3,438,165	$ 32,270
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 193,667	$ 2,330,691	$ 21,875
2		Interest on Customer Deposits	8.0	37,125	0	1,334	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,458	$ 58,507	$ 75
5		GCU Acquisition Adjustment	1.1	318,752	1,150	7,117	9
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	30,251	0
7		LNG Deferral Amortizaton	2.0	3,983,884	40,937	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	12,993	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,387	18,639	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,911)	(20,454)	0
11		DSM	1.1	(3,702,079)	(13,362)	(82,654)	(106)
12		Total Regulatory Amortizations		4,315,957	37,659	24,398	(22)
13		Taxes Other Than Income	1.1	69,307,596	250,152	1,547,388	1,985
14		Total Allocated Operating Deductions		$ 315,902,948	$ 804,828	$ 7,366,375	$ 56,087
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 193,915	$ 1,199,518	$ 1,539
16		South Georgia - Federal	1.1	(7,284,597)	(26,292)	(162,639)	(209)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,333,843	$ 88,666,232	$ 113,754
18		Total Common Systems Allocable Net Plant		142,424,093	514,051	3,179,816	4,080
19		Cash Working Capital	11.2	(16,619,324)	(33,484)	(402,959)	(3,782)
20		Materials & Supplies	1.1	30,847,268	111,337	688,708	884
21		Prepayments	1.1	14,121,283	50,968	315,277	404
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(3,418,126)	0
24		Customer Advances	9.0	(59,445,400)	0	(6,020,493)	0
25		Deferred Taxes	1.1	(634,525,981)	(2,290,194)	(14,166,675)	(18,175)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 12,686,522	$ 68,841,781	$ 97,165
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 4,754,484	$ 6,582,143
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	56,297	77,939
30		Late Charges	12.0	848,431	0	48,737	0
31		Service Establishment Charges	9.0	6,845,361	0	693,282	0
32		Reconnect / Reread Charges	9.0	100	0	10	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	9	12
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	1
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	31,048	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,583,868	$ 6,660,094
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (285,692)	$ (3,438,165)	$ (32,270)
40		A & G	Total O&M	(96,125,247)	(193,667)	(2,330,691)	(21,875)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(415,552)	(3,268,014)	(3,371)
42		Interest on Customer Deposits	8.0	(37,125)	0	(1,334)	0
43		Regulatory Amortizations	Various	(4,315,957)	(37,659)	(24,398)	22
44		Taxes Other Than Income	1.1	(69,307,596)	(250,152)	(1,547,388)	(1,985)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,182,721)	$ (5,026,123)	$ 6,600,614
46		Interest Expense	1.1	(53,726,452)	(193,915)	(1,199,518)	(1,539)
47		State Taxable Income		$ 77,326,971	$ (1,376,636)	$ (6,225,640)	$ 6,599,076
48		State Income Tax	4.90%	$ 3,789,022	$ (67,455)	$ (305,056)	$ 323,355
49		Total State Income Tax		$ 3,789,022	$ (67,455)	$ (305,056)	$ 323,355
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,182,721)	$ (5,026,123)	$ 6,600,614
51		Interest Expense	1.1	(53,726,452)	(193,915)	(1,199,518)	(1,539)
52		Federal Taxable Income		$ 77,326,971	$ (1,376,636)	$ (6,225,640)	$ 6,599,076
53		Federal Income Tax	19.97%	$ 15,442,969	$ (274,928)	$ (1,243,323)	$ 1,317,901
54		South Georgia Federal	1.1	(7,284,597)	(26,292)	(162,639)	(209)
55		Total Federal Income Tax		$ 8,158,372	$ (301,220)	$ (1,405,961)	$ 1,317,693
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (814,046)	$ (3,315,105)	$ 4,959,567
58		Rate of Return on Rate Base		3.49%	-6.42%	-4.82%	5104.29%
59		Rate of Return by Class Total				1.02%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 76	$ 9	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	8,061	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	130	0	0
	375.00	Structures	1.0	3,704	10	0	0
	376.00	Mains	2.2	47,744,070	61,400	2,023	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	4,978	164	0
	380.00	Services	7.0	35,893,910	0	6,637	0
	381.00	Meters	6.0	14,097,273	0	5,604	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	461
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	66,517	14,427	461
4	389 - 398	General Plant	1.1	14,327,615	12,813	1,499	76
5		Total Direct Depreciation Expense		$ 119,891,319	$ 87,467	$ 15,935	$ 538
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 11,072	$ 1,295	$ 66
7		General Plant	1.1	4,272,997	3,821	447	23
8		Total System Allocable Amortization		$ 16,653,700	$ 14,893	$ 1,742	$ 89
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 3,821	$ 447	$ 23
10		Total Depreciation Expense		$ 136,545,019	$ 102,360	$ 17,677	$ 627
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 102,360	$ 17,677	$ 627
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	2,490
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 2,490
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 4,517	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 4,608	$ 2,257	$ 496
22		Materials & Expenses	5.5	1,271,396	603	295	65
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	2,359
24		Materials & Expenses	3.0	51,869	0	0	97
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	5,293	448	0
26		Materials & Expenses	4.4	14,594,880	13,800	1,169	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	2,764	91	0
28		Materials & Expenses	2.2	732,095	941	31	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	2,861	0
30		Materials & Expenses	6.0	3,556,774	0	1,414	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	4,454	0
32		Materials & Expenses	6.0	1,752,586	0	697	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	2,833	1,387	305
34		Materials & Expenses	5.5	4,526,461	2,145	1,051	231
35	881.00	Rents	5.5	(838,690)	(397)	(195)	(43)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 32,590	$ 15,960	$ 3,510
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 37,107	$ 15,960	$ 6,000

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 1,873	$ 294	$ 0
2		Materials & Expenses	6.6	249,786	197	31	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	2	0	0
4		Materials & Expenses	1.0	6,846	18	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	14,711	485	0
6		Materials & Expenses	2.2	10,664,855	13,715	452	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	1,875	62	0
8		Materials & Expenses	2.2	697,186	897	30	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	944	0
10		Materials & Expenses	3.3	5,366,958	0	992	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	1,447	0
12		Materials & Expenses	6.0	1,246,741	0	496	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	167	26	0
14		Materials & Expenses	6.6	93,400	74	12	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 33,528	$ 5,270	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 70,635	$ 21,231	$ 6,000
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 197	$ 0
18		Materials & Expenses	10.1	54,104	0	4	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	103	0
20		Materials & Expenses	11.0	407,223	0	35	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	684	0
22		Materials & Expenses	4.0	12,265,589	0	1,039	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	143	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	6	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 2,213	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	14	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 14	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 70,635	$ 23,458	$ 6,000
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 47,883	$ 15,902	$ 4,067
2		Interest on Customer Deposits	8.0	37,125	0	3	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 2,344	$ 274	$ 14
5		GCU Acquisition Adjustment	1.1	318,752	285	33	2
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	72	0
7		LNG Deferral Amortizaton	2.0	3,983,884	8,993	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	65	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	1,343	44	0
10		TRIMP/DOT	2.2	(1,146,342)	(1,474)	(49)	0
11		DSM	1.1	(3,702,079)	(3,311)	(387)	(20)
12		Total Regulatory Amortizations		4,315,957	8,180	52	(4)
13		Taxes Other Than Income	1.1	69,307,596	61,981	7,251	369
14		Total Allocated Operating Deductions		$ 315,902,948	$ 196,858	$ 46,718	$ 10,429
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 48,047	$ 5,621	$ 286
16		South Georgia - Federal	1.1	(7,284,597)	(6,515)	(762)	(39)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 3,551,549	$ 415,462	$ 21,151
18		Total Common Systems Allocable Net Plant		142,424,093	127,368	14,900	759
19		Cash Working Capital	11.2	(16,619,324)	(8,279)	(2,749)	(703)
20		Materials & Supplies	1.1	30,847,268	27,586	3,227	164
21		Prepayments	1.1	14,121,283	12,629	1,477	75
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,477)	0
24		Customer Advances	9.0	(59,445,400)	0	(4,363)	0
25		Deferred Taxes	1.1	(634,525,981)	(567,450)	(66,381)	(3,379)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 3,143,404	$ 359,095	$ 18,067
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 76,824	$ 635,208
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	910	7,521
30		Late Charges	12.0	848,431	0	266	0
31		Service Establishment Charges	9.0	6,845,361	0	502	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	1
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 78,503	$ 642,731
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (70,635)	$ (23,458)	$ (6,000)
40		A & G	Total O&M	(96,125,247)	(47,883)	(15,902)	(4,067)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(102,360)	(17,677)	(627)
42		Interest on Customer Deposits	8.0	(37,125)	0	(3)	0
43		Regulatory Amortizations	Various	(4,315,957)	(8,180)	(52)	4
44		Taxes Other Than Income	1.1	(69,307,596)	(61,981)	(7,251)	(369)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (291,039)	$ 14,160	$ 631,671
46		Interest Expense	1.1	(53,726,452)	(48,047)	(5,621)	(286)
47		State Taxable Income		$ 77,326,971	$ (339,086)	$ 8,539	$ 631,385
48		State Income Tax	4.90%	$ 3,789,022	$ (16,615)	$ 418	$ 30,938
49		Total State Income Tax		$ 3,789,022	$ (16,615)	$ 418	$ 30,938
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (291,039)	$ 14,160	$ 631,671
51		Interest Expense	1.1	(53,726,452)	(48,047)	(5,621)	(286)
52		Federal Taxable Income		$ 77,326,971	$ (339,086)	$ 8,539	$ 631,385
53		Federal Income Tax	19.97%	$ 15,442,969	$ (67,719)	$ 1,705	$ 126,094
54		South Georgia Federal	1.1	(7,284,597)	(6,515)	(762)	(39)
55		Total Federal Income Tax		$ 8,158,372	$ (74,233)	$ 943	$ 126,055
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (200,190)	$ 12,798	$ 474,678
58		Rate of Return on Rate Base		3.49%	-6.37%	3.56%	2627.39%
59		Rate of Return by Class Total				8.16%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 236	$ 1,041	$ 1
2	360 - 363.50	Storage Plant	2.0	3,571,136	24,628	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	407	0	0
	375.00	Structures	1.0	3,704	30	0	0
	376.00	Mains	2.2	47,744,070	191,737	359,604	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	15,544	29,154	0
	380.00	Services	7.0	35,893,910	0	1,008,971	0
	381.00	Meters	6.0	14,097,273	0	133,744	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	1,335
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	207,718	1,531,473	1,335
4	389 - 398	General Plant	1.1	14,327,615	39,971	176,041	221
5		Total Direct Depreciation Expense		$ 119,891,319	$ 272,554	$ 1,708,556	$ 1,557
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 34,539	$ 152,120	$ 191
7		General Plant	1.1	4,272,997	11,921	52,502	66
8		Total System Allocable Amortization		$ 16,653,700	$ 46,460	$ 204,621	$ 257
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 11,921	$ 52,502	$ 66
10		Total Depreciation Expense		$ 136,545,019	$ 319,014	$ 1,913,177	$ 1,814
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 319,014	$ 1,913,177	$ 1,814
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	7,204
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 7,204
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 13,801	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 14,389	$ 102,829	$ 1,436
22		Materials & Expenses	5.5	1,271,396	1,882	13,447	188
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	6,826
24		Materials & Expenses	3.0	51,869	0	0	280
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	16,530	72,666	0
26		Materials & Expenses	4.4	14,594,880	43,094	189,442	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	8,630	16,186	0
28		Materials & Expenses	2.2	732,095	2,940	5,514	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	68,295	0
30		Materials & Expenses	6.0	3,556,774	0	33,744	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	106,297	0
32		Materials & Expenses	6.0	1,752,586	0	16,627	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	8,847	63,225	883
34		Materials & Expenses	5.5	4,526,461	6,699	47,874	669
35	881.00	Rents	5.5	(838,690)	(1,241)	(8,870)	(124)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 101,771	$ 727,275	$ 10,158
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 115,572	$ 727,275	$ 17,362

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 5,849	$ 31,409	$ 0
2		Materials & Expenses	6.6	249,786	614	3,300	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	7	0	0
4		Materials & Expenses	1.0	6,846	55	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	45,940	86,162	0
6		Materials & Expenses	2.2	10,664,855	42,829	80,327	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	5,855	10,982	0
8		Materials & Expenses	2.2	697,186	2,800	5,251	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	143,578	0
10		Materials & Expenses	3.3	5,366,958	0	150,864	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	34,538	0
12		Materials & Expenses	6.0	1,246,741	0	11,828	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	521	2,799	0
14		Materials & Expenses	6.6	93,400	230	1,234	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 104,701	$ 562,271	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 220,272	$ 1,289,546	$ 17,362
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 36,047	$ 0
18		Materials & Expenses	10.1	54,104	0	812	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	18,340	0
20		Materials & Expenses	11.0	407,223	0	6,134	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	121,668	0
22		Materials & Expenses	4.0	12,265,589	0	184,767	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	10,447	0
24		Materials & Expenses - KAM	15.0	2,968	0	40	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	25,499	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,169	0
27		Materials & Expenses	10.1	237	0	4	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 404,926	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	2,530	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 2,530	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(3)	0
42		Total Sales Expense		$ (203)	$ 0	$ (3)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 220,272	$ 1,696,999	$ 17,362
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 149,320	$ 1,150,375	$ 11,770
2		Interest on Customer Deposits	8.0	37,125	0	563	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 7,311	$ 32,198	$ 40
5		GCU Acquisition Adjustment	1.1	318,752	889	3,916	5
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	12,770	0
7		LNG Deferral Amortizaton	2.0	3,983,884	27,475	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	9,808	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	4,195	7,868	0
10		TRIMP/DOT	2.2	(1,146,342)	(4,604)	(8,634)	0
11		DSM	1.1	(3,702,079)	(10,328)	(45,487)	(57)
12		Total Regulatory Amortizations		4,315,957	24,938	12,439	(12)
13		Taxes Other Than Income	1.1	69,307,596	193,352	851,572	1,068
14		Total Allocated Operating Deductions		$ 315,902,948	$ 612,820	$ 3,724,387	$ 30,177
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 149,884	$ 660,129	$ 828
16		South Georgia - Federal	1.1	(7,284,597)	(20,322)	(89,505)	(112)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 11,079,185	$ 48,795,554	$ 61,204
18		Total Common Systems Allocable Net Plant		142,424,093	397,330	1,749,943	2,195
19		Cash Working Capital	11.2	(16,619,324)	(25,816)	(198,891)	(2,035)
20		Materials & Supplies	1.1	30,847,268	86,057	379,016	475
21		Prepayments	1.1	14,121,283	39,395	173,506	218
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(433,766)	0
24		Customer Advances	9.0	(59,445,400)	0	(764,010)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,770,180)	(7,796,325)	(9,779)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 9,805,971	$ 41,905,027	$ 52,278
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 5,711,446	$ 4,025,121
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	67,629	47,661
30		Late Charges	12.0	848,431	0	29,565	0
31		Service Establishment Charges	9.0	6,845,361	0	87,979	0
32		Reconnect / Reread Charges	9.0	100	0	1	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	11	7
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	16,389	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,913,021	$ 4,072,790
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (220,272)	$ (1,696,999)	$ (17,362)
40		A & G	Total O&M	(96,125,247)	(149,320)	(1,150,375)	(11,770)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(319,014)	(1,913,177)	(1,814)
42		Interest on Customer Deposits	8.0	(37,125)	0	(563)	0
43		Regulatory Amortizations	Various	(4,315,957)	(24,938)	(12,439)	12
44		Taxes Other Than Income	1.1	(69,307,596)	(193,352)	(851,572)	(1,068)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (906,896)	$ 287,895	$ 4,040,788
46		Interest Expense	1.1	(53,726,452)	(149,884)	(660,129)	(828)
47		State Taxable Income		$ 77,326,971	$ (1,056,780)	$ (372,234)	$ 4,039,960
48		State Income Tax	4.90%	$ 3,789,022	$ (51,782)	$ (18,239)	$ 197,958
49		Total State Income Tax		$ 3,789,022	$ (51,782)	$ (18,239)	$ 197,958
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (906,896)	$ 287,895	$ 4,040,788
51		Interest Expense	1.1	(53,726,452)	(149,884)	(660,129)	(828)
52		Federal Taxable Income		$ 77,326,971	$ (1,056,780)	$ (372,234)	$ 4,039,960
53		Federal Income Tax	19.97%	$ 15,442,969	$ (211,050)	$ (74,339)	$ 806,820
54		South Georgia Federal	1.1	(7,284,597)	(20,322)	(89,505)	(112)
55		Total Federal Income Tax		$ 8,158,372	$ (231,372)	$ (163,844)	$ 806,708
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (623,742)	$ 469,978	$ 3,036,122
58		Rate of Return on Rate Base		3.49%	-6.36%	1.12%	5807.64%
59		Rate of Return by Class Total				5.57%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 1,877	$ 3,183	$ 17
2	360 - 363.50	Storage Plant	2.0	3,571,136	231,629	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	3,204	0	0
	375.00	Structures	1.0	3,704	234	0	0
	376.00	Mains	2.2	47,744,070	1,508,517	346,056	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	122,298	28,055	0
	380.00	Services	7.0	35,893,910	0	2,203,029	0
	381.00	Meters	6.0	14,097,273	0	3,074,939	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	17,394
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	1,634,253	5,652,080	17,394
4	389 - 398	General Plant	1.1	14,327,615	317,361	538,056	2,877
5		Total Direct Depreciation Expense		$ 119,891,319	$ 2,185,121	$ 6,193,319	$ 20,288
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 274,237	$ 464,942	$ 2,486
7		General Plant	1.1	4,272,997	94,648	160,467	858
8		Total System Allocable Amortization		$ 16,653,700	$ 368,885	$ 625,410	$ 3,344
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 94,648	$ 160,467	$ 858
10		Total Depreciation Expense		$ 136,545,019	$ 2,554,006	$ 6,818,729	$ 23,632
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 2,554,006	$ 6,818,729	$ 23,632
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	93,865
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 93,865
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 129,794	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 113,210	$ 1,137,650	$ 18,712
22		Materials & Expenses	5.5	1,271,396	14,805	148,771	2,447
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	88,937
24		Materials & Expenses	3.0	51,869	0	0	3,646
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	130,053	120,805	0
26		Materials & Expenses	4.4	14,594,880	339,050	314,940	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	67,900	15,576	0
28		Materials & Expenses	2.2	732,095	23,131	5,306	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	1,570,180	0
30		Materials & Expenses	6.0	3,556,774	0	775,814	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	2,443,892	0
32		Materials & Expenses	6.0	1,752,586	0	382,279	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	69,608	699,487	11,505
34		Materials & Expenses	5.5	4,526,461	52,708	529,659	8,712
35	881.00	Rents	5.5	(838,690)	(9,766)	(98,138)	(1,614)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 800,699	$ 8,046,222	$ 132,345
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 930,493	$ 8,046,222	$ 226,210

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 46,016	$ 113,076	$ 0
2		Materials & Expenses	6.6	249,786	4,834	11,880	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	52	0	0
4		Materials & Expenses	1.0	6,846	433	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	361,443	82,916	0
6		Materials & Expenses	2.2	10,664,855	336,966	77,301	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	46,067	10,568	0
8		Materials & Expenses	2.2	697,186	22,028	5,053	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	313,494	0
10		Materials & Expenses	3.3	5,366,958	0	329,403	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	794,061	0
12		Materials & Expenses	6.0	1,246,741	0	271,943	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	4,100	10,076	0
14		Materials & Expenses	6.6	93,400	1,808	4,442	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 823,746	$ 2,024,213	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 1,754,239	$ 10,070,435	$ 226,210
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 47,092	$ 0
18		Materials & Expenses	10.1	54,104	0	1,061	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	17,649	0
20		Materials & Expenses	11.0	407,223	0	5,903	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	117,084	0
22		Materials & Expenses	4.0	12,265,589	0	177,806	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	135,809	0
24		Materials & Expenses - KAM	15.0	2,968	0	519	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	24,538	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,528	0
27		Materials & Expenses	10.1	237	0	5	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 528,994	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	2,434	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 2,434	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(3)	0
42		Total Sales Expense		$ (203)	$ 0	$ (3)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 1,754,239	$ 10,601,860	$ 226,210
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 1,189,178	$ 7,186,874	$ 153,345
2		Interest on Customer Deposits	8.0	37,125	0	542	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 58,045	$ 98,410	$ 526
5		GCU Acquisition Adjustment	1.1	318,752	7,060	11,970	64
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	12,289	0
7		LNG Deferral Amortizaton	2.0	3,983,884	258,400	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	21,414	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	33,005	7,571	0
10		TRIMP/DOT	2.2	(1,146,342)	(36,220)	(8,309)	0
11		DSM	1.1	(3,702,079)	(82,002)	(139,027)	(743)
12		Total Regulatory Amortizations		4,315,957	238,289	4,319	(153)
13		Taxes Other Than Income	1.1	69,307,596	1,535,186	2,602,763	13,916
14		Total Allocated Operating Deductions		$ 315,902,948	$ 4,955,182	$ 20,400,677	$ 393,165
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 1,190,058	$ 2,017,632	$ 10,788
16		South Georgia - Federal	1.1	(7,284,597)	(161,356)	(273,564)	(1,463)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 87,967,004	$ 149,139,783	$ 797,412
18		Total Common Systems Allocable Net Plant		142,424,093	3,154,740	5,348,565	28,597
19		Cash Working Capital	11.2	(16,619,324)	(205,600)	(1,242,556)	(26,512)
20		Materials & Supplies	1.1	30,847,268	683,277	1,158,432	6,194
21		Prepayments	1.1	14,121,283	312,791	530,308	2,835
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(522,844)	0
24		Customer Advances	9.0	(59,445,400)	0	(920,908)	0
25		Deferred Taxes	1.1	(634,525,981)	(14,054,956)	(23,828,856)	(127,407)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 77,857,256	$ 129,661,922	$ 681,120
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 8,659,176	$ 23,293,621
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	102,532	275,818
30		Late Charges	12.0	848,431	0	64,644	0
31		Service Establishment Charges	9.0	6,845,361	0	106,046	0
32		Reconnect / Reread Charges	9.0	100	0	2	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	16	43
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	3
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	37,936	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 8,970,354	$ 23,569,485
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (1,754,239)	$ (10,601,860)	$ (226,210)
40		A & G	Total O&M	(96,125,247)	(1,189,178)	(7,186,874)	(153,345)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(2,554,006)	(6,818,729)	(23,632)
42		Interest on Customer Deposits	8.0	(37,125)	0	(542)	0
43		Regulatory Amortizations	Various	(4,315,957)	(238,289)	(4,319)	153
44		Taxes Other Than Income	1.1	(69,307,596)	(1,535,186)	(2,602,763)	(13,916)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (7,270,898)	$ (18,244,733)	$ 23,152,535
46		Interest Expense	1.1	(53,726,452)	(1,190,058)	(2,017,632)	(10,788)
47		State Taxable Income		$ 77,326,971	$ (8,460,956)	$ (20,262,365)	$ 23,141,747
48		State Income Tax	4.90%	$ 3,789,022	$ (414,587)	$ (992,856)	$ 1,133,946
49		Total State Income Tax		$ 3,789,022	$ (414,587)	$ (992,856)	$ 1,133,946
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (7,270,898)	$ (18,244,733)	$ 23,152,535
51		Interest Expense	1.1	(53,726,452)	(1,190,058)	(2,017,632)	(10,788)
52		Federal Taxable Income		$ 77,326,971	$ (8,460,956)	$ (20,262,365)	$ 23,141,747
53		Federal Income Tax	19.97%	$ 15,442,969	$ (1,689,738)	$ (4,046,597)	$ 4,621,638
54		South Georgia Federal	1.1	(7,284,597)	(161,356)	(273,564)	(1,463)
55		Total Federal Income Tax		$ 8,158,372	$ (1,851,094)	$ (4,320,161)	$ 4,620,176
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (5,005,217)	$ (12,931,716)	$ 17,398,413
58		Rate of Return on Rate Base		3.49%	-6.43%	-9.97%	2554.38%
59		Rate of Return by Class Total				-0.26%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 3,677	$ 1,281	$ 36
2	360 - 363.50	Storage Plant	2.0	3,571,136	465,514	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	6,266	0	0
	375.00	Structures	1.0	3,704	458	0	0
	376.00	Mains	2.2	47,744,070	2,950,246	141,605	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	239,182	11,480	0
	380.00	Services	7.0	35,893,910	0	723,128	0
	381.00	Meters	6.0	14,097,273	0	1,405,689	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	36,850
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	3,196,151	2,281,902	36,850
4	389 - 398	General Plant	1.1	14,327,615	621,625	216,488	6,095
5		Total Direct Depreciation Expense		$ 119,891,319	$ 4,286,968	$ 2,499,671	$ 42,980
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 537,156	$ 187,071	$ 5,266
7		General Plant	1.1	4,272,997	185,390	64,564	1,818
8		Total System Allocable Amortization		$ 16,653,700	$ 722,546	$ 251,635	$ 7,084
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 185,390	$ 64,564	$ 1,818
10		Total Depreciation Expense		$ 136,545,019	$ 5,009,514	$ 2,751,306	$ 50,064
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 5,009,514	$ 2,751,306	$ 50,064
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	198,850
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 198,850
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 260,853	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 221,408	$ 510,276	$ 39,641
22		Materials & Expenses	5.5	1,271,396	28,954	66,729	5,184
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	188,412
24		Materials & Expenses	3.0	51,869	0	0	7,724
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	254,348	42,069	0
26		Materials & Expenses	4.4	14,594,880	663,089	109,673	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	132,795	6,374	0
28		Materials & Expenses	2.2	732,095	45,238	2,171	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	717,798	0
30		Materials & Expenses	6.0	3,556,774	0	354,658	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	1,117,210	0
32		Materials & Expenses	6.0	1,752,586	0	174,757	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	136,133	313,744	24,374
34		Materials & Expenses	5.5	4,526,461	103,082	237,570	18,456
35	881.00	Rents	5.5	(838,690)	(19,100)	(44,019)	(3,420)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 1,565,947	$ 3,609,010	$ 280,371
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 1,826,800	$ 3,609,010	$ 479,221

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 89,994	$ 46,214	$ 0
2		Materials & Expenses	6.6	249,786	9,455	4,855	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	101	0	0
4		Materials & Expenses	1.0	6,846	846	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	706,884	33,929	0
6		Materials & Expenses	2.2	10,664,855	659,013	31,631	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	90,094	4,324	0
8		Materials & Expenses	2.2	697,186	43,081	2,068	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	102,902	0
10		Materials & Expenses	3.3	5,366,958	0	108,124	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	363,000	0
12		Materials & Expenses	6.0	1,246,741	0	124,317	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	8,019	4,118	0
14		Materials & Expenses	6.6	93,400	3,535	1,815	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 1,611,022	$ 827,299	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 3,437,822	$ 4,436,309	$ 479,221
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 40,283	$ 0
18		Materials & Expenses	10.1	54,104	0	908	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	7,222	0
20		Materials & Expenses	11.0	407,223	0	2,416	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	47,910	0
22		Materials & Expenses	4.0	12,265,589	0	72,758	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	268,633	0
24		Materials & Expenses - KAM	15.0	2,968	0	1,027	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	10,041	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,307	0
27		Materials & Expenses	10.1	237	0	4	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 452,509	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	996	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 996	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(1)	0
42		Total Sales Expense		$ (203)	$ 0	$ (1)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 3,437,822	$ 4,889,812	$ 479,221
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 2,330,458	$ 3,314,745	$ 324,858
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 113,695	$ 39,596	$ 1,115
5		GCU Acquisition Adjustment	1.1	318,752	13,830	4,816	136
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	5,029	0
7		LNG Deferral Amortizaton	2.0	3,983,884	519,318	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	7,029	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	64,549	3,098	0
10		TRIMP/DOT	2.2	(1,146,342)	(70,836)	(3,400)	0
11		DSM	1.1	(3,702,079)	(160,620)	(55,938)	(1,575)
12		Total Regulatory Amortizations		4,315,957	479,935	230	(324)
13		Taxes Other Than Income	1.1	69,307,596	3,007,015	1,047,228	29,481
14		Total Allocated Operating Deductions		$ 315,902,948	$ 9,735,166	$ 9,252,245	$ 832,912
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 2,331,004	$ 811,799	$ 22,854
16		South Georgia - Federal	1.1	(7,284,597)	(316,053)	(110,069)	(3,099)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 172,303,660	$ 60,006,741	$ 1,689,302
18		Total Common Systems Allocable Net Plant		142,424,093	6,179,285	2,152,007	60,583
19		Cash Working Capital	11.2	(16,619,324)	(402,919)	(573,094)	(56,166)
20		Materials & Supplies	1.1	30,847,268	1,338,355	466,098	13,122
21		Prepayments	1.1	14,121,283	612,673	213,371	6,007
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(175,302)	0
24		Customer Advances	9.0	(59,445,400)	0	(308,766)	0
25		Deferred Taxes	1.1	(634,525,981)	(27,529,872)	(9,587,596)	(269,909)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 152,501,184	$ 52,193,459	$ 1,442,939
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 6,509,416	$ 44,543,042
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	77,077	527,430
30		Late Charges	12.0	848,431	0	65,327	0
31		Service Establishment Charges	9.0	6,845,361	0	35,556	0
32		Reconnect / Reread Charges	9.0	100	0	1	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	12	83
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	5
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	34,797	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 6,722,186	$ 45,070,560
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (3,437,822)	$ (4,889,812)	$ (479,221)
40		A & G	Total O&M	(96,125,247)	(2,330,458)	(3,314,745)	(324,858)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(5,009,514)	(2,751,306)	(50,064)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(479,935)	(230)	324
44		Taxes Other Than Income	1.1	(69,307,596)	(3,007,015)	(1,047,228)	(29,481)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (14,264,744)	$ (5,281,135)	$ 44,187,259
46		Interest Expense	1.1	(53,726,452)	(2,331,004)	(811,799)	(22,854)
47		State Taxable Income		$ 77,326,971	$ (16,595,748)	$ (6,092,934)	$ 44,164,406
48		State Income Tax	4.90%	$ 3,789,022	$ (813,192)	$ (298,554)	$ 2,164,056
49		Total State Income Tax		$ 3,789,022	$ (813,192)	$ (298,554)	$ 2,164,056
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (14,264,744)	$ (5,281,135)	$ 44,187,259
51		Interest Expense	1.1	(53,726,452)	(2,331,004)	(811,799)	(22,854)
52		Federal Taxable Income		$ 77,326,971	$ (16,595,748)	$ (6,092,934)	$ 44,164,406
53		Federal Income Tax	19.97%	$ 15,442,969	$ (3,314,337)	$ (1,216,820)	$ 8,820,073
54		South Georgia Federal	1.1	(7,284,597)	(316,053)	(110,069)	(3,099)
55		Total Federal Income Tax		$ 8,158,372	$ (3,630,390)	$ (1,326,889)	$ 8,816,975
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (9,821,163)	$ (3,655,692)	$ 33,206,229
58		Rate of Return on Rate Base		3.49%	-6.44%	-7.00%	2301.29%
59		Rate of Return by Class Total				9.57%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 1,178	$ 380	$ 12
2	360 - 363.50	Storage Plant	2.0	3,571,136	151,979	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	2,004	0	0
	375.00	Structures	1.0	3,704	146	0	0
	376.00	Mains	2.2	47,744,070	943,755	8,309	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	76,512	674	0
	380.00	Services	7.0	35,893,910	0	162,278	0
	381.00	Meters	6.0	14,097,273	0	549,489	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	12,105
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	1,022,418	720,750	12,105
4	389 - 398	General Plant	1.1	14,327,615	199,086	64,180	2,002
5		Total Direct Depreciation Expense		$ 119,891,319	$ 1,374,660	$ 785,310	$ 14,119
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 172,033	$ 55,459	$ 1,730
7		General Plant	1.1	4,272,997	59,374	19,141	597
8		Total System Allocable Amortization		$ 16,653,700	$ 231,407	$ 74,600	$ 2,327
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 59,374	$ 19,141	$ 597
10		Total Depreciation Expense		$ 136,545,019	$ 1,606,067	$ 859,909	$ 16,446
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 1,606,067	$ 859,909	$ 16,446
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	65,321
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 65,321
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 85,162	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 70,826	$ 192,314	$ 13,022
22		Materials & Expenses	5.5	1,271,396	9,262	25,149	1,703
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	61,892
24		Materials & Expenses	3.0	51,869	0	0	2,537
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	81,363	7,417	0
26		Materials & Expenses	4.4	14,594,880	212,116	19,337	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	42,480	374	0
28		Materials & Expenses	2.2	732,095	14,471	127	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	280,590	0
30		Materials & Expenses	6.0	3,556,774	0	138,637	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	436,722	0
32		Materials & Expenses	6.0	1,752,586	0	68,313	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	43,548	118,245	8,007
34		Materials & Expenses	5.5	4,526,461	32,975	89,536	6,063
35	881.00	Rents	5.5	(838,690)	(6,110)	(16,590)	(1,123)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 500,931	$ 1,360,172	$ 92,100
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 586,093	$ 1,360,172	$ 157,420

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 28,788	$ 14,523	$ 0
2		Materials & Expenses	6.6	249,786	3,024	1,526	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	32	0	0
4		Materials & Expenses	1.0	6,846	271	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	226,125	1,991	0
6		Materials & Expenses	2.2	10,664,855	210,812	1,856	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	28,820	254	0
8		Materials & Expenses	2.2	697,186	13,781	121	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	23,092	0
10		Materials & Expenses	3.3	5,366,958	0	24,264	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	141,898	0
12		Materials & Expenses	6.0	1,246,741	0	48,596	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	2,565	1,294	0
14		Materials & Expenses	6.6	93,400	1,131	571	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 515,350	$ 259,987	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 1,101,444	$ 1,620,158	$ 157,420
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 11,554	$ 0
18		Materials & Expenses	10.1	54,104	0	260	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	424	0
20		Materials & Expenses	11.0	407,223	0	142	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	2,811	0
22		Materials & Expenses	4.0	12,265,589	0	4,269	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	108,946	0
24		Materials & Expenses - KAM	15.0	2,968	0	417	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	589	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	375	0
27		Materials & Expenses	10.1	237	0	1	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 129,788	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	58	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 58	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 1,101,444	$ 1,750,005	$ 157,420
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 746,656	$ 1,186,307	$ 106,713
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 36,413	$ 11,739	$ 366
5		GCU Acquisition Adjustment	1.1	318,752	4,429	1,428	45
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	295	0
7		LNG Deferral Amortizaton	2.0	3,983,884	169,545	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	1,577	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	20,649	182	0
10		TRIMP/DOT	2.2	(1,146,342)	(22,660)	(200)	0
11		DSM	1.1	(3,702,079)	(51,441)	(16,583)	(517)
12		Total Regulatory Amortizations		4,315,957	156,934	(1,562)	(107)
13		Taxes Other Than Income	1.1	69,307,596	963,045	310,461	9,684
14		Total Allocated Operating Deductions		$ 315,902,948	$ 3,125,013	$ 3,243,649	$ 273,605
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 746,542	$ 240,666	$ 7,507
16		South Georgia - Federal	1.1	(7,284,597)	(101,221)	(32,631)	(1,018)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 55,183,039	$ 17,789,603	$ 554,922
18		Total Common Systems Allocable Net Plant		142,424,093	1,979,016	637,984	19,901
19		Cash Working Capital	11.2	(16,619,324)	(129,091)	(205,104)	(18,450)
20		Materials & Supplies	1.1	30,847,268	428,630	138,179	4,310
21		Prepayments	1.1	14,121,283	196,219	63,256	1,973
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(8,416)	0
24		Customer Advances	9.0	(59,445,400)	0	(14,824)	0
25		Deferred Taxes	1.1	(634,525,981)	(8,816,887)	(2,842,339)	(88,663)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 48,840,925	$ 15,558,339	$ 473,994
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 2,231,662	$ 10,674,638
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	26,425	126,397
30		Late Charges	12.0	848,431	0	28,883	0
31		Service Establishment Charges	9.0	6,845,361	0	1,707	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	4	20
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	1
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 2,288,681	$ 10,801,057
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (1,101,444)	$ (1,750,005)	$ (157,420)
40		A & G	Total O&M	(96,125,247)	(746,656)	(1,186,307)	(106,713)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(1,606,067)	(859,909)	(16,446)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(156,934)	1,562	107
44		Taxes Other Than Income	1.1	(69,307,596)	(963,045)	(310,461)	(9,684)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (4,574,146)	$ (1,816,440)	$ 10,510,899
46		Interest Expense	1.1	(53,726,452)	(746,542)	(240,666)	(7,507)
47		State Taxable Income		$ 77,326,971	$ (5,320,688)	$ (2,057,106)	$ 10,503,392
48		State Income Tax	4.90%	$ 3,789,022	$ (260,714)	$ (100,798)	$ 514,666
49		Total State Income Tax		$ 3,789,022	$ (260,714)	$ (100,798)	$ 514,666
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (4,574,146)	$ (1,816,440)	$ 10,510,899
51		Interest Expense	1.1	(53,726,452)	(746,542)	(240,666)	(7,507)
52		Federal Taxable Income		$ 77,326,971	$ (5,320,688)	$ (2,057,106)	$ 10,503,392
53		Federal Income Tax	19.97%	$ 15,442,969	$ (1,062,595)	$ (410,825)	$ 2,097,632
54		South Georgia Federal	1.1	(7,284,597)	(101,221)	(32,631)	(1,018)
55		Total Federal Income Tax		$ 8,158,372	$ (1,163,816)	$ (443,456)	$ 2,096,615
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (3,149,617)	$ (1,272,186)	$ 7,899,619
58		Rate of Return on Rate Base		3.49%	-6.45%	-8.18%	1666.61%
59		Rate of Return by Class Total				5.36%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 3,487	$ 209	$ 46
2	360 - 363.50	Storage Plant	2.0	3,571,136	536,230	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	5,865	0	0
	375.00	Structures	1.0	3,704	428	0	0
	376.00	Mains	2.2	47,744,070	2,761,483	4,296	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	223,878	348	0
	380.00	Services	7.0	35,893,910	0	130,909	0
	381.00	Meters	6.0	14,097,273	0	259,684	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	47,134
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	2,991,655	395,238	47,134
4	389 - 398	General Plant	1.1	14,327,615	589,513	35,404	7,796
5		Total Direct Depreciation Expense		$ 119,891,319	$ 4,120,884	$ 430,851	$ 54,976
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 509,407	$ 30,593	$ 6,736
7		General Plant	1.1	4,272,997	175,813	10,559	2,325
8		Total System Allocable Amortization		$ 16,653,700	$ 685,220	$ 41,152	$ 9,061
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 175,813	$ 10,559	$ 2,325
10		Total Depreciation Expense		$ 136,545,019	$ 4,806,104	$ 472,003	$ 64,037
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 4,806,104	$ 472,003	$ 64,037
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	254,350
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 254,350
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 300,479	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 207,242	$ 92,546	$ 50,705
22		Materials & Expenses	5.5	1,271,396	27,101	12,102	6,631
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	240,997
24		Materials & Expenses	3.0	51,869	0	0	9,879
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	238,074	5,776	0
26		Materials & Expenses	4.4	14,594,880	620,663	15,058	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	124,298	193	0
28		Materials & Expenses	2.2	732,095	42,344	66	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	132,604	0
30		Materials & Expenses	6.0	3,556,774	0	65,519	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	206,391	0
32		Materials & Expenses	6.0	1,752,586	0	32,284	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	127,423	56,902	31,176
34		Materials & Expenses	5.5	4,526,461	96,486	43,087	23,607
35	881.00	Rents	5.5	(838,690)	(17,878)	(7,983)	(4,374)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 1,465,754	$ 654,545	$ 358,622
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 1,766,233	$ 654,545	$ 612,972

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 84,236	$ 7,824	$ 0
2		Materials & Expenses	6.6	249,786	8,850	822	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	94	0	0
4		Materials & Expenses	1.0	6,846	792	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	661,656	1,029	0
6		Materials & Expenses	2.2	10,664,855	616,848	960	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	84,329	131	0
8		Materials & Expenses	2.2	697,186	40,325	63	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	18,629	0
10		Materials & Expenses	3.3	5,366,958	0	19,574	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	67,060	0
12		Materials & Expenses	6.0	1,246,741	0	22,966	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	7,506	697	0
14		Materials & Expenses	6.6	93,400	3,309	307	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 1,507,945	$ 140,062	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 3,274,178	$ 794,607	$ 612,972
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 21,614	$ 0
18		Materials & Expenses	10.1	54,104	0	487	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	219	0
20		Materials & Expenses	11.0	407,223	0	73	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	1,454	0
22		Materials & Expenses	4.0	12,265,589	0	2,207	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	214,907	0
24		Materials & Expenses - KAM	15.0	2,968	0	822	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	305	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	701	0
27		Materials & Expenses	10.1	237	0	2	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 242,791	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	30	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 30	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 3,274,178	$ 1,037,428	$ 612,972
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 2,219,526	$ 703,260	$ 415,527
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 107,822	$ 6,475	$ 1,426
5		GCU Acquisition Adjustment	1.1	318,752	13,115	788	173
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	153	0
7		LNG Deferral Amortizaton	2.0	3,983,884	598,207	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	1,272	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	60,419	94	0
10		TRIMP/DOT	2.2	(1,146,342)	(66,304)	(103)	0
11		DSM	1.1	(3,702,079)	(152,323)	(9,148)	(2,014)
12		Total Regulatory Amortizations		4,315,957	560,936	(469)	(415)
13		Taxes Other Than Income	1.1	69,307,596	2,851,675	171,260	37,710
14		Total Allocated Operating Deductions		$ 315,902,948	$ 9,467,253	$ 1,911,011	$ 1,065,378
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 2,210,586	$ 132,759	$ 29,232
16		South Georgia - Federal	1.1	(7,284,597)	(299,726)	(18,000)	(3,963)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 163,402,597	$ 9,813,314	$ 2,160,788
18		Total Common Systems Allocable Net Plant		142,424,093	5,860,068	351,933	77,492
19		Cash Working Capital	11.2	(16,619,324)	(383,739)	(121,588)	(71,841)
20		Materials & Supplies	1.1	30,847,268	1,269,217	76,224	16,784
21		Prepayments	1.1	14,121,283	581,023	34,894	7,683
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,191)	0
24		Customer Advances	9.0	(59,445,400)	0	(3,858)	0
25		Deferred Taxes	1.1	(634,525,981)	(26,107,701)	(1,567,925)	(345,241)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 144,621,465	$ 8,580,802	$ 1,845,665
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 15,551,126	$ 2,348,400	$ 15,603,421
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	184,139	27,807	184,759
30		Late Charges	12.0	848,431	0	5,525	0
31		Service Establishment Charges	9.0	6,845,361	0	444	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	29	4	29
34		Other Revenue - Parts & Material	Net Op Margin	68	2	0	2
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	35,825	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 15,735,296	$ 2,418,006	$ 15,788,211
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (3,274,178)	$ (1,037,428)	$ (612,972)
40		A & G	Total O&M	(96,125,247)	(2,219,526)	(703,260)	(415,527)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(4,806,104)	(472,003)	(64,037)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(560,936)	469	415
44		Taxes Other Than Income	1.1	(69,307,596)	(2,851,675)	(171,260)	(37,710)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ 2,022,876	$ 34,524	$ 14,658,380
46		Interest Expense	1.1	(53,726,452)	(2,210,586)	(132,759)	(29,232)
47		State Taxable Income		$ 77,326,971	$ (187,710)	$ (98,235)	$ 14,629,148
48		State Income Tax	4.90%	$ 3,789,022	$ (9,198)	$ (4,814)	$ 716,828
49		Total State Income Tax		$ 3,789,022	$ (9,198)	$ (4,814)	$ 716,828
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ 2,022,876	$ 34,524	$ 14,658,380
51		Interest Expense	1.1	(53,726,452)	(2,210,586)	(132,759)	(29,232)
52		Federal Taxable Income		$ 77,326,971	$ (187,710)	$ (98,235)	$ 14,629,148
53		Federal Income Tax	19.97%	$ 15,442,969	$ (37,488)	$ (19,619)	$ 2,921,587
54		South Georgia Federal	1.1	(7,284,597)	(299,726)	(18,000)	(3,963)
55		Total Federal Income Tax		$ 8,158,372	$ (337,214)	$ (37,619)	$ 2,917,624
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ 2,369,287	$ 76,956	$ 11,023,928
58		Rate of Return on Rate Base		3.49%	1.64%	0.90%	597.29%
59		Rate of Return by Class Total				8.69%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 5	$ 1	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	1,400	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	8	0	0
	375.00	Structures	1.0	3,704	1	0	0
	376.00	Mains	2.2	47,744,070	3,797	396	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	308	32	0
	380.00	Services	7.0	35,893,910	0	722	0
	381.00	Meters	6.0	14,097,273	0	147	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	118
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	4,113	1,298	118
4	389 - 398	General Plant	1.1	14,327,615	861	158	20
5		Total Direct Depreciation Expense		$ 119,891,319	$ 6,380	$ 1,457	$ 138
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 744	$ 137	$ 17
7		General Plant	1.1	4,272,997	257	47	6
8		Total System Allocable Amortization		$ 16,653,700	$ 1,001	$ 184	$ 23
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 257	$ 47	$ 6
10		Total Depreciation Expense		$ 136,545,019	$ 7,380	$ 1,640	$ 161
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 7,380	$ 1,640	$ 161
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	638
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 638
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 785	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 285	$ 102	$ 127
22		Materials & Expenses	5.5	1,271,396	37	13	17
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	604
24		Materials & Expenses	3.0	51,869	0	0	25
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	327	64	0
26		Materials & Expenses	4.4	14,594,880	853	167	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	171	18	0
28		Materials & Expenses	2.2	732,095	58	6	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	75	0
30		Materials & Expenses	6.0	3,556,774	0	37	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	117	0
32		Materials & Expenses	6.0	1,752,586	0	18	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	175	62	78
34		Materials & Expenses	5.5	4,526,461	133	47	59
35	881.00	Rents	5.5	(838,690)	(25)	(9)	(11)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 2,015	$ 718	$ 899
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 2,800	$ 718	$ 1,537

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 116	$ 28	$ 0
2		Materials & Expenses	6.6	249,786	12	3	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	0	0	0
4		Materials & Expenses	1.0	6,846	1	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	910	95	0
6		Materials & Expenses	2.2	10,664,855	848	89	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	116	12	0
8		Materials & Expenses	2.2	697,186	55	6	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	103	0
10		Materials & Expenses	3.3	5,366,958	0	108	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	38	0
12		Materials & Expenses	6.0	1,246,741	0	13	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	10	2	0
14		Materials & Expenses	6.6	93,400	5	1	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 2,073	$ 497	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 4,873	$ 1,216	$ 1,537
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 186	$ 0
18		Materials & Expenses	10.1	54,104	0	4	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	20	0
20		Materials & Expenses	11.0	407,223	0	7	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	134	0
22		Materials & Expenses	4.0	12,265,589	0	204	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	1,492	0
24		Materials & Expenses - KAM	15.0	2,968	0	6	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	28	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	6	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 2,087	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	3	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 3	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 4,873	$ 3,305	$ 1,537
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 3,303	$ 2,241	$ 1,042
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 157	$ 29	$ 4
5		GCU Acquisition Adjustment	1.1	318,752	19	4	0
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	14	0
7		LNG Deferral Amortizaton	2.0	3,983,884	1,562	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	7	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	83	9	0
10		TRIMP/DOT	2.2	(1,146,342)	(91)	(10)	0
11		DSM	1.1	(3,702,079)	(222)	(41)	(5)
12		Total Regulatory Amortizations		4,315,957	1,508	12	(1)
13		Taxes Other Than Income	1.1	69,307,596	4,165	764	95
14		Total Allocated Operating Deductions		$ 315,902,948	$ 15,358	$ 6,334	$ 2,671
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 3,229	$ 593	$ 73
16		South Georgia - Federal	1.1	(7,284,597)	(438)	(80)	(10)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 238,663	$ 43,801	$ 5,418
18		Total Common Systems Allocable Net Plant		142,424,093	8,559	1,571	194
19		Cash Working Capital	11.2	(16,619,324)	(571)	(387)	(180)
20		Materials & Supplies	1.1	30,847,268	1,854	340	42
21		Prepayments	1.1	14,121,283	849	156	19
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	0	0
24		Customer Advances	9.0	(59,445,400)	0	0	0
25		Deferred Taxes	1.1	(634,525,981)	(38,133)	(6,998)	(866)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 211,221	$ 38,482	$ 4,628
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 5,370	$ 47,869
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	64	567
30		Late Charges	12.0	848,431	0	21	0
31		Service Establishment Charges	9.0	6,845,361	0	0	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	0
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,455	$ 48,436
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (4,873)	$ (3,305)	$ (1,537)
40		A & G	Total O&M	(96,125,247)	(3,303)	(2,241)	(1,042)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(7,380)	(1,640)	(161)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(1,508)	(12)	1
44		Taxes Other Than Income	1.1	(69,307,596)	(4,165)	(764)	(95)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (21,230)	$ (2,507)	$ 45,603
46		Interest Expense	1.1	(53,726,452)	(3,229)	(593)	(73)
47		State Taxable Income		$ 77,326,971	$ (24,459)	$ (3,100)	$ 45,530
48		State Income Tax	4.90%	$ 3,789,022	$ (1,198)	$ (152)	$ 2,231
49		Total State Income Tax		$ 3,789,022	$ (1,198)	$ (152)	$ 2,231
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (21,230)	$ (2,507)	$ 45,603
51		Interest Expense	1.1	(53,726,452)	(3,229)	(593)	(73)
52		Federal Taxable Income		$ 77,326,971	$ (24,459)	$ (3,100)	$ 45,530
53		Federal Income Tax	19.97%	$ 15,442,969	$ (4,885)	$ (619)	$ 9,093
54		South Georgia Federal	1.1	(7,284,597)	(438)	(80)	(10)
55		Total Federal Income Tax		$ 8,158,372	$ (5,322)	$ (699)	$ 9,083
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (14,709)	$ (1,656)	$ 34,289
58		Rate of Return on Rate Base		3.49%	-6.96%	-4.30%	740.97%
59		Rate of Return by Class Total				7.05%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 0	$ 2	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	40	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	0	0	0
	375.00	Structures	1.0	3,704	0	0	0
	376.00	Mains	2.2	47,744,070	175	1,001	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	14	81	0
	380.00	Services	7.0	35,893,910	0	1,827	0
	381.00	Meters	6.0	14,097,273	0	0	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	3
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	189	2,910	3
4	389 - 398	General Plant	1.1	14,327,615	38	367	1
5		Total Direct Depreciation Expense		$ 119,891,319	$ 267	$ 3,279	$ 4
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 33	$ 317	$ 0
7		General Plant	1.1	4,272,997	11	110	0
8		Total System Allocable Amortization		$ 16,653,700	$ 44	$ 427	$ 1
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 11	$ 110	$ 0
10		Total Depreciation Expense		$ 136,545,019	$ 311	$ 3,706	$ 5
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 311	$ 3,706	$ 5
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	18
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 18
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 22	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 13	$ 130	$ 4
22		Materials & Expenses	5.5	1,271,396	2	17	0
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	18
24		Materials & Expenses	3.0	51,869	0	0	1
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	15	162	0
26		Materials & Expenses	4.4	14,594,880	39	422	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	8	45	0
28		Materials & Expenses	2.2	732,095	3	15	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	0	0
30		Materials & Expenses	6.0	3,556,774	0	0	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	0	0
32		Materials & Expenses	6.0	1,752,586	0	0	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	8	80	2
34		Materials & Expenses	5.5	4,526,461	6	61	2
35	881.00	Rents	5.5	(838,690)	(1)	(11)	(0)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 93	$ 920	$ 26
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 115	$ 920	$ 45

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 5	$ 63	$ 0
2		Materials & Expenses	6.6	249,786	1	7	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	0	0	0
4		Materials & Expenses	1.0	6,846	0	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	42	240	0
6		Materials & Expenses	2.2	10,664,855	39	224	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	5	31	0
8		Materials & Expenses	2.2	697,186	3	15	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	260	0
10		Materials & Expenses	3.3	5,366,958	0	273	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	0	0
12		Materials & Expenses	6.0	1,246,741	0	0	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	0	6	0
14		Materials & Expenses	6.6	93,400	0	2	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 95	$ 1,119	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 211	$ 2,040	$ 45
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 97	$ 0
18		Materials & Expenses	10.1	54,104	0	2	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	51	0
20		Materials & Expenses	11.0	407,223	0	17	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	339	0
22		Materials & Expenses	4.0	12,265,589	0	514	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	71	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	3	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 1,095	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	7	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 7	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 211	$ 3,142	$ 45
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 143	$ 2,130	$ 30
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 7	$ 67	$ 0
5		GCU Acquisition Adjustment	1.1	318,752	1	8	0
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	36	0
7		LNG Deferral Amortizaton	2.0	3,983,884	45	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	18	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	4	22	0
10		TRIMP/DOT	2.2	(1,146,342)	(4)	(24)	0
11		DSM	1.1	(3,702,079)	(10)	(95)	(0)
12		Total Regulatory Amortizations		4,315,957	42	32	(0)
13		Taxes Other Than Income	1.1	69,307,596	183	1,777	3
14		Total Allocated Operating Deductions		$ 315,902,948	$ 621	$ 7,111	$ 77
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 142	$ 1,378	$ 2
16		South Georgia - Federal	1.1	(7,284,597)	(19)	(187)	(0)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 10,464	$ 101,823	$ 157
18		Total Common Systems Allocable Net Plant		142,424,093	375	3,652	6
19		Cash Working Capital	11.2	(16,619,324)	(25)	(368)	(5)
20		Materials & Supplies	1.1	30,847,268	81	791	1
21		Prepayments	1.1	14,121,283	37	362	1
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(438)	0
24		Customer Advances	9.0	(59,445,400)	0	(772)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,672)	(16,269)	(25)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 9,261	$ 88,780	$ 134
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 0	$ 7,725
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	0	91
30		Late Charges	12.0	848,431	0	1	0
31		Service Establishment Charges	9.0	6,845,361	0	89	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	0
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 90	$ 7,816
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (211)	$ (3,142)	$ (45)
40		A & G	Total O&M	(96,125,247)	(143)	(2,130)	(30)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(311)	(3,706)	(5)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(42)	(32)	0
44		Taxes Other Than Income	1.1	(69,307,596)	(183)	(1,777)	(3)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (889)	$ (10,696)	$ 7,734
46		Interest Expense	1.1	(53,726,452)	(142)	(1,378)	(2)
47		State Taxable Income		$ 77,326,971	$ (1,031)	$ (12,074)	$ 7,732
48		State Income Tax	4.90%	$ 3,789,022	$ (51)	$ (592)	$ 379
49		Total State Income Tax		$ 3,789,022	$ (51)	$ (592)	$ 379
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (889)	$ (10,696)	$ 7,734
51		Interest Expense	1.1	(53,726,452)	(142)	(1,378)	(2)
52		Federal Taxable Income		$ 77,326,971	$ (1,031)	$ (12,074)	$ 7,732
53		Federal Income Tax	19.97%	$ 15,442,969	$ (206)	$ (2,411)	$ 1,544
54		South Georgia Federal	1.1	(7,284,597)	(19)	(187)	(0)
55		Total Federal Income Tax		$ 8,158,372	$ (225)	$ (2,598)	$ 1,544
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (614)	$ (7,507)	$ 5,812
58		Rate of Return on Rate Base		3.49%	-6.63%	-8.46%	4332.65%
59		Rate of Return by Class Total				-2.35%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 311	$ 55	$ 5
2	360 - 363.50	Storage Plant	2.0	3,571,136	53,692	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	518	0	0
	375.00	Structures	1.0	3,704	38	0	0
	376.00	Mains	2.2	47,744,070	243,988	1,272	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	19,781	103	0
	380.00	Services	7.0	35,893,910	0	55,212	0
	381.00	Meters	6.0	14,097,273	0	45,664	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	5,190
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	264,324	102,251	5,190
4	389 - 398	General Plant	1.1	14,327,615	52,567	9,297	858
5		Total Direct Depreciation Expense		$ 119,891,319	$ 370,894	$ 111,603	$ 6,053
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 45,424	$ 8,033	$ 742
7		General Plant	1.1	4,272,997	15,677	2,773	256
8		Total System Allocable Amortization		$ 16,653,700	$ 61,101	$ 10,806	$ 998
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 15,677	$ 2,773	$ 256
10		Total Depreciation Expense		$ 136,545,019	$ 431,995	$ 122,409	$ 7,051
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 431,995	$ 122,409	$ 7,051
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	28,007
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 28,007
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 30,086	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,311	$ 17,282	$ 5,583
22		Materials & Expenses	5.5	1,271,396	2,394	2,260	730
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	26,536
24		Materials & Expenses	3.0	51,869	0	0	1,088
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,035	2,390	0
26		Materials & Expenses	4.4	14,594,880	54,838	6,230	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	10,982	57	0
28		Materials & Expenses	2.2	732,095	3,741	20	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	23,318	0
30		Materials & Expenses	6.0	3,556,774	0	11,521	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	36,293	0
32		Materials & Expenses	6.0	1,752,586	0	5,677	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,258	10,626	3,433
34		Materials & Expenses	5.5	4,526,461	8,525	8,046	2,599
35	881.00	Rents	5.5	(838,690)	(1,580)	(1,491)	(482)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 129,505	$ 122,227	$ 39,488
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 159,591	$ 122,227	$ 67,495

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,443	$ 1,955	$ 0
2		Materials & Expenses	6.6	249,786	782	205	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	8	0	0
4		Materials & Expenses	1.0	6,846	70	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	58,460	305	0
6		Materials & Expenses	2.2	10,664,855	54,501	284	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,451	39	0
8		Materials & Expenses	2.2	697,186	3,563	19	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	7,857	0
10		Materials & Expenses	3.3	5,366,958	0	8,255	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	11,792	0
12		Materials & Expenses	6.0	1,246,741	0	4,038	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	663	174	0
14		Materials & Expenses	6.6	93,400	292	77	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 133,233	$ 35,001	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 292,824	$ 157,228	$ 67,495
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,743	$ 0
18		Materials & Expenses	10.1	54,104	0	39	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	65	0
20		Materials & Expenses	11.0	407,223	0	22	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	430	0
22		Materials & Expenses	4.0	12,265,589	0	654	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	16,416	0
24		Materials & Expenses - KAM	15.0	2,968	0	63	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	90	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	57	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 19,579	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	9	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 9	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 292,824	$ 176,816	$ 67,495
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 198,502	$ 119,861	$ 45,754
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,615	$ 1,700	$ 157
5		GCU Acquisition Adjustment	1.1	318,752	1,169	207	19
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	45	0
7		LNG Deferral Amortizaton	2.0	3,983,884	59,897	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	537	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,338	28	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,858)	(31)	0
11		DSM	1.1	(3,702,079)	(13,583)	(2,402)	(222)
12		Total Regulatory Amortizations		4,315,957	56,579	84	(46)
13		Taxes Other Than Income	1.1	69,307,596	254,285	44,971	4,152
14		Total Allocated Operating Deductions		$ 315,902,948	$ 858,768	$ 341,817	$ 117,309
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 197,118	$ 34,861	$ 3,219
16		South Georgia - Federal	1.1	(7,284,597)	(26,727)	(4,727)	(436)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,570,646	$ 2,576,865	$ 237,925
18		Total Common Systems Allocable Net Plant		142,424,093	522,544	92,413	8,533
19		Cash Working Capital	11.2	(16,619,324)	(34,320)	(20,723)	(7,910)
20		Materials & Supplies	1.1	30,847,268	113,176	20,016	1,848
21		Prepayments	1.1	14,121,283	51,810	9,163	846
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(448)	0
24		Customer Advances	9.0	(59,445,400)	0	(790)	0
25		Deferred Taxes	1.1	(634,525,981)	(2,328,030)	(411,719)	(38,015)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 12,895,827	$ 2,264,776	$ 203,227
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 78,565	$ 3,289,421
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	930	38,950
30		Late Charges	12.0	848,431	0	2,658	0
31		Service Establishment Charges	9.0	6,845,361	0	91	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	6
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 82,244	$ 3,328,377
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (292,824)	$ (176,816)	$ (67,495)
40		A & G	Total O&M	(96,125,247)	(198,502)	(119,861)	(45,754)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(431,995)	(122,409)	(7,051)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(56,579)	(84)	46
44		Taxes Other Than Income	1.1	(69,307,596)	(254,285)	(44,971)	(4,152)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,234,185)	$ (381,897)	$ 3,203,971
46		Interest Expense	1.1	(53,726,452)	(197,118)	(34,861)	(3,219)
47		State Taxable Income		$ 77,326,971	$ (1,431,303)	$ (416,758)	$ 3,200,752
48		State Income Tax	4.90%	$ 3,789,022	$ (70,134)	$ (20,421)	$ 156,837
49		Total State Income Tax		$ 3,789,022	$ (70,134)	$ (20,421)	$ 156,837
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,234,185)	$ (381,897)	$ 3,203,971
51		Interest Expense	1.1	(53,726,452)	(197,118)	(34,861)	(3,219)
52		Federal Taxable Income		$ 77,326,971	$ (1,431,303)	$ (416,758)	$ 3,200,752
53		Federal Income Tax	19.97%	$ 15,442,969	$ (285,846)	$ (83,231)	$ 639,222
54		South Georgia Federal	1.1	(7,284,597)	(26,727)	(4,727)	(436)
55		Total Federal Income Tax		$ 8,158,372	$ (312,572)	$ (87,957)	$ 638,786
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (851,479)	$ (273,519)	$ 2,408,348
58		Rate of Return on Rate Base		3.49%	-6.60%	-12.08%	1185.05%
59		Rate of Return by Class Total				8.35%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 320	$ 10	$ 5
2	360 - 363.50	Storage Plant	2.0	3,571,136	60,168	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	529	0	0
	375.00	Structures	1.0	3,704	39	0	0
	376.00	Mains	2.2	47,744,070	249,240	521	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	20,206	42	0
	380.00	Services	7.0	35,893,910	0	4,298	0
	381.00	Meters	6.0	14,097,273	0	13,573	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	5,235
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	270,015	18,434	5,235
4	389 - 398	General Plant	1.1	14,327,615	54,104	1,675	866
5		Total Direct Depreciation Expense		$ 119,891,319	$ 384,607	$ 20,119	$ 6,106
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 46,752	$ 1,447	$ 748
7		General Plant	1.1	4,272,997	16,136	499	258
8		Total System Allocable Amortization		$ 16,653,700	$ 62,888	$ 1,947	$ 1,006
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 16,136	$ 499	$ 258
10		Total Depreciation Expense		$ 136,545,019	$ 447,494	$ 22,066	$ 7,113
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 447,494	$ 22,066	$ 7,113
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	28,251
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 28,251
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 33,715	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,705	$ 4,783	$ 5,632
22		Materials & Expenses	5.5	1,271,396	2,446	625	736
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	26,768
24		Materials & Expenses	3.0	51,869	0	0	1,097
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,488	222	0
26		Materials & Expenses	4.4	14,594,880	56,019	580	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	11,219	23	0
28		Materials & Expenses	2.2	732,095	3,822	8	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	6,931	0
30		Materials & Expenses	6.0	3,556,774	0	3,424	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	10,787	0
32		Materials & Expenses	6.0	1,752,586	0	1,687	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,501	2,941	3,463
34		Materials & Expenses	5.5	4,526,461	8,708	2,227	2,622
35	881.00	Rents	5.5	(838,690)	(1,614)	(413)	(486)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 132,293	$ 33,827	$ 39,833
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 166,008	$ 33,827	$ 68,084

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,603	$ 373	$ 0
2		Materials & Expenses	6.6	249,786	799	39	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	9	0	0
4		Materials & Expenses	1.0	6,846	71	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	59,718	125	0
6		Materials & Expenses	2.2	10,664,855	55,674	116	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,611	16	0
8		Materials & Expenses	2.2	697,186	3,640	8	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	612	0
10		Materials & Expenses	3.3	5,366,958	0	643	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	3,505	0
12		Materials & Expenses	6.0	1,246,741	0	1,200	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	677	33	0
14		Materials & Expenses	6.6	93,400	299	15	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 136,101	$ 6,685	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 302,109	$ 40,512	$ 68,084
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,081	$ 0
18		Materials & Expenses	10.1	54,104	0	24	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	27	0
20		Materials & Expenses	11.0	407,223	0	9	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	176	0
22		Materials & Expenses	4.0	12,265,589	0	268	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	10,447	0
24		Materials & Expenses - KAM	15.0	2,968	0	40	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	37	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	35	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 12,144	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	4	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 4	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 302,109	$ 52,660	$ 68,084
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 204,796	$ 35,697	$ 46,153
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,896	$ 306	$ 158
5		GCU Acquisition Adjustment	1.1	318,752	1,204	37	19
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	19	0
7		LNG Deferral Amortizaton	2.0	3,983,884	67,122	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	42	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,453	11	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,984)	(13)	0
11		DSM	1.1	(3,702,079)	(13,980)	(433)	(224)
12		Total Regulatory Amortizations		4,315,957	63,710	(30)	(46)
13		Taxes Other Than Income	1.1	69,307,596	261,720	8,101	4,188
14		Total Allocated Operating Deductions		$ 315,902,948	$ 896,046	$ 96,398	$ 118,333
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 202,883	$ 6,280	$ 3,247
16		South Georgia - Federal	1.1	(7,284,597)	(27,508)	(852)	(440)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,996,722	$ 464,218	$ 240,001
18		Total Common Systems Allocable Net Plant		142,424,093	537,824	16,648	8,607
19		Cash Working Capital	11.2	(16,619,324)	(35,408)	(6,172)	(7,980)
20		Materials & Supplies	1.1	30,847,268	116,486	3,606	1,864
21		Prepayments	1.1	14,121,283	53,325	1,651	853
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	0	0
24		Customer Advances	9.0	(59,445,400)	0	0	0
25		Deferred Taxes	1.1	(634,525,981)	(2,396,106)	(74,171)	(38,346)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 13,272,843	$ 405,780	$ 205,000
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 101,208	$ 2,399,564
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,198	28,413
30		Late Charges	12.0	848,431	0	646	0
31		Service Establishment Charges	9.0	6,845,361	0	0	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	4
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 103,053	$ 2,427,982
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (302,109)	$ (52,660)	$ (68,084)
40		A & G	Total O&M	(96,125,247)	(204,796)	(35,697)	(46,153)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(447,494)	(22,066)	(7,113)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(63,710)	30	46
44		Taxes Other Than Income	1.1	(69,307,596)	(261,720)	(8,101)	(4,188)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,279,831)	$ (15,441)	$ 2,302,490
46		Interest Expense	1.1	(53,726,452)	(202,883)	(6,280)	(3,247)
47		State Taxable Income		$ 77,326,971	$ (1,482,713)	$ (21,721)	$ 2,299,243
48		State Income Tax	4.90%	$ 3,789,022	$ (72,653)	$ (1,064)	$ 112,663
49		Total State Income Tax		$ 3,789,022	$ (72,653)	$ (1,064)	$ 112,663
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,279,831)	$ (15,441)	$ 2,302,490
51		Interest Expense	1.1	(53,726,452)	(202,883)	(6,280)	(3,247)
52		Federal Taxable Income		$ 77,326,971	$ (1,482,713)	$ (21,721)	$ 2,299,243
53		Federal Income Tax	19.97%	$ 15,442,969	$ (296,113)	$ (4,338)	$ 459,182
54		South Georgia Federal	1.1	(7,284,597)	(27,508)	(852)	(440)
55		Total Federal Income Tax		$ 8,158,372	$ (323,621)	$ (5,190)	$ 458,742
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (883,557)	$ (9,187)	$ 1,731,086
58		Rate of Return on Rate Base		3.49%	-6.66%	-2.26%	844.43%
59		Rate of Return by Class Total				6.04%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 120	$ 7	$ 2
2	360 - 363.50	Storage Plant	2.0	3,571,136	20,697	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	200	0	0
	375.00	Structures	1.0	3,704	15	0	0
	376.00	Mains	2.2	47,744,070	94,113	1,397	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	7,630	113	0
	380.00	Services	7.0	35,893,910	0	2,534	0
	381.00	Meters	6.0	14,097,273	0	7,684	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	1,713
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	101,957	11,729	1,713
4	389 - 398	General Plant	1.1	14,327,615	20,276	1,176	283
5		Total Direct Depreciation Expense		$ 119,891,319	$ 143,050	$ 12,913	$ 1,998
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 17,520	$ 1,017	$ 245
7		General Plant	1.1	4,272,997	6,047	351	85
8		Total System Allocable Amortization		$ 16,653,700	$ 23,567	$ 1,367	$ 329
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 6,047	$ 351	$ 85
10		Total Depreciation Expense		$ 136,545,019	$ 166,617	$ 14,280	$ 2,328
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 166,617	$ 14,280	$ 2,328
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	9,245
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 9,245
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 11,598	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 7,063	$ 2,794	$ 1,843
22		Materials & Expenses	5.5	1,271,396	924	365	241
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	8,759
24		Materials & Expenses	3.0	51,869	0	0	359
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	8,114	225	0
26		Materials & Expenses	4.4	14,594,880	21,152	587	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	4,236	63	0
28		Materials & Expenses	2.2	732,095	1,443	21	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	3,924	0
30		Materials & Expenses	6.0	3,556,774	0	1,939	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	6,107	0
32		Materials & Expenses	6.0	1,752,586	0	955	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	4,343	1,718	1,133
34		Materials & Expenses	5.5	4,526,461	3,288	1,301	858
35	881.00	Rents	5.5	(838,690)	(609)	(241)	(159)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 49,954	$ 19,758	$ 13,035
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 61,551	$ 19,758	$ 22,279

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 2,871	$ 247	$ 0
2		Materials & Expenses	6.6	249,786	302	26	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	3	0	0
4		Materials & Expenses	1.0	6,846	27	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	22,550	335	0
6		Materials & Expenses	2.2	10,664,855	21,022	312	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	2,874	43	0
8		Materials & Expenses	2.2	697,186	1,374	20	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	361	0
10		Materials & Expenses	3.3	5,366,958	0	379	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	1,984	0
12		Materials & Expenses	6.0	1,246,741	0	680	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	256	22	0
14		Materials & Expenses	6.6	93,400	113	10	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 51,392	$ 4,418	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 112,943	$ 24,176	$ 22,279
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,019	$ 0
18		Materials & Expenses	10.1	54,104	0	23	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	71	0
20		Materials & Expenses	11.0	407,223	0	24	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	473	0
22		Materials & Expenses	4.0	12,265,589	0	718	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	8,954	0
24		Materials & Expenses - KAM	15.0	2,968	0	34	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	99	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	33	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 11,449	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	10	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 10	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 112,943	$ 35,635	$ 22,279
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 76,563	$ 24,156	$ 15,103
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 3,708	$ 215	$ 52
5		GCU Acquisition Adjustment	1.1	318,752	451	26	6
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	50	0
7		LNG Deferral Amortizaton	2.0	3,983,884	23,089	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	25	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	2,059	31	0
10		TRIMP/DOT	2.2	(1,146,342)	(2,260)	(34)	0
11		DSM	1.1	(3,702,079)	(5,239)	(304)	(73)
12		Total Regulatory Amortizations		4,315,957	21,809	9	(15)
13		Taxes Other Than Income	1.1	69,307,596	98,080	5,691	1,371
14		Total Allocated Operating Deductions		$ 315,902,948	$ 331,204	$ 65,499	$ 38,722
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 76,030	$ 4,411	$ 1,062
16		South Georgia - Federal	1.1	(7,284,597)	(10,309)	(598)	(144)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 5,620,016	$ 326,088	$ 78,536
18		Total Common Systems Allocable Net Plant		142,424,093	201,549	11,694	2,817
19		Cash Working Capital	11.2	(16,619,324)	(13,237)	(4,176)	(2,611)
20		Materials & Supplies	1.1	30,847,268	43,653	2,533	610
21		Prepayments	1.1	14,121,283	19,984	1,159	279
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,581)	0
24		Customer Advances	9.0	(59,445,400)	0	(4,547)	0
25		Deferred Taxes	1.1	(634,525,981)	(897,940)	(52,101)	(12,548)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 4,974,025	$ 278,069	$ 67,083
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 96,480	$ 1,396,687
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,142	16,538
30		Late Charges	12.0	848,431	0	871	0
31		Service Establishment Charges	9.0	6,845,361	0	524	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	3
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	37	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 99,054	$ 1,413,228
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (112,943)	$ (35,635)	$ (22,279)
40		A & G	Total O&M	(96,125,247)	(76,563)	(24,156)	(15,103)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(166,617)	(14,280)	(2,328)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(21,809)	(9)	15
44		Taxes Other Than Income	1.1	(69,307,596)	(98,080)	(5,691)	(1,371)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (476,011)	$ 19,283	$ 1,372,163
46		Interest Expense	1.1	(53,726,452)	(76,030)	(4,411)	(1,062)
47		State Taxable Income		$ 77,326,971	$ (552,042)	$ 14,872	$ 1,371,100
48		State Income Tax	4.90%	$ 3,789,022	$ (27,050)	$ 729	$ 67,184
49		Total State Income Tax		$ 3,789,022	$ (27,050)	$ 729	$ 67,184
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (476,011)	$ 19,283	$ 1,372,163
51		Interest Expense	1.1	(53,726,452)	(76,030)	(4,411)	(1,062)
52		Federal Taxable Income		$ 77,326,971	$ (552,042)	$ 14,872	$ 1,371,100
53		Federal Income Tax	19.97%	$ 15,442,969	$ (110,248)	$ 2,970	$ 273,822
54		South Georgia Federal	1.1	(7,284,597)	(10,309)	(598)	(144)
55		Total Federal Income Tax		$ 8,158,372	$ (120,557)	$ 2,372	$ 273,678
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (328,404)	$ 16,183	$ 1,031,300
58		Rate of Return on Rate Base		3.49%	-6.60%	5.82%	1537.35%
59		Rate of Return by Class Total				13.52%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 173	$ 46	$ 6
2	360 - 363.50	Storage Plant	2.0	3,571,136	64,005	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	260	0	0
	375.00	Structures	1.0	3,704	19	0	0
	376.00	Mains	2.2	47,744,070	122,249	8,744	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	9,911	709	0
	380.00	Services	7.0	35,893,910	0	21,217	0
	381.00	Meters	6.0	14,097,273	0	48,085	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	6,367
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	132,439	78,755	6,367
4	389 - 398	General Plant	1.1	14,327,615	29,167	7,856	1,053
5		Total Direct Depreciation Expense		$ 119,891,319	$ 225,783	$ 86,657	$ 7,427
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 25,203	$ 6,788	$ 910
7		General Plant	1.1	4,272,997	8,698	2,343	314
8		Total System Allocable Amortization		$ 16,653,700	$ 33,902	$ 9,131	$ 1,224
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 8,698	$ 2,343	$ 314
10		Total Depreciation Expense		$ 136,545,019	$ 259,684	$ 95,788	$ 8,651
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 259,684	$ 95,788	$ 8,651
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	34,360
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 34,360
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 35,865	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 9,174	$ 17,642	$ 6,850
22		Materials & Expenses	5.5	1,271,396	1,200	2,307	896
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	32,556
24		Materials & Expenses	3.0	51,869	0	0	1,335
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	10,539	1,630	0
26		Materials & Expenses	4.4	14,594,880	27,476	4,249	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	5,503	394	0
28		Materials & Expenses	2.2	732,095	1,875	134	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	24,554	0
30		Materials & Expenses	6.0	3,556,774	0	12,132	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	38,217	0
32		Materials & Expenses	6.0	1,752,586	0	5,978	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	5,641	10,847	4,212
34		Materials & Expenses	5.5	4,526,461	4,271	8,214	3,189
35	881.00	Rents	5.5	(838,690)	(791)	(1,522)	(591)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 64,888	$ 124,775	$ 48,446
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 100,753	$ 124,775	$ 82,806

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 3,729	$ 1,638	$ 0
2		Materials & Expenses	6.6	249,786	392	172	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	4	0	0
4		Materials & Expenses	1.0	6,846	35	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	29,291	2,095	0
6		Materials & Expenses	2.2	10,664,855	27,307	1,953	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	3,733	267	0
8		Materials & Expenses	2.2	697,186	1,785	128	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	3,019	0
10		Materials & Expenses	3.3	5,366,958	0	3,172	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	12,417	0
12		Materials & Expenses	6.0	1,246,741	0	4,253	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	332	146	0
14		Materials & Expenses	6.6	93,400	146	64	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 66,756	$ 29,325	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 167,509	$ 154,100	$ 82,806
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 851	$ 0
18		Materials & Expenses	10.1	54,104	0	19	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	446	0
20		Materials & Expenses	11.0	407,223	0	149	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	2,958	0
22		Materials & Expenses	4.0	12,265,589	0	4,493	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	620	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	28	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 9,564	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	62	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 62	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 167,509	$ 163,726	$ 82,806
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 113,553	$ 110,988	$ 56,133
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 5,335	$ 1,437	$ 193
5		GCU Acquisition Adjustment	1.1	318,752	649	175	23
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	311	0
7		LNG Deferral Amortizaton	2.0	3,983,884	71,402	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	206	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	2,675	191	0
10		TRIMP/DOT	2.2	(1,146,342)	(2,935)	(210)	0
11		DSM	1.1	(3,702,079)	(7,536)	(2,030)	(272)
12		Total Regulatory Amortizations		4,315,957	69,589	80	(56)
13		Taxes Other Than Income	1.1	69,307,596	141,089	38,000	5,094
14		Total Allocated Operating Deductions		$ 315,902,948	$ 561,329	$ 312,873	$ 143,921
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 109,370	$ 29,457	$ 3,949
16		South Georgia - Federal	1.1	(7,284,597)	(14,829)	(3,994)	(535)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 8,084,452	$ 2,177,434	$ 291,900
18		Total Common Systems Allocable Net Plant		142,424,093	289,931	78,089	10,468
19		Cash Working Capital	11.2	(16,619,324)	(19,632)	(19,189)	(9,705)
20		Materials & Supplies	1.1	30,847,268	62,795	16,913	2,267
21		Prepayments	1.1	14,121,283	28,747	7,742	1,038
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(7,705)	0
24		Customer Advances	9.0	(59,445,400)	0	(13,570)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,291,696)	(347,900)	(46,638)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 7,154,596	$ 1,891,814	$ 249,330
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 314,190	$ 3,980,193
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	3,720	47,129
30		Late Charges	12.0	848,431	0	18,217	0
31		Service Establishment Charges	9.0	6,845,361	0	1,563	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	1	7
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 337,691	$ 4,027,330
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (167,509)	$ (163,726)	$ (82,806)
40		A & G	Total O&M	(96,125,247)	(113,553)	(110,988)	(56,133)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(259,684)	(95,788)	(8,651)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(69,589)	(80)	56
44		Taxes Other Than Income	1.1	(69,307,596)	(141,089)	(38,000)	(5,094)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (751,424)	$ (70,890)	$ 3,874,702
46		Interest Expense	1.1	(53,726,452)	(109,370)	(29,457)	(3,949)
47		State Taxable Income		$ 77,326,971	$ (860,794)	$ (100,347)	$ 3,870,753
48		State Income Tax	4.90%	$ 3,789,022	$ (42,179)	$ (4,917)	$ 189,667
49		Total State Income Tax		$ 3,789,022	$ (42,179)	$ (4,917)	$ 189,667
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (751,424)	$ (70,890)	$ 3,874,702
51		Interest Expense	1.1	(53,726,452)	(109,370)	(29,457)	(3,949)
52		Federal Taxable Income		$ 77,326,971	$ (860,794)	$ (100,347)	$ 3,870,753
53		Federal Income Tax	19.97%	$ 15,442,969	$ (171,909)	$ (20,040)	$ 773,028
54		South Georgia Federal	1.1	(7,284,597)	(14,829)	(3,994)	(535)
55		Total Federal Income Tax		$ 8,158,372	$ (186,738)	$ (24,034)	$ 772,493
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (522,507)	$ (41,938)	$ 2,912,542
58		Rate of Return on Rate Base		3.49%	-7.30%	-2.22%	1168.15%
59		Rate of Return by Class Total				25.26%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF RATE BASE BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Cost of Service														
		Direct														
		Intangible Plant														
1	301.00	Organization	Dist Plant	$ 85,175	$ 0	$ 1,618	$ 0	$ 0	$ 0	$ 28,195	$ 55,118	$ 243	$ 0	$ 0	$ 0	1
2	302.00	Franchises & Consents	Dist Plant	1,378,298	0	26,185	0	0	0	456,251	891,925	3,937	0	0	0	2
3	303.00	Miscellaneous Intangible Plant	Dist Plant	0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Direct Intangible Plant		$ 1,463,473	$ 0	$ 27,803	$ 0	$ 0	$ 0	$ 484,446	$ 947,043	$ 4,181	$ 0	$ 0	$ 0	4
		Storage Plant														
5	360.00	Land and Land Rights		$ 1,772,673	$ 0	$ 1,772,673	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6	361.00	Structures and Improvements		13,951,814	0	13,951,814	0	0	0	0	0	0	0	0	0	6
7	363.10	Liquifaction Equipment		30,870,490	0	30,870,490	0	0	0	0	0	0	0	0	0	7
8	363.20	Vaporizing Equipment		8,524,686	0	8,524,686	0	0	0	0	0	0	0	0	0	8
9	363.30	Compressor Equipment		7,286,861	0	7,286,861	0	0	0	0	0	0	0	0	0	9
10	363.50	Other Equipment		9,812,144	0	9,812,144	0	0	0	0	0	0	0	0	0	10
11		Total Storage Plant		$ 72,218,669	$ 0	$ 72,218,669	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	11
		Distribution Plant														
12	374.10	Land & Land Rights	Demand	$ 732,082	$ 0	$ 0	$ 0	$ 0	$ 0	$ 732,082	$ 0	$ 0	$ 0	$ 0	$ 0	12
13	374.20	Rights of Way	Demand	2,575,655	0	0	0	0	0	2,575,655	0	0	0	0	0	13
14	375.00	Structures	Demand	455,882	0	0	0	0	0	455,882	0	0	0	0	0	14
15	376.00	Mains	Dmd/Cust	2,438,675,162	0	0	0	0	0	1,219,337,581	1,219,337,581	0	0	0	0	15
16	378.00	Measuring & Regulating Station	Commodity	77,379,561	0	0	0	0	0	38,689,781	38,689,781	0	0	0	0	16
17	380.00	Services	Customer	878,142,657	0	0	0	0	0	0	878,142,657	0	0	0	0	17
18	381.00	Meters	Customer	323,771,492	0	0	0	0	0	0	323,771,492	0	0	0	0	18
19	385.00	Industrial Measuring & Regulating Station	Commodity	10,858,853	0	0	0	0	0	0	0	10,858,853	0	0	0	19
20	387.00	Other Equipment	Demand	(3,442,867)	0	0	0	0	0	(3,442,867)	0	0	0	0	0	20
21		Total Direct Distribution Plant		$ 3,729,148,477	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,258,348,114	$ 2,459,941,511	$ 10,858,853	$ 0	$ 0	$ 0	21
22		Total Direct Plant		$ 3,801,367,146	$ 0	$ 72,218,669	$ 0	$ 0	$ 0	$ 1,258,348,114	$ 2,459,941,511	$ 10,858,853	$ 0	$ 0	$ 0	22
22		Total Percent Direct Distribution Plant		100.00%	0.00%	1.90%	0.00%	0.00%	0.00%	33.10%	64.71%	0.29%	0.00%	0.00%	0.00%	22
		General Plant														
23	389.00	Land & Land Rights	Dist Plant	$ 17,385,788	$ 0	$ 330,297	$ 0	$ 0	$ 0	$ 5,755,133	$ 11,250,695	$ 49,664	$ 0	$ 0	$ 0	23
24	390.10	Structures	Dist Plant	67,780,516	0	1,287,700	0	0	0	22,437,055	43,862,142	193,619	0	0	0	24
25	390.20	Structures - Leasehold Improvements	Dist Plant	91,949	0	1,747	0	0	0	30,437	59,502	263	0	0	0	25
26	391.00	Office Furniture & Equipment	Dist Plant	3,677,440	0	69,864	0	0	0	1,217,325	2,379,746	10,505	0	0	0	26
27	391.10	Computer Equipment	Dist Plant	3,425,053	0	65,069	0	0	0	1,133,779	2,216,421	9,784	0	0	0	27
28	392.11	Transportation Equipment - Light	Dist Plant	23,465,308	0	445,796	0	0	0	7,767,607	15,184,875	67,030	0	0	0	28
29	392.20	Transportation Equipment - Heavy	Dist Plant	16,208,457	0	307,930	0	0	0	5,365,407	10,488,820	46,301	0	0	0	29
30	393.00	Stores Equipment	Dist Plant	3,761,835	0	71,468	0	0	0	1,245,262	2,434,360	10,746	0	0	0	30
31	394.00	Tools, Shop & Garage Equipment	Dist Plant	12,749,334	0	242,213	0	0	0	4,220,350	8,250,352	36,419	0	0	0	31
32	395.00	Laboratory Equipment	Dist Plant	330,521	0	6,279	0	0	0	109,411	213,887	944	0	0	0	32
33	396.00	Power Operated Equipment	Dist Plant	8,447,434	0	160,485	0	0	0	2,796,313	5,466,505	24,131	0	0	0	33
34	397.10	Communication Equipment	Dist Plant	7,555,254	0	143,535	0	0	0	2,500,979	4,889,158	21,582	0	0	0	34
35	397.20	Telemetering Equipment	Dist Plant	(67,708)	0	(1,286)	0	0	0	(22,413)	(43,815)	(193)	0	0	0	35
36	398.00	Miscellaneous Equipment	Dist Plant	3,722,492	0	70,720	0	0	0	1,232,238	2,408,900	10,634	0	0	0	36
37		Total Direct General Plant		$ 168,533,673	$ 0	$ 3,201,816	$ 0	$ 0	$ 0	$ 55,788,884	$ 109,061,546	$ 481,427	$ 0	$ 0	$ 0	37
		Common - Systems Allocable														
		Intangible Plant														
38	301.00	Organization	Dist Plant	$ 34,778	$ 0	$ 661	$ 0	$ 0	$ 0	$ 11,512	$ 22,505	$ 99	$ 0	$ 0	$ 0	38
39	303.00	Miscellaneous Intangible	Dist Plant	91,469,953	0	1,737,753	0	0	0	30,278,854	59,192,055	261,290	0	0	0	39
40		Total Common Intangible Plant		$ 91,504,730	$ 0	$ 1,738,414	$ 0	$ 0	$ 0	$ 30,290,367	$ 59,214,560	$ 261,389	$ 0	$ 0	$ 0	40
		General Plant														
41	389.00	Land & Land Rights	Dist Plant	$ 2,017,129	$ 0	$ 38,322	$ 0	$ 0	$ 0	$ 667,721	$ 1,305,325	$ 5,762	$ 0	$ 0	$ 0	41
42	390.10	Structures	Dist Plant	29,391,869	0	558,389	0	0	0	9,729,448	19,020,072	83,960	0	0	0	42
43	390.20	Structures - Leasehold Improvements	Dist Plant	292,533	0	5,558	0	0	0	96,836	189,304	836	0	0	0	43
44	391.00	Office Furniture & Equipment	Dist Plant	3,972,460	0	75,469	0	0	0	1,314,984	2,570,659	11,348	0	0	0	44
45	391.10	Computer Equipment	Dist Plant	7,835,593	0	148,861	0	0	0	2,593,778	5,070,571	22,383	0	0	0	45
46	392.11	Transportation Equipment - Light	Dist Plant	429,216	0	8,154	0	0	0	142,081	277,754	1,226	0	0	0	46
47	393.11	Transportation Equipment - Light	Dist Plant	(3,729)	0	(71)	0	0	0	(1,234)	(2,413)	(11)	0	0	0	47
48	392.21	Transportation Equipment - Aircraft	Dist Plant	442,044	0	8,398	0	0	0	146,328	286,055	1,263	0	0	0	48
49	393.00	Stores Equipment	Dist Plant	15,054	0	286	0	0	0	4,983	9,741	43	0	0	0	49
50	394.00	Tools, Shop & Garage Equipment	Dist Plant	468,827	0	8,907	0	0	0	155,194	303,388	1,339	0	0	0	50
51	395.00	Laboratory Equipment	Dist Plant	643,781	0	12,231	0	0	0	213,108	416,603	1,839	0	0	0	51
52	396.00	Power Operated Equipment	Dist Plant	145,920	0	2,772	0	0	0	48,303	94,428	417	0	0	0	52
53	397.00	Communication Equipment	Dist Plant	2,446,721	0	46,483	0	0	0	809,926	1,583,322	6,989	0	0	0	53
54	397.20	Telemetering Equipment	Dist Plant	264,499	0	5,025	0	0	0	87,556	171,163	756	0	0	0	54
55	398.00	Miscellaneous Equipment	Dist Plant	2,567,448	0	48,587	0	0	0	846,580	1,654,976	7,306	0	0	0	55
56		Total Common General Plant	0	$ 50,919,363	$ 0	$ 967,370	$ 0	$ 0	$ 0	$ 16,855,590	$ 32,950,949	$ 145,454	$ 0	$ 0	$ 0	56
		Net Plant														
57		Total Direct Net Plant		$ 3,971,364,293	$ 0	$ 75,448,288	$ 0	$ 0	$ 0	$ 1,314,621,444	$ 2,569,950,100	$ 11,344,461	$ 0	$ 0	$ 0	57
58		Total Common/System Allocable Net Plant	4.90%	142,424,093	0	2,705,784	0	0	0	47,145,956	92,165,509	406,844	0	0	0	58
59		Total Net Plant		$ 4,113,788,386	$ 0	$ 78,154,072	$ 0	$ 0	$ 0	$ 1,361,767,400	$ 2,662,115,610	$ 11,751,304	$ 0	$ 0	$ 0	59
					0.0000%	1.8998%	0.0000%	0.0000%	0.0000%	33.1025%	64.7120%	0.2857%	0.0000%	0.0000%	0.0000%	
		Rate Base														
60		Cash Working Capital	Total O&M	$ (16,619,324)	$ 0	$ (234,532)	$ 0	$ 0	$ 0	$ (3,012,854)	$ (9,813,918)	$ (377,178)	$ 0	$ 0	$ (3,180,842)	60
61		Materials & Supplies	Net Plant	30,847,268	0	586,039	0	0	0	10,211,221	19,961,890	88,117	0	0	0	61
62		Prepayments	Net Plant	14,121,283	0	268,277	0	0	0	4,674,500	9,138,168	40,338	0	0	0	62
63		Other		0	0	0	0	0	0	0	0	0	0	0	0	63
64		Customer Advances	Customer	(59,445,400)	0	0	(1,129,348)	0	0	0	(58,316,051)	0	0	0	0	64
65		Customer Deposits	Customer	(33,750,043)	0	0	(641,186)	0	0	0	(33,108,857)	0	0	0	0	65
66		Deferred Taxes	Net Plant	(634,525,981)	0	(12,054,774)	0	0	0	(210,044,055)	(410,814,587)	(1,812,565)	0	0	0	66
67		Other		0	0	0	0	0	0	0	0	0	0	0	0	67
68		Total Rate Base		$ 3,414,416,189	$ 0	$ 66,719,082	$ (1,770,534)	$ 0	$ 0	$ 1,163,596,213	$ 2,179,362,255	$ 9,690,017	$ 0	$ 0	$ (3,180,842)	68

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Depreciation Expense & Amortization														
		Direct														
		Intangible Plant														
1	301.00	Organization		0	0	0	0	0	0	0	0	0	0	0	0	1
2	302.00	Franchises & Consents	Plant Acct.	84,750	0	1,610	0	0	0	28,055	54,844	242	0	0	0	2
3	303.00	Miscellaneous Intangible Plant		0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Direct Intangible Plant		$ 84,750	$ 0	$ 1,610	$ 0	$ 0	$ 0	$ 28,055	$ 54,844	$ 242	$ 0	$ 0	$ 0	4
		Storage Plant														
5	360.00	Land and Land Rights	Plant Acct.	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6	361.00	Structures and Improvements	Plant Acct.	708,097	0	708,097	0	0	0	0	0	0	0	0	0	6
7	363.10	Liquifaction Equipment	Plant Acct.	1,566,771	0	1,566,771	0	0	0	0	0	0	0	0	0	7
8	363.20	Vaporizing Equipment	Plant Acct.	432,654	0	432,654	0	0	0	0	0	0	0	0	0	8
9	363.30	Compressor Equipment	Plant Acct.	369,830	0	369,830	0	0	0	0	0	0	0	0	0	9
10	363.50	Other Equipment	Plant Acct.	493,784	0	493,784	0	0	0	0	0	0	0	0	0	10
11		Total Storage Plant		$ 3,571,136	$ 0	$ 3,571,136	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	11
		Distribution Plant														
12	374.10	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
13	374.20	Rights of Way	Plant Acct.	50,700	0	0	0	0	0	50,700	0	0	0	0	0	13
14	375.00	Structures	Plant Acct.	3,704	0	0	0	0	0	3,704	0	0	0	0	0	14
15	376.00	Mains	Plant Acct.	47,744,070	0	0	0	0	0	23,872,035	23,872,035	0	0	0	0	15
16	378.00	Measuring & Regulating Station	Plant Acct.	3,870,699	0	0	0	0	0	1,935,349	1,935,349	0	0	0	0	16
17	380.00	Services	Plant Acct.	35,893,910	0	0	0	0	0	0	35,893,910	0	0	0	0	17
18	381.00	Meters	Plant Acct.	14,097,273	0	0	0	0	0	0	14,097,273	0	0	0	0	18
19	385.00	Industrial Measuring & Regulating Station	Plant Acct.	247,463	0	0	0	0	0	0	0	247,463	0	0	0	19
20	387.00	Other Equipment	Plant Acct.	0	0	0	0	0	0	0	0	0	0	0	0	20
21		Total Direct Distribution Plant		$ 101,907,818	$ 0	$ 0	$ 0	$ 0	$ 0	$ 25,861,788	$ 75,798,567	$ 247,463	$ 0	$ 0	$ 0	21
		General Plant														
22	389.00	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23	390.10	Structures	Plant Acct.	2,287,019	0	43,449	0	0	0	757,061	1,479,976	6,533	0	0	0	23
24	390.20	Structures - Leasehold Improvements	Plant Acct.	6,879	0	131	0	0	0	2,277	4,451	20	0	0	0	24
25	391.00	Office Furniture & Equipment	Plant Acct.	445,503	0	8,464	0	0	0	147,473	288,294	1,273	0	0	0	25
26	391.10	Computer Equipment	Plant Acct.	2,431,100	0	46,186	0	0	0	804,755	1,573,214	6,945	0	0	0	26
27	392.11	Transportation Equipment - Light	Plant Acct.	5,318,385	0	101,039	0	0	0	1,760,519	3,441,634	15,192	0	0	0	27
28	392.12	Transportation Equipment - Heavy	Plant Acct.	899,402	0	17,087	0	0	0	297,725	582,021	2,569	0	0	0	28
29	393.00	Stores Equipment	Plant Acct.	154,564	0	2,936	0	0	0	51,165	100,022	442	0	0	0	29
30	394.00	Tools, Shop & Garage Equipment	Plant Acct.	2,177,517	0	41,369	0	0	0	720,813	1,409,115	6,220	0	0	0	30
31	395.00	Laboratory Equipment	Plant Acct.	29,725	0	565	0	0	0	9,840	19,235	85	0	0	0	31
32	396.00	Power Operated Equipment	Plant Acct.	349,743	0	6,644	0	0	0	115,774	226,326	999	0	0	0	32
33	397.10	Communication Equipment	Plant Acct.	(82,339)	0	(1,564)	0	0	0	(27,256)	(53,283)	(235)	0	0	0	33
34	397.20	Telemetering Equipment	Plant Acct.	2,045	0	39	0	0	0	677	1,323	6	0	0	0	34
35	398.00	Miscellaneous Equipment	Plant Acct.	308,073	0	5,853	0	0	0	101,980	199,360	880	0	0	0	35
36		Total Direct General Plant		$ 14,327,615	$ 0	$ 272,197	$ 0	$ 0	$ 0	$ 4,742,801	$ 9,271,689	$ 40,928	$ 0	$ 0	$ 0	36
		Common - Systems Allocable														
		Common - Systems Allocation	4.90%													
		Intangible Plant														
37	301.00	Organization		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	37
38	303.00	Miscellaneous Intangible	Plant Acct.	12,380,703	0	235,210	0	0	0	4,098,324	8,011,803	35,366	0	0	0	38
39		Total Common Intangible Plant		$ 12,380,703	$ 0	$ 235,210	$ 0	$ 0	$ 0	$ 4,098,324	$ 8,011,803	$ 35,366	$ 0	$ 0	$ 0	39

SCHEDULE G-6
SHEET 1 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		General Plant														
1	389.00	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	390.10	Structures	Plant Acct.	607,993	0	11,551	0	0	0	201,261	393,445	1,737	0	0	0	2
3	390.20	Structures - Leasehold Improvements	Plant Acct.	44,128	0	838	0	0	0	14,608	28,556	126	0	0	0	3
4	391.00	Office Furniture & Equipment	Plant Acct.	329,114	0	6,253	0	0	0	108,945	212,977	940	0	0	0	4
5	391.10	Computer Equipment	Plant Acct.	2,612,782	0	49,638	0	0	0	864,897	1,690,784	7,464	0	0	0	5
6	392.11	Transportation Equipment, Light	Plant Acct.	29,434	0	559	0	0	0	9,743	19,047	84	0	0	0	6
7	392.12	Transportation Equipment, Heavy	Plant Acct.	0	0	0	0	0	0	0	0	0	0	0	0	7
8	392.21	Transportation Equipment, Aircraft	Plant Acct.	7,755	0	147	0	0	0	2,567	5,018	22	0	0	0	8
9	393.00	Stores Equipment	Plant Acct.	1,282	0	24	0	0	0	424	830	4	0	0	0	9
10	394.00	Tools, Shop & Garage Equipment	Plant Acct.	49,435	0	939	0	0	0	16,364	31,990	141	0	0	0	10
11	395.00	Laboratory Equipment	Plant Acct.	43,333	0	823	0	0	0	14,344	28,042	124	0	0	0	11
12	396.00	Power Operated Equipment	Plant Acct.	8,276	0	157	0	0	0	2,740	5,356	24	0	0	0	12
13	397.00	Communication Equipment	Plant Acct.	293,371	0	5,573	0	0	0	97,113	189,846	838	0	0	0	13
14	397.20	Telemetering Equipment	Plant Acct.	45,825	0	871	0	0	0	15,169	29,655	131	0	0	0	14
15	398.00	Miscellaneous Equipment	Plant Acct.	200,268	0	3,805	0	0	0	66,294	129,597	572	0	0	0	15
16		Total Common General Plant		$ 4,272,997	$ 0	$ 81,179	$ 0	$ 0	$ 0	$ 1,414,469	$ 2,765,143	$ 12,206	$ 0	$ 0	$ 0	16
		System Allocable Amortization														
17	303.00	Miscellaneous Intangible Plant	Com Gen Plant	$ 12,380,703	$ 0	$ 235,210	$ 0	$ 0	$ 0	$ 4,098,324	$ 8,011,803	$ 35,366	$ 0	$ 0	$ 0	17
18	309.2-398	General Plant	Com Gen Plant	4,272,997	0	81,179	0	0	0	1,414,469	2,765,143	12,206	0	0	0	18
19		Total System Allocable Amortization		$ 16,653,700	$ 0	$ 316,388	$ 0	$ 0	$ 0	$ 5,512,793	$ 10,776,946	$ 47,572	$ 0	$ 0	$ 0	19
20	389-390.1	Total System Depreciation Expense	Com Gen Plant	$ 4,272,997	$ 0	$ 81,179	$ 0	$ 0	$ 0	$ 1,414,469	$ 2,765,143	$ 12,206	$ 0	$ 0	$ 0	20
21		Total Direct Depreciation Expense	Dir. Depr.	119,891,319	0	3,844,943	0	0	0	30,632,643	85,125,100	288,633	0	0	0	21
22		Amortization Gas Plant Acquisition	Dir. Depr.	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23		Regulatory Amortizations	Dir. Plant	$ 0	0	0	0	0	0	0	0	0	0	0	0	23
24		Total Depreciation Expense		$ 136,545,019	$ 0	$ 4,161,331	$ 0	$ 0	$ 0	$ 36,145,436	$ 95,902,046	$ 336,205	$ 0	$ 0	$ 0	24
		Operation and Maintenance Expense														
		Operation Expenses														
		Gas Supply Expenses														
25	803.00	Natural Gas Transmission Line Purchases		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	25
26	805.10	Purchased Gas Cost Adjustments		0	0	0	0	0	0	0	0	0	0	0	0	26
27	810.00	Gas Used for Compression Station Fuel		0	0	0	0	0	0	0	0	0	0	0	0	27
	813.00	Other Gas Supply Expenses														
28		Labor	Commodity	$ 815,199	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 815,199	$ 0	$ 0	$ 0	28
29		Labor Loadings	Commodity	451,314	0	0	0	0	0	0	0	451,314	0	0	0	29
30		Materials & Expenses	Commodity	68,861	0	0	0	0	0	0	0	68,861	0	0	0	30
31		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,335,375	$ 0	$ 0	$ 0	31

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Transmission Expenses														
	858.00	Transmission and Compression of Gas														
1		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	2
3		Materials & Expenses		0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Transmission Expenses		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
		Storage														
5	Various	Various	Storage	$ 2,001,101	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
		Distribution Expenses - Operation														
	870.00	Operation Supervision and Engineering														
6		Labor	Dist Oper Exp	$ 6,126,955	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,129,012	$ 4,830,178	$ 167,764	$ 0	$ 0	$ 0	6
7		Labor Loadings	Dist Oper Exp	3,595,392	0	0	0	0	0	662,522	2,834,424	98,447	0	0	0	7
8		Materials & Expenses	Dist Oper Exp	1,271,396	0	0	0	0	0	234,280	1,002,304	34,813	0	0	0	8
	871.00	Distribution Load Dispatching														
9		Labor	Dmd/Comm	$ 815,897	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 815,897	$ 0	$ 0	$ 0	9
10		Labor Loadings	Dmd/Comm	449,376	0	0	0	0	0	0	0	$ 449,376	0	0	0	10
11		Materials & Expenses	Dmd/Comm	51,869	0	0	0	0	0	0	0	$ 51,869	0	0	0	11
	874.00	Mains and Services Expenses														
12		Labor	Plant Acct.	$ 3,520,537	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,294,229	$ 2,226,308	$ 0	$ 0	$ 0	$ 0	12
13		Labor Loadings	Plant Acct.	2,077,778	0	0	0	0	0	$ 763,838	$ 1,313,939	0	0	0	0	13
14		Materials & Expenses	Plant Acct.	14,594,880	0	0	0	0	0	$ 5,365,409	$ 9,229,471	0	0	0	0	14
	875.00	Measuring & Regulating Exps. - General														
15		Labor	Commodity	$ 1,351,217	$ 0	$ 0	$ 0	$ 0	$ 0	$ 675,609	$ 675,609	$ 0	$ 0	$ 0	$ 0	15
16		Labor Loadings	Commodity	797,810	0	0	0	0	0	$ 398,905	$ 398,905	$ 0	0	0	0	16
17		Materials & Expenses	Commodity	732,095	0	0	0	0	0	$ 366,047	$ 366,047	$ 0	0	0	0	17
	878.00	Meter and House Regulator Expenses														
18		Labor	Plant Acct.	$ 4,537,442	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,537,442	$ 0	$ 0	$ 0	$ 0	18
19		Labor Loadings	Plant Acct.	2,661,158	0	0	0	0	0	0	2,661,158	0	0	0	0	19
20		Materials & Expenses	Plant Acct.	3,556,774	0	0	0	0	0	0	3,556,774	0	0	0	0	20
	879.00	Customer Installation Expense														
21		Labor	Dist Cust	$ 7,108,224	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,108,224	$ 0	$ 0	$ 0	$ 0	21
22		Labor Loadings	Dist Cust	4,095,971	0	0	0	0	0	0	4,095,971	0	0	0	0	22
23		Materials & Expenses	Dist Cust	1,752,586	0	0	0	0	0	0	1,752,586	0	0	0	0	23
	880.00	Other Expenses														
24		Labor	Dist Oper Exp	$ 3,767,748	$ 0	$ 0	$ 0	$ 0	$ 0	$ 694,282	$ 2,970,300	$ 103,166	$ 0	$ 0	$ 0	24
25		Labor Loadings	Dist Oper Exp	2,210,058	0	0	0	0	0	407,247	1,742,297	60,514	0	0	0	25
26		Materials & Expenses	Dist Oper Exp	4,526,461	0	0	0	0	0	834,090	3,568,431	123,941	0	0	0	26
	881.00	Rents														
27		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	27
28		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	28
29		Materials & Expenses	Dist Oper Exp	(838,690)	0	0	0	0	0	(154,545)	(661,181)	(22,964)	0	0	0	29
30		Total Distribution Operating Expenses		$ 68,762,934	$ 0	$ 0	$ 0	$ 0	$ 0	$ 12,670,925	$ 54,209,189	$ 1,882,821	$ 0	$ 0	$ 0	30
31		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 12,670,925	$ 54,209,189	$ 3,218,195	$ 0	$ 0	$ 0	31

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SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Maintenance Expenses														
	885.00	Maintenance Supervision & Engineering														
1		Labor	Dist Maint Exp	$ 1,498,223	$ 0	$ 0	$ 0	$ 0	$ 0	$ 458,870	$ 1,039,353	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings	Dist Maint Exp	879,344	0	0	0	0	0	269,322	610,022	0	0	0	0	2
3		Materials & Expenses	Dist Maint Exp	249,786	0	0	0	0	0	76,504	173,283	0	0	0	0	3
	886.00	Maintenance of Structures & Improvement														
4		Labor	Plant Acct.	$ 492	$ 0	$ 0	$ 0	$ 0	$ 0	$ 492	$ 0	$ 0	$ 0	$ 0	$ 0	4
5		Labor Loadings	Plant Acct.	324	0	0	0	0	0	324	0	0	0	0	0	5
6		Materials & Expenses	Plant Acct.	6,846	0	0	0	0	0	6,846	0	0	0	0	0	6
	887.00	Maintenance of Mains														
7		Labor	Plant Acct.	$ 7,208,633	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,604,316	$ 3,604,316	$ 0	$ 0	$ 0	$ 0	7
8		Labor Loadings	Plant Acct.	4,230,923	0	0	0	0	0	2,115,461	2,115,461	0	0	0	0	8
9		Materials & Expenses	Plant Acct.	10,664,855	0	0	0	0	0	5,332,428	5,332,428	0	0	0	0	9
	889.00	Maint. of Measuring & Reg. Station Equip.														
10		Labor	Commodity	$ 921,397	$ 0	$ 0	$ 0	$ 0	$ 0	$ 460,699	$ 460,699	$ 0	$ 0	$ 0	$ 0	10
11		Labor Loadings	Commodity	536,599	0	0	0	0	0	268,300	268,300	0	0	0	0	11
12		Materials & Expenses	Commodity	697,186	0	0	0	0	0	348,593	348,593	0	0	0	0	12
	892.00	Maintenance of Services														
13		Labor	Plant Acct.	$ 3,224,003	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,224,003	$ 0	$ 0	$ 0	$ 0	13
14		Labor Loadings	Plant Acct.	1,883,756	0	0	0	0	0	0	1,883,756	0	0	0	0	14
15		Materials & Expenses	Plant Acct.	5,366,958	0	0	0	0	0	0	5,366,958	0	0	0	0	15
	893.00	Maintenance of Meter & House Regulators														
16		Labor	Plant Acct.	$ 2,309,042	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,309,042	$ 0	$ 0	$ 0	$ 0	16
17		Labor Loadings	Plant Acct.	1,331,388	0	0	0	0	0	0	1,331,388	0	0	0	0	17
18		Materials & Expenses	Plant Acct.	1,246,741	0	0	0	0	0	0	1,246,741	0	0	0	0	18
	894.00	Maintenance of Other Equipment														
19		Labor	Dist Maint Exp	$ 134,322	$ 0	$ 0	$ 0	$ 0	$ 0	$ 41,140	$ 93,183	$ 0	$ 0	$ 0	$ 0	19
20		Labor Loadings	Dist Maint Exp	77,543	0	0	0	0	0	23,750	53,793	0	0	0	0	20
21		Materials & Expenses	Dist Maint Exp	93,400	0	0	0	0	0	28,606	64,794	0	0	0	0	21
22		Total Maintenance Expenses		$ 42,561,761	$ 0	$ 0	$ 0	$ 0	$ 0	$ 13,035,649	$ 29,526,112	$ 0	$ 0	$ 0	$ 0	22
23		Total Gas Supply, Distribution & Maint. Exps		$ 114,661,171	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 25,706,573	$ 83,735,301	$ 3,218,195	$ 0	$ 0	$ 0	23
		Customer Accounts Expenses														
	901.00	Supervision Expenses														
24		Labor	Customer	$ 1,539,112	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,539,112	24
25		Labor Loadings	Customer	861,996	0	0	0	0	0	0	0	0	0	0	861,996	25
26		Materials & Expenses	Customer	54,104	0	0	0	0	0	0	0	0	0	0	54,104	26
	902.00	Meter Reading Expenses														
27		Labor	Customer	$ 767,647	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 767,647	27
28		Labor Loadings	Customer	449,828	0	0	0	0	0	0	0	0	0	0	449,828	28
29		Materials & Expenses	Customer	407,223	0	0	0	0	0	0	0	0	0	0	407,223	29

SCHEDULE G-6
SHEET 4 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
	903.00	Customer Records & Collections Expenses														
1		Labor & Loadings	KAM Direct	776,052	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 776,052	1
2		Materials & Expenses	KAM Direct	2,968	0	0	0	0	0	0	0	0	0	0	2,968	2
	903.00	Customer Records & Collections Expenses														
3		Labor & Loadings	Customer	$ 8,076,815	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,076,815	3
4		Materials & Expenses	Customer	12,265,589.29	0	0	0	0	0	0	0	0	0	0	12,265,589	4
	904.00	Uncollectible Accounts Expense														
5		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	6
7		Materials & Expenses	Customer	1,692,711	0	0	0	0	0	0	0	0	0	0	1,692,711	7
	905.00	Miscellaneous Customer Accounts Expenses														
8		Labor	Customer	$ 49,014	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 49,014	8
9		Labor Loadings	Customer	28,878	0	0	0	0	0	0	0	0	0	0	28,878	9
10		Materials & Expenses	Customer	237	0	0	0	0	0	0	0	0	0	0	237	10
11		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 26,972,173	11
		Customer Service & Informational Expenses														
	908.00	Customer Assistance Expense														
12		Labor	Customer	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
13		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	13
14		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	14
	909.00	Info. & Instructional Advertising Exps.														
15		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	15
16		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	16
17		Materials & Expenses		0	0	0	0	0	0	0	0	0	0	0	0	17
	910.00	Misc. Customer Service & Info. Exp.														
18		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	18
19		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	19
20		Materials & Expenses	Customer	167,925	0	0	0	0	0	0	0	0	0	0	167,925	20
21		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	21
		Sales Expense														
	911.00	Supervision														
22		Labor	Customer	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	23
24		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	24

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
	912.00	Demonstrating & Selling Expense														
1		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	2
3		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	3
	913.00	Advertising Expenses														
4		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	5
6		Materials & Expenses	Customer	(203)	0	0	0	0	0	0	0	0	0	0	(203)	6
7		Total Sales Expense		$ (203)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	7
8		Total O&M Expense		$ 141,801,067	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 25,706,573	$ 83,735,301	$ 3,218,195	$ 0	$ 0	$ 27,139,896	8
					0.0000%	1.4112%	0.0000%	0.0000%	0.0000%	18.1286%	59.0512%	2.2695%	0.0000%	0.0000%	19.1394%	
		Administrative & General Expense														
	920.00	Administrative & General Salaries														
9		Labor	Total O&M	$ 37,802,149	$ 0	$ 533,465	$ 0	$ 0	$ 0	$ 6,853,007	$ 22,322,641	$ 857,925	$ 0	$ 0	$ 7,235,111	9
10		Labor Loadings	Total O&M	16,922,586	0	238,812	0	0	0	3,067,831	9,992,999	384,060	0	0	3,238,884	10
11		Materials & Expenses	Total O&M	(2,276,215)	0	(32,122)	0	0	0	(412,646)	(1,344,133)	(51,659)	0	0	(435,654)	11
12		Total Admin. & General Salaries		$ 52,448,521	$ 0	$ 740,155	$ 0	$ 0	$ 0	$ 9,508,192	$ 30,971,507	$ 1,190,327	$ 0	$ 0	$ 10,038,341	12
		Other Administrative & General Expense														
13	921.00	Office Supplies	Total O&M	$ 6,386,409	$ 0	$ 90,125	$ 0	$ 0	$ 0	$ 1,157,768	$ 3,771,254	$ 144,940	$ 0	$ 0	$ 1,222,321	13
14	922.00	Administrative Expenses Transferred - Credit	Total O&M	(7,845,986)	0	(110,723)	0	0	0	(1,422,369)	(4,633,153)	(178,066)	0	0	(1,501,676)	14
15	923.00	Outside Services Employed	Total O&M	17,424,059	0	245,889	0	0	0	3,158,741	10,289,124	395,441	0	0	3,334,863	15
16	924.00	Property Insurance	Total O&M	603,187	0	8,512	0	0	0	109,349	356,189	13,689	0	0	115,446	16
17	925.00	Injuries and Damages	Total O&M	10,029,888	0	141,542	0	0	0	1,818,280	5,922,774	227,630	0	0	1,919,662	17
18	926.00	Employee Pensions and Benefits	Total O&M	8,346,693	0	117,789	0	0	0	1,513,140	4,928,827	189,429	0	0	1,597,508	18
19	928.00	Regulatory Commission Expenses	Total O&M	197,333	0	2,785	0	0	0	35,774	116,528	4,479	0	0	37,768	19
20	930.10	Safety Advertising	Total O&M	829,341	0	11,704	0	0	0	150,348	489,736	18,822	0	0	158,731	20
	930.20	Miscellaneous General Expenses														
21		Labor	Total O&M	0	0	0	0	0	0	0	0	0	0	0	0	21
22		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	22
23		Materials & Expenses	Total O&M	3,748,145	0	52,894	0	0	0	679,487	2,213,327	85,065	0	0	717,373	23
24	931.00	Rents	Total O&M	1,011,191	0	14,270	0	0	0	183,315	597,121	22,949	0	0	193,536	24
	935.00	Maintenance of General Plant														
25		Labor	Total O&M	471,364	0	6,652	0	0	0	85,452	278,346	10,698	0	0	90,216	25
26		Labor Loadings	Total O&M	272,410	0	3,844	0	0	0	49,384	160,862	6,182	0	0	52,138	26
27		Materials & Expenses	Total O&M	2,202,692	0	31,084	0	0	0	399,318	1,300,717	49,990	0	0	421,582	27
28		Total Other Administrative & General Expense		$ 43,676,726	$ 0	$ 616,367	$ 0	$ 0	$ 0	$ 7,917,987	$ 25,791,652	$ 991,249	$ 0	$ 0	$ 8,359,470	28
29		Total Administrative and General Expense		$ 96,125,247	$ 0	$ 1,356,523	$ 0	$ 0	$ 0	$ 17,426,178	$ 56,763,159	$ 2,181,576	$ 0	$ 0	$ 18,397,811	29
30		Total O&M and A&G Expense		$ 237,926,314	$ 0	$ 3,357,624	$ 0	$ 0	$ 0	$ 43,132,752	$ 140,498,460	$ 5,399,771	$ 0	$ 0	$ 45,537,707	30

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
1		Interest on Customer Deposits	Customer	$ 37,125											$ 37,125	1
2		Taxes Other Than Income	Net Plant	69,307,596	$ 0	$ 1,316,711	$ 0	$ 0	$ 0	$ 22,942,557	$ 44,850,346	$ 197,982	$ 0	$ 0	$ 0	2
3		Interest Expense	Total Dr. Plant	53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	3
4		ARAM Federal	Total Dr. Plant	(7,284,597)	0	(138,393)	0	0	0	(2,411,385)	(4,714,010)	(20,809)	0	0	0	4
5		Regulatory Amortizations														
6		Recorded	Net Plant	2,620,521	0	49,785	0	0	0	867,458	1,695,792	7,486	0	0	0	
7		GCU Acquisition Adjustment	Net Plant	318,752	0	6,056	0	0	0	105,515	206,271	911	0	0	0	
8		COVID-19 Late Fees Waived and Suppressed	Customer	847,717	0	0	0	0	0	0	0	0	0	0	847,717	
9		LNG Deferral Amortizaton	Plant Acct.	3,983,884	0	3,983,884	0	0	0	0	0	0	0	0	0	
10		COYL Regulatory Amortization Balance	Plant Acct.	348,902	0	0	0	0	0	0	348,902	0	0	0	0	
11		VSP Regulatory Amortization Balance	Plant Acct.	1,044,601	0	0	0	0	0	522,300	522,300	0	0	0	0	
12		TRIMP/DOT	Plant Acct.	(1,146,342)	0	0	0	0	0	(573,171)	(573,171)	0	0	0	0	
13		DSM	Net Plant	(3,702,079)	0	(70,332)	0	0	0	(1,225,481)	(2,395,690)	(10,575)	0	0	0	
14		Total Regulatory Amortizations	Various	4,315,957	0	3,969,392	0	0	0	(303,379)	(195,596)	(2,179)	0	0	847,717	14
		Rate Base														
15		Total Direct Net Plant		$ 3,971,364,293	$ 0	$ 75,448,288	$ 0	$ 0	$ 0	$ 1,314,621,444	$ 2,569,950,100	$ 11,344,461	$ 0	$ 0	$ 0	15
16		Total Common Systems Allocable Net Plant		142,424,093	0	2,705,784	0	0	0	47,145,956	92,165,509	406,844	0	0	0	16
17		Total Net Plant		$ 4,113,788,386	$ 0	$ 78,154,072	$ 0	$ 0	$ 0	$ 1,361,767,400	$ 2,662,115,610	$ 11,751,304	$ 0	$ 0	$ 0	17
18		Cash Working Capital	Total O&M	$ (16,619,324)	$ 0	$ (234,532)	$ 0	$ 0	$ 0	$ (3,012,854)	$ (9,813,918)	$ (377,178)	$ 0	$ 0	$ (3,180,842)	18
19		Materials & Supplies	Net Plant	30,847,268	0	586,039	0	0	0	10,211,221	19,961,890	88,117	0	0	0	19
20		Prepayments	Net Plant	14,121,283	0	268,277	0	0	0	4,674,500	9,138,168	40,338	0	0	0	20
21		Other		0	0	0	0	0	0	0	0	0	0	0	0	21
22		Customer Deposits	Customer	(33,750,043)	0	0	(641,186)	0	0	0	(33,108,857)	0	0	0	0	22
23		Customer Advances	Customer	(59,445,400)	0	0	(1,129,348)	0	0	0	(58,316,051)	0	0	0	0	23
24		Deferred Taxes	Net Plant	(634,525,981)	0	(12,054,774)	0	0	0	(210,044,055)	(410,614,587)	(1,812,565)	0	0	0	24
25		Other		0	0	0	0	0	0	0	0	0	0	0	0	25
26		Total Rate Base		$ 3,414,416,189	$ 0	$ 66,719,082	$ (1,770,534)	$ 0	$ 0	$ 1,163,596,212	$ 2,179,362,254	$ 9,690,017	$ 0	$ 0	$ (3,180,842)	26
		Revenue														
27		Net Operating Margin		$ 564,241,682	$ 0	$ 295,811	$ 3,190,492	$ 7,246,623	$ 0	$ 15,269,802	$ 164,693,412	$ 374,071,185	$ 0	$ 0	$ (525,643)	27
28		Special Contract & Optional Margin		6,681,133	0	3,503	37,778	85,807	0	180,808	1,950,119	4,429,342	0	0	(6,224)	28
29		Late Charges		848,431	0	0	$ 16,139	0	0	0	$ 833,082	0	0	0	(790)	29
30		Service Establishment Charges		6,845,361	0	0	$ 130,212	0	0	0	$ 6,721,527	0	0	0	(6,377)	30
31		Reconnect / Reread Charges		100	0	0	$ 2	0	0	0	$ 98	0	0	0	(0)	31
32		Other Revenue - Labor		1,050	0	1	6	13	0	28	306	696	0	0	(1)	32
33		Other Revenue - Parts & Material		68	0	0	0	1	0	2	20	45	0	0	(0)	33
34		Other Revenue - Field Collection Fee		0	0	0	0	0	0	0	0	0	0	0	0	34
35		Other Revenue - Returned Item Fee		567,609	0	0	$ 10,797	0	0	0	$ 557,341	0	0	0	(529)	35
36		Other Revenue - Rental Income & UESC Revenue		0	0	0	0	0	0	0	0	0	0	0	0	36
37		Total Revenue		$ 579,185,433	$ 0	$ 299,315	$ 3,385,426	$ 7,332,444	$ 0	$ 15,450,640	$ 174,755,905	$ 378,501,268	$ 0	$ 0	$ (539,564)	37

SCHEDULE G-6
SHEET 7 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Operating Deductions														
1		Operations & Maintenance Expenses		$ (141,801,067)	$ 0	$ (2,001,101)	$ 0	$ 0	$ 0	$ (25,706,573)	$ (83,735,301)	$ (3,218,195)	$ 0	$ 0	$ (27,139,896)	1
2		Administrative & General Expenses		(96,125,247)	0	(1,356,523)	0	0	0	(17,426,178)	(56,763,159)	(2,181,576)	0	0	(18,397,811)	2
3		Depreciation Expenses		(136,545,019)	0	(4,161,331)	0	0	0	(36,145,436)	(95,902,046)	(336,205)	0	0	0	3
4		Interest on Customer Deposits		(37,125)	0	0	0	0	0	0	0	0	0	0	(37,125)	4
5		Regulatory Amortizations		(4,315,957)	0	3,969,392	0	0	0	(303,379)	(195,596)	(2,179)	0	0	847,717	5
6		Taxes Other Than Income		(69,307,596)	0	(1,316,711)	0	0	0	(22,942,557)	(44,850,346)	(197,982)	0	0	0	6
7		Total Operating Deductions		$ (448,132,011)	$ 0	$ (4,866,274)	$ 0	$ 0	$ 0	$ (102,524,124)	$ (281,446,448)	$ (5,936,137)	$ 0	$ 0	$ (44,727,115)	7
		State Income Tax														
8		Taxable Income before Interest Expense		$ 131,053,423	$ 0	$ (4,566,959)	$ 3,385,426	$ 7,332,444	$ 0	$ (87,073,483)	$ (106,690,543)	$ 372,565,130	$ 0	$ 0	$ (45,266,679)	8
9		Interest Expense		53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	9
10		State Taxable Income		$ 77,326,971	$ 0	$ (5,587,658)	$ 3,385,426	$ 7,332,444	$ 0	$ (104,858,290)	$ (141,458,015)	$ 372,411,657	$ 0	$ 0	$ (45,266,679)	10
11		State Income Tax	4.90%	$ 3,789,021.58	$ 0	$ (273,795)	$ 165,886	$ 359,290	$ 0	$ (5,138,056)	$ (6,931,443)	$ 18,248,171	$ 0	$ 0	$ (2,218,067)	11
12		Total State Income Tax		$ 3,789,022	$ 0	$ (273,795)	$ 165,886	$ 359,290	$ 0	$ (5,138,056)	$ (6,931,443)	$ 18,248,171	$ 0	$ 0	$ (2,218,067)	12
		Federal Income Tax														
13		Taxable Income before Interest Expense		$ 131,053,423	$ 0	$ (4,566,959)	$ 3,385,426	$ 7,332,444	$ 0	$ (87,073,483)	$ (106,690,543)	$ 372,565,130	$ 0	$ 0	$ (45,266,679)	13
14		Interest Expense		53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	14
15		Federal Taxable Income		$ 77,326,971	$ 0	$ (5,587,658)	$ 3,385,426	$ 7,332,444	$ 0	$ (104,858,290)	$ (141,458,015)	$ 372,411,657	$ 0	$ 0	$ (45,266,679)	15
16		Federal Income Tax	19.97%	$ 15,442,969	$ 0	$ (1,115,911)	$ 676,103	$ 1,464,362	$ 0	$ (20,941,249)	$ (28,250,580)	$ 74,374,332	$ 0	$ 0	$ (9,040,209)	16
17		ARAM Federal		(7,284,597)	0	(138,393)	0	0	0	(2,411,385)	(4,714,010)	(20,809)	0	0	0	17
18		Total Federal Income Tax		$ 8,158,372	$ 0	$ (1,254,305)	$ 676,103	$ 1,464,362	$ 0	$ (23,352,634)	$ (32,964,590)	$ 74,353,523	$ 0	$ 0	$ (9,040,209)	18
19		Regulatory Amortization	Net Plant	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	19
20		Net Income		$ 119,106,029	$ 0	$ (3,038,859)	$ 2,543,436	$ 5,508,792	$ 0	$ (58,582,793)	$ (66,794,509)	$ 279,963,436	$ 0	$ 0	$ (34,008,403)	20
21		Rate of Return on Rate Base		3.49%	0	-4.55%	-143.65%	0	0	-5.03%	-3.06%	2889.19%	0	0	1069.16%	21

SCHEDULE G-6
SHEET 8 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	68,069,077		
	Allocation Percent -	1	100.0000%	60.720117%	0.000000%	0.000000%
2	Storage Plant		145,103,366	77,867,586	0	0
	Allocation Percent -	2	100.0000%	53.663528%	0.000000%	0.000000%
3	Throughput		673,575,744			302,336,107
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	44.885243%
4	Customers		1,144,613		1,061,802	
	Allocation Percent -	4	100.0000%	0.000000%	92.765125%	0.000000%
5	Customers With Mains		1,144,613	0	1,061,802	0
	Allocation Percent -	5	100.0000%	0.000000%	92.765125%	0.000000%
6	Meters for Customers		1,817,419	0	1,061,802	0
	Allocation Percent -	6	100.0000%	0.000000%	58.423626%	0.000000%
7	Service Lines for Customers		1,260,470	0	1,061,802	
	Allocation Percent -	7	100.0000%	0.000000%	84.238549%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580	0	1,061,802	0
	Allocation Percent -	8	100.0000%	0.000000%	93.420788%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	4,344,698	0
	Allocation Percent -	9	100.0000%	0.000000%	86.446551%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		1,061,802	
	Allocation Percent -	11	100.0000%	0.000000%	92.765125%	0.000000%
12	Late Fees		2,013,823	0	1,383,964	0
	Allocation Percent -	12	100.0000%	0.000000%	68.723243%	0.000000%
13	Return Item Fees		1,068,572	0	774,828	0
	Allocation Percent -	13	100.0000%	0.000000%	72.510548%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	1,061,802	0
	Allocation Percent -	16	100.0000%	0.000000%	92.765125%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	802,825,533	2,095,904,337	4,874,022
	Allocation Percent -	1.1	100.0000%	21.119389%	55.135541%	0.128218%
18	Distribution Mains (Account 376)		2,438,675,162	740,383,206	1,131,120,036	0
	Allocation Percent -	2.2	100.0000%	30.360058%	46.382563%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	739,734,632	0
	Allocation Percent -	3.3	100.0000%	0.000000%	84.238549%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	740,383,206	1,870,854,668	0
	Allocation Percent -	4.4	100.0000%	22.322094%	56.405108%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	5,382,254	26,579,833	591,202
	Allocation Percent -	5.5	100.0000%	11.188877%	55.255376%	1.229018%
22	Allocable Distribution Maintenance Expenses		39,629,143	7,369,879	22,931,233	0
	Allocation Percent -	6.6	100.0000%	18.597118%	57.864570%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	136,840,429	264,484,254
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	24.252095%	46.874285%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	21,948,055	0
	Allocation Percent -	10.1	100.0000%	0.000000%	89.808115%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	16,682,923	87,002,187	1,444,495
	Allocation Percent -	11.2	100.0000%	11.765019%	61.355100%	1.018677%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Multi-Family Residential Demand	Multi-Family Residential Customer	Multi-Family Residential Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,156,193		
	Allocation Percent -	1	100.0000%	1.031367%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,491,024	0	0
	Allocation Percent -	2	100.0000%	1.027560%	0.000000%	0.000000%
3	Throughput		673,575,744			6,754,149
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	1.002730%
4	Customers		1,144,613		40,846	
	Allocation Percent -	4	100.0000%	0.000000%	3.568549%	0.000000%
5	Customers With Mains		1,144,613	0	40,846	0
	Allocation Percent -	5	100.0000%	0.000000%	3.568549%	0.000000%
6	Meters for Customers		1,817,419	0	40,846	0
	Allocation Percent -	6	100.0000%	0.000000%	2.247478%	0.000000%
7	Service Lines for Customers		1,260,470		46,938	
	Allocation Percent -	7	100.0000%	0.000000%	3.723859%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580	0	40,846	0
	Allocation Percent -	8	100.0000%	0.000000%	3.593771%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	509,009	0
	Allocation Percent -	9	100.0000%	0.000000%	10.127769%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		40,846	
	Allocation Percent -	11	100.0000%	0.000000%	3.568549%	0.000000%
12	Late Fees		2,013,823	0	115,682	0
	Allocation Percent -	12	100.0000%	0.000000%	5.744419%	0.000000%
13	Return Item Fees		1,068,572	0	58,450	0
	Allocation Percent -	13	100.0000%	0.000000%	5.469919%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	40,846	0
	Allocation Percent -	16	100.0000%	0.000000%	3.568549%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	13,720,273	84,870,809	108,885
	Allocation Percent -	1.1	100.0000%	0.360930%	2.232639%	0.002864%
18	Distribution Mains (Account 376)		2,438,675,162	12,575,841	43,512,658	0
	Allocation Percent -	2.2	100.0000%	0.515683%	1.784274%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	32,700,795	0
	Allocation Percent -	3.3	100.0000%	0.000000%	3.723859%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,575,841	76,213,453	0
	Allocation Percent -	4.4	100.0000%	0.379154%	2.297788%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	91,421	1,048,329	13,207
	Allocation Percent -	5.5	100.0000%	0.190050%	2.179315%	0.027456%
22	Allocable Distribution Maintenance Expenses		39,629,143	125,182	932,760	0
	Allocation Percent -	6.6	100.0000%	0.315883%	2.353721%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	4,754,484	6,582,143
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.842633%	1.166547%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	844,312	0
	Allocation Percent -	10.1	100.0000%	0.000000%	3.454797%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	285,692	3,438,165	32,270
	Allocation Percent -	11.2	100.0000%	0.201473%	2.424640%	0.022757%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	288,332		
	Allocation Percent -	1	100.0000%	0.257203%	0.000000%	0.000000%
2	Storage Plant		145,103,366	327,536	0	0
	Allocation Percent -	2	100.0000%	0.225726%	0.000000%	0.000000%
3	Throughput		673,575,744			1,255,848
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.186445%
4	Customers		1,144,613		97	
	Allocation Percent -	4	100.0000%	0.000000%	0.008474%	0.000000%
5	Customers With Mains		1,144,613	0	97	0
	Allocation Percent -	5	100.0000%	0.000000%	0.008474%	0.000000%
6	Meters for Customers		1,817,419	0	722	0
	Allocation Percent -	6	100.0000%	0.000000%	0.039749%	0.000000%
7	Service Lines for Customers		1,260,470		233	
	Allocation Percent -	7	100.0000%	0.000000%	0.018490%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		97	
	Allocation Percent -	8	100.0000%	0.000000%	0.008534%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	369	0
	Allocation Percent -	9	100.0000%	0.000000%	0.007340%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		97	
	Allocation Percent -	11	100.0000%	0.000000%	0.008474%	0.000000%
12	Late Fees		2,013,823	0	632	0
	Allocation Percent -	12	100.0000%	0.000000%	0.031396%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	97	0
	Allocation Percent -	16	100.0000%	0.000000%	0.008474%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	3,399,522	397,677	20,246
	Allocation Percent -	1.1	100.0000%	0.089429%	0.010461%	0.000533%
18	Distribution Mains (Account 376)		2,438,675,162	3,136,170	103,332	0
	Allocation Percent -	2.2	100.0000%	0.128601%	0.004237%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	162,370	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.018490%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	3,136,170	265,702	0
	Allocation Percent -	4.4	100.0000%	0.094554%	0.008011%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	22,799	11,165	2,456
	Allocation Percent -	5.5	100.0000%	0.047395%	0.023211%	0.005105%
22	Allocable Distribution Maintenance Expenses		39,629,143	31,218	4,907	0
	Allocation Percent -	6.6	100.0000%	0.078775%	0.012383%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	76,824	635,208
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.013615%	0.112577%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	2,005	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.008204%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	70,635	23,458	6,000
	Allocation Percent -	11.2	100.0000%	0.049813%	0.016543%	0.004231%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Small General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	900,396		
	Allocation Percent -	1	100.0000%	0.803186%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,000,699	0	0
	Allocation Percent -	2	100.0000%	0.689646%	0.000000%	0.000000%
3	Throughput		673,575,744			3,633,968
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.539504%
4	Customers		1,144,613		17,242	
	Allocation Percent -	4	100.0000%	0.000000%	1.506382%	0.000000%
5	Customers With Mains		1,144,613	0	17,242	0
	Allocation Percent -	5	100.0000%	0.000000%	1.506382%	0.000000%
6	Meters for Customers		1,817,419	0	17,242	0
	Allocation Percent -	6	100.0000%	0.000000%	0.948722%	0.000000%
7	Service Lines for Customers		1,260,470		35,432	
	Allocation Percent -	7	100.0000%	0.000000%	2.810982%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		17,242	
	Allocation Percent -	8	100.0000%	0.000000%	1.517029%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	64,594	0
	Allocation Percent -	9	100.0000%	0.000000%	1.285230%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		17,242	
	Allocation Percent -	11	100.0000%	0.000000%	1.506382%	0.000000%
12	Late Fees		2,013,823	0	70,176	0
	Allocation Percent -	12	100.0000%	0.000000%	3.484712%	0.000000%
13	Return Item Fees		1,068,572	0	30,855	0
	Allocation Percent -	13	100.0000%	0.000000%	2.887450%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		84	
	Allocation Percent -	15	100.0000%	0.000000%	1.346154%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	17,242	0
	Allocation Percent -	16	100.0000%	0.000000%	1.506382%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	10,604,933	46,706,825	58,584
	Allocation Percent -	1.1	100.0000%	0.278977%	1.228685%	0.001541%
18	Distribution Mains (Account 376)		2,438,675,162	9,793,552	18,367,884	0
	Allocation Percent -	2.2	100.0000%	0.401593%	0.753191%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	24,684,434	0
	Allocation Percent -	3.3	100.0000%	0.000000%	2.810982%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	9,793,552	43,052,318	0
	Allocation Percent -	4.4	100.0000%	0.295270%	1.298001%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	71,195	508,771	7,106
	Allocation Percent -	5.5	100.0000%	0.148003%	1.057656%	0.014772%
22	Allocable Distribution Maintenance Expenses		39,629,143	97,486	523,529	0
	Allocation Percent -	6.6	100.0000%	0.245997%	1.321071%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	5,711,446	4,025,121
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.012234%	0.713368%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	366,894	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.501275%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	220,272	1,696,999	17,362
	Allocation Percent -	11.2	100.0000%	0.155339%	1.196746%	0.012244%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Medium General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	7,083,993		
	Allocation Percent -	1	100.0000%	6.319182%	0.000000%	0.000000%
2	Storage Plant		145,103,366	9,411,609	0	0
	Allocation Percent -	2	100.0000%	6.486141%	0.000000%	0.000000%
3	Throughput		673,575,744			47,346,251
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	7.029091%
4	Customers		1,144,613		16,593	
	Allocation Percent -	4	100.0000%	0.000000%	1.449631%	0.000000%
5	Customers With Mains		1,144,613	0	16,593	0
	Allocation Percent -	5	100.0000%	0.000000%	1.449631%	0.000000%
6	Meters for Customers		1,817,419	0	396,421	0
	Allocation Percent -	6	100.0000%	0.000000%	21.812298%	0.000000%
7	Service Lines for Customers		1,260,470		77,363	
	Allocation Percent -	7	100.0000%	0.000000%	6.137612%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		16,593	
	Allocation Percent -	8	100.0000%	0.000000%	1.459877%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	77,859	0
	Allocation Percent -	9	100.0000%	0.000000%	1.549167%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		16,593	
	Allocation Percent -	11	100.0000%	0.000000%	1.449631%	0.000000%
12	Late Fees		2,013,823	0	153,438	0
	Allocation Percent -	12	100.0000%	0.000000%	7.619264%	0.000000%
13	Return Item Fees		1,068,572	0	71,418	0
	Allocation Percent -	13	100.0000%	0.000000%	6.683498%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		1,092	
	Allocation Percent -	15	100.0000%	0.000000%	17.500000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	16,593	0
	Allocation Percent -	16	100.0000%	0.000000%	1.449631%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	84,201,512	142,755,746	763,279
	Allocation Percent -	1.1	100.0000%	2.215032%	3.755379%	0.020079%
18	Distribution Mains (Account 376)		2,438,675,162	77,052,161	17,675,894	0
	Allocation Percent -	2.2	100.0000%	3.159591%	0.724815%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	53,896,991	0
	Allocation Percent -	3.3	100.0000%	0.000000%	6.137612%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	77,052,161	71,572,885	0
	Allocation Percent -	4.4	100.0000%	2.323075%	2.157878%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	560,135	5,628,794	92,583
	Allocation Percent -	5.5	100.0000%	1.164434%	11.701394%	0.192466%
22	Allocable Distribution Maintenance Expenses		39,629,143	766,988	1,884,739	0
	Allocation Percent -	6.6	100.0000%	1.935414%	4.755942%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	8,659,176	23,293,621
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.534657%	4.128306%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	479,308	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.961257%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	1,754,239	10,601,860	226,210
	Allocation Percent -	11.2	100.0000%	1.237113%	7.476573%	0.159526%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	13,854,347		
	Allocation Percent -	1	100.0000%	12.358586%	0.000000%	0.000000%
2	Storage Plant		145,103,366	18,914,894	0	0
	Allocation Percent -	2	100.0000%	13.035462%	0.000000%	0.000000%
3	Throughput		673,575,744			100,302,070
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	14.890986%
4	Customers		1,144,613		6,790	
	Allocation Percent -	4	100.0000%	0.000000%	0.593184%	0.000000%
5	Customers With Mains		1,144,613	0	6,790	0
	Allocation Percent -	5	100.0000%	0.000000%	0.593184%	0.000000%
6	Meters for Customers		1,817,419	0	181,221	0
	Allocation Percent -	6	100.0000%	0.000000%	9.971352%	0.000000%
7	Service Lines for Customers		1,260,470		25,394	
	Allocation Percent -	7	100.0000%	0.000000%	2.014626%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	26,105	0
	Allocation Percent -	9	100.0000%	0.000000%	0.519412%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		6,790	
	Allocation Percent -	11	100.0000%	0.000000%	0.593184%	0.000000%
12	Late Fees		2,013,823	0	155,059	0
	Allocation Percent -	12	100.0000%	0.000000%	7.699753%	0.000000%
13	Return Item Fees		1,068,572	0	65,508	0
	Allocation Percent -	13	100.0000%	0.000000%	6.130408%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		2,160	
	Allocation Percent -	15	100.0000%	0.000000%	34.615385%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	6,790	0
	Allocation Percent -	16	100.0000%	0.000000%	0.593184%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	164,928,076	57,438,109	1,616,990
	Allocation Percent -	1.1	100.0000%	4.338652%	1.510986%	0.042537%
18	Distribution Mains (Account 376)		2,438,675,162	150,692,889	7,232,920	0
	Allocation Percent -	2.2	100.0000%	6.179293%	0.296592%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	17,691,293	0
	Allocation Percent -	3.3	100.0000%	0.000000%	2.014626%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	150,692,889	24,924,213	0
	Allocation Percent -	4.4	100.0000%	4.543297%	0.751450%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,095,470	2,524,709	196,135
	Allocation Percent -	5.5	100.0000%	2.277313%	5.248482%	0.407735%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,500,018	770,296	0
	Allocation Percent -	6.6	100.0000%	3.785139%	1.943760%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	6,509,416	44,543,042
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.153657%	7.894320%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	410,007	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.677687%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	3,437,822	4,889,812	479,221
	Allocation Percent -	11.2	100.0000%	2.424398%	3.448361%	0.337953%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	4,431,871		
	Allocation Percent -	1	100.0000%	3.953392%	0.000000%	0.000000%
2	Storage Plant		145,103,366	6,175,261	0	0
	Allocation Percent -	2	100.0000%	4.255767%	0.000000%	0.000000%
3	Throughput		673,575,744			32,948,432
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	4.891570%
4	Customers		1,144,613		398	
	Allocation Percent -	4	100.0000%	0.000000%	0.034808%	0.000000%
5	Customers With Mains		1,144,613	0	398	0
	Allocation Percent -	5	100.0000%	0.000000%	0.034808%	0.000000%
6	Meters for Customers		1,817,419	0	70,840	0
	Allocation Percent -	6	100.0000%	0.000000%	3.897841%	0.000000%
7	Service Lines for Customers		1,260,470		5,699	
	Allocation Percent -	7	100.0000%	0.000000%	0.452104%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	1,253	0
	Allocation Percent -	9	100.0000%	0.000000%	0.024937%	0.000000%
10	Industrial Meas & Reg		604	0	398	0
	Allocation Percent -	10	100.0000%	0.000000%	65.917551%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		398	
	Allocation Percent -	11	100.0000%	0.000000%	0.034808%	0.000000%
12	Late Fees		2,013,823	0	68,555	0
	Allocation Percent -	12	100.0000%	0.000000%	3.404233%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		876	
	Allocation Percent -	15	100.0000%	0.000000%	14.038462%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	398	0
	Allocation Percent -	16	100.0000%	0.000000%	0.034808%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	52,820,888	17,028,106	531,168
	Allocation Percent -	1.1	100.0000%	1.389523%	0.447947%	0.013973%
18	Distribution Mains (Account 376)		2,438,675,162	48,205,191	424,427	0
	Allocation Percent -	2.2	100.0000%	1.976696%	0.017404%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	3,970,114	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.452104%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	48,205,191	4,394,541	0
	Allocation Percent -	4.4	100.0000%	1.453357%	0.132493%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	350,430	951,518	64,429
	Allocation Percent -	5.5	100.0000%	0.728490%	1.978059%	0.133938%
22	Allocable Distribution Maintenance Expenses		39,629,143	479,841	242,073	0
	Allocation Percent -	6.6	100.0000%	1.210829%	0.610846%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	2,231,662	10,674,638
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.395515%	1.891856%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	117,598	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.481193%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	1,101,444	1,750,005	157,420
	Allocation Percent -	11.2	100.0000%	0.776753%	1.234127%	0.111015%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Transportation Eligible General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	12,967,916		
	Allocation Percent -	1	100.0000%	11.567857%	0.000000%	0.000000%
2	Storage Plant		145,103,366	21,788,237	0	0
	Allocation Percent -	2	100.0000%	15.015666%	0.000000%	0.000000%
3	Throughput		673,575,744			128,296,499
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	19.047078%
4	Customers		1,144,613		206	
	Allocation Percent -	4	100.0000%	0.000000%	0.017997%	0.000000%
5	Customers With Mains		1,144,613	0	206	0
	Allocation Percent -	5	100.0000%	0.000000%	0.017997%	0.000000%
6	Meters for Customers		1,817,419	0	33,478	0
	Allocation Percent -	6	100.0000%	0.000000%	1.842086%	0.000000%
7	Service Lines for Customers		1,260,470		4,597	
	Allocation Percent -	7	100.0000%	0.000000%	0.364711%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	326	0
	Allocation Percent -	9	100.0000%	0.000000%	0.006490%	0.000000%
10	Industrial Meas & Reg		604	0	206	0
	Allocation Percent -	10	100.0000%	0.000000%	34.082449%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		206	
	Allocation Percent -	11	100.0000%	0.000000%	0.017997%	0.000000%
12	Late Fees		2,013,823	0	13,113	0
	Allocation Percent -	12	100.0000%	0.000000%	0.651149%	0.000000%
13	Return Item Fees		1,068,572	0	67,444	0
	Allocation Percent -	13	100.0000%	0.000000%	6.311626%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		1,728	
	Allocation Percent -	15	100.0000%	0.000000%	27.692308%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	206	0
	Allocation Percent -	16	100.0000%	0.000000%	0.017997%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	156,408,030	9,393,248	2,068,294
	Allocation Percent -	1.1	100.0000%	4.114520%	0.247102%	0.054409%
18	Distribution Mains (Account 376)		2,438,675,162	141,051,233	219,448	0
	Allocation Percent -	2.2	100.0000%	5.783929%	0.008999%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	3,202,686	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.364711%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	141,051,233	3,422,135	0
	Allocation Percent -	4.4	100.0000%	4.252607%	0.103175%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,025,379	457,892	250,877
	Allocation Percent -	5.5	100.0000%	2.131605%	0.951887%	0.521534%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,404,044	130,411	0
	Allocation Percent -	6.6	100.0000%	3.542958%	0.329080%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	15,551,126	2,348,400	15,603,421
	Allocation Percent -	Net Op Margin	100.0000%	2.756111%	0.416205%	2.765379%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	219,987	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.900152%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	3,274,178	1,037,428	612,972
	Allocation Percent -	11.2	100.0000%	2.308994%	0.731608%	0.432276%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	17,829		
	Allocation Percent -	1	100.0000%	0.015904%	0.000000%	0.000000%
2	Storage Plant		145,103,366	56,897	0	0
	Allocation Percent -	2	100.0000%	0.039211%	0.000000%	0.000000%
3	Throughput		673,575,744			321,676
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.047756%
4	Customers		1,144,613		19	
	Allocation Percent -	4	100.0000%	0.000000%	0.001660%	0.000000%
5	Customers With Mains		1,144,613	0	19	0
	Allocation Percent -	5	100.0000%	0.000000%	0.001660%	0.000000%
6	Meters for Customers		1,817,419	0	19	0
	Allocation Percent -	6	100.0000%	0.000000%	0.001045%	0.000000%
7	Service Lines for Customers		1,260,470		25	
	Allocation Percent -	7	100.0000%	0.000000%	0.002011%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	0	0
	Allocation Percent -	9	100.0000%	0.000000%	0.000000%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		19	
	Allocation Percent -	11	100.0000%	0.000000%	0.001660%	0.000000%
12	Late Fees		2,013,823	0	51	0
	Allocation Percent -	12	100.0000%	0.000000%	0.002515%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		12	
	Allocation Percent -	15	100.0000%	0.000000%	0.192308%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	19	0
	Allocation Percent -	16	100.0000%	0.000000%	0.001660%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	228,447	41,926	5,186
	Allocation Percent -	1.1	100.0000%	0.006010%	0.001103%	0.000136%
18	Distribution Mains (Account 376)		2,438,675,162	193,925	20,240	0
	Allocation Percent -	2.2	100.0000%	0.007952%	0.000830%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	17,658	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.002011%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	193,925	37,899	0
	Allocation Percent -	4.4	100.0000%	0.005847%	0.001143%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,410	503	629
	Allocation Percent -	5.5	100.0000%	0.002931%	0.001045%	0.001308%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,930	463	0
	Allocation Percent -	6.6	100.0000%	0.004871%	0.001169%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	5,370	47,869
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.000952%	0.008484%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	1,891	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.007737%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	4,873	3,305	1,537
	Allocation Percent -	11.2	100.0000%	0.003437%	0.002331%	0.001084%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	820		
	Allocation Percent -	1	100.0000%	0.000731%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,630	0	0
	Allocation Percent -	2	100.0000%	0.001123%	0.000000%	0.000000%
3	Throughput		673,575,744			9,324
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.001384%
4	Customers		1,144,613		48	
	Allocation Percent -	4	100.0000%	0.000000%	0.004194%	0.000000%
5	Customers With Mains		1,144,613	0	48	0
	Allocation Percent -	5	100.0000%	0.000000%	0.004194%	0.000000%
6	Meters for Customers		1,817,419	0	0	0
	Allocation Percent -	6	100.0000%	0.000000%	0.000000%	0.000000%
7	Service Lines for Customers		1,260,470		64	
	Allocation Percent -	7	100.0000%	0.000000%	0.005091%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	65	0
	Allocation Percent -	9	100.0000%	0.000000%	0.001299%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		48	
	Allocation Percent -	11	100.0000%	0.000000%	0.004194%	0.000000%
12	Late Fees		2,013,823	0	2	0
	Allocation Percent -	12	100.0000%	0.000000%	0.000120%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	48	0
	Allocation Percent -	16	100.0000%	0.000000%	0.004194%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	10,016	97,464	150
	Allocation Percent -	1.1	100.0000%	0.000263%	0.002564%	0.000004%
18	Distribution Mains (Account 376)		2,438,675,162	8,919	51,134	0
	Allocation Percent -	2.2	100.0000%	0.000366%	0.002097%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	44,708	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.005091%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	8,919	95,842	0
	Allocation Percent -	4.4	100.0000%	0.000269%	0.002890%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	65	644	18
	Allocation Percent -	5.5	100.0000%	0.000135%	0.001339%	0.000038%
22	Allocable Distribution Maintenance Expenses		39,629,143	89	1,042	0
	Allocation Percent -	6.6	100.0000%	0.000224%	0.002629%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	0	7,725
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.000000%	0.001369%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	992	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.004060%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	211	3,142	45
	Allocation Percent -	11.2	100.0000%	0.000148%	0.002215%	0.000031%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Compression on Customer's Premises		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,145,766		
	Allocation Percent -	1	100.0000%	1.022065%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,181,612	0	0
	Allocation Percent -	2	100.0000%	1.503488%	0.000000%	0.000000%
3	Throughput		673,575,744			14,126,783
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.097282%
4	Customers		1,144,613		61	
	Allocation Percent -	4	100.0000%	0.000000%	0.005329%	0.000000%
5	Customers With Mains		1,144,613	0	61	0
	Allocation Percent -	5	100.0000%	0.000000%	0.005329%	0.000000%
6	Meters for Customers		1,817,419	0	5,887	0
	Allocation Percent -	6	100.0000%	0.000000%	0.323922%	0.000000%
7	Service Lines for Customers		1,260,470		1,939	
	Allocation Percent -	7	100.0000%	0.000000%	0.153819%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	67	0
	Allocation Percent -	9	100.0000%	0.000000%	0.001328%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		61	
	Allocation Percent -	11	100.0000%	0.000000%	0.005329%	0.000000%
12	Late Fees		2,013,823	0	6,308	0
	Allocation Percent -	12	100.0000%	0.000000%	0.313247%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		132	
	Allocation Percent -	15	100.0000%	0.000000%	2.115385%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	61	0
	Allocation Percent -	16	100.0000%	0.000000%	0.005329%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	13,946,939	2,466,560	227,741
	Allocation Percent -	1.1	100.0000%	0.366893%	0.064886%	0.005991%
18	Distribution Mains (Account 376)		2,438,675,162	12,462,427	64,982	0
	Allocation Percent -	2.2	100.0000%	0.511033%	0.002665%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	1,350,748	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.153819%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,462,427	1,415,730	0
	Allocation Percent -	4.4	100.0000%	0.375734%	0.042683%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	90,596	85,505	27,624
	Allocation Percent -	5.5	100.0000%	0.188336%	0.177751%	0.057426%
22	Allocable Distribution Maintenance Expenses		39,629,143	124,053	32,589	0
	Allocation Percent -	6.6	100.0000%	0.313034%	0.082235%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	78,565	3,289,421
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.013924%	0.582981%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	17,740	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.072590%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	292,824	176,816	67,495
	Allocation Percent -	11.2	100.0000%	0.206504%	0.124693%	0.047598%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Electric Generation		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,170,432		
	Allocation Percent -	1	100.0000%	1.044068%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,444,746	0	0
	Allocation Percent -	2	100.0000%	1.684831%	0.000000%	0.000000%
3	Throughput		673,575,744			14,250,039
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.115581%
4	Customers		1,144,613		25	
	Allocation Percent -	4	100.0000%	0.000000%	0.002184%	0.000000%
5	Customers With Mains		1,144,613	0	25	0
	Allocation Percent -	5	100.0000%	0.000000%	0.002184%	0.000000%
6	Meters for Customers		1,817,419	0	1,750	0
	Allocation Percent -	6	100.0000%	0.000000%	0.096279%	0.000000%
7	Service Lines for Customers		1,260,470		151	
	Allocation Percent -	7	100.0000%	0.000000%	0.011974%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	0	0
	Allocation Percent -	9	100.0000%	0.000000%	0.000000%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		25	
	Allocation Percent -	11	100.0000%	0.000000%	0.002184%	0.000000%
12	Late Fees		2,013,823	0	1,533	0
	Allocation Percent -	12	100.0000%	0.000000%	0.076130%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		84	
	Allocation Percent -	15	100.0000%	0.000000%	1.346154%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	25	0
	Allocation Percent -	16	100.0000%	0.000000%	0.002184%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	14,354,776	444,347	229,728
	Allocation Percent -	1.1	100.0000%	0.377621%	0.011689%	0.006043%
18	Distribution Mains (Account 376)		2,438,675,162	12,730,718	26,632	0
	Allocation Percent -	2.2	100.0000%	0.522034%	0.001092%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	105,145	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.011974%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,730,718	131,777	0
	Allocation Percent -	4.4	100.0000%	0.383823%	0.003973%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	92,547	23,664	27,865
	Allocation Percent -	5.5	100.0000%	0.192390%	0.049193%	0.057927%
22	Allocable Distribution Maintenance Expenses		39,629,143	126,723	6,224	0
	Allocation Percent -	6.6	100.0000%	0.319773%	0.015707%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	101,208	2,399,564
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.017937%	0.425272%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	11,004	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.045025%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	302,109	52,660	68,084
	Allocation Percent -	11.2	100.0000%	0.213052%	0.037136%	0.048013%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	441,953		
	Allocation Percent -	1	100.0000%	0.394238%	0.000000%	0.000000%
2	Storage Plant		145,103,366	840,974	0	0
	Allocation Percent -	2	100.0000%	0.579569%	0.000000%	0.000000%
3	Throughput		673,575,744			4,663,085
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.692288%
4	Customers		1,144,613		67	
	Allocation Percent -	4	100.0000%	0.000000%	0.005854%	0.000000%
5	Customers With Mains		1,144,613	0	67	0
	Allocation Percent -	5	100.0000%	0.000000%	0.005854%	0.000000%
6	Meters for Customers		1,817,419	0	991	0
	Allocation Percent -	6	100.0000%	0.000000%	0.054510%	0.000000%
7	Service Lines for Customers		1,260,470		89	
	Allocation Percent -	7	100.0000%	0.000000%	0.007061%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	384	0
	Allocation Percent -	9	100.0000%	0.000000%	0.007649%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		67	
	Allocation Percent -	11	100.0000%	0.000000%	0.005854%	0.000000%
12	Late Fees		2,013,823	0	2,067	0
	Allocation Percent -	12	100.0000%	0.000000%	0.102622%	0.000000%
13	Return Item Fees		1,068,572	0	70	0
	Allocation Percent -	13	100.0000%	0.000000%	0.006551%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		72	
	Allocation Percent -	15	100.0000%	0.000000%	1.153846%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	67	0
	Allocation Percent -	16	100.0000%	0.000000%	0.005854%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	5,379,447	312,130	75,175
	Allocation Percent -	1.1	100.0000%	0.141513%	0.008211%	0.001978%
18	Distribution Mains (Account 376)		2,438,675,162	4,807,096	71,374	0
	Allocation Percent -	2.2	100.0000%	0.197119%	0.002927%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	62,004	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.007061%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	4,807,096	133,378	0
	Allocation Percent -	4.4	100.0000%	0.144931%	0.004021%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	34,945	13,822	9,118
	Allocation Percent -	5.5	100.0000%	0.072646%	0.028733%	0.018956%
22	Allocable Distribution Maintenance Expenses		39,629,143	47,851	4,114	0
	Allocation Percent -	6.6	100.0000%	0.120746%	0.010380%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	96,480	1,396,687
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.017099%	0.247533%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	10,374	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.042447%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	112,943	35,635	22,279
	Allocation Percent -	11.2	100.0000%	0.079649%	0.025130%	0.015712%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	574,082		
	Allocation Percent -	1	100.0000%	0.512102%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,600,661	0	0
	Allocation Percent -	2	100.0000%	1.792282%	0.000000%	0.000000%
3	Throughput		673,575,744			17,331,513
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.573061%
4	Customers		1,144,613		419	
	Allocation Percent -	4	100.0000%	0.000000%	0.036628%	0.000000%
5	Customers With Mains		1,144,613	0	419	0
	Allocation Percent -	5	100.0000%	0.000000%	0.036628%	0.000000%
6	Meters for Customers		1,817,419	0	6,199	0
	Allocation Percent -	6	100.0000%	0.000000%	0.341092%	0.000000%
7	Service Lines for Customers		1,260,470		745	
	Allocation Percent -	7	100.0000%	0.000000%	0.059111%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	1,147	0
	Allocation Percent -	9	100.0000%	0.000000%	0.022828%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		419	
	Allocation Percent -	11	100.0000%	0.000000%	0.036628%	0.000000%
12	Late Fees		2,013,823	0	43,241	0
	Allocation Percent -	12	100.0000%	0.000000%	2.147198%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	419	0
	Allocation Percent -	16	100.0000%	0.000000%	0.036628%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	7,738,391	2,084,227	279,405
	Allocation Percent -	1.1	100.0000%	0.203569%	0.054828%	0.007350%
18	Distribution Mains (Account 376)		2,438,675,162	6,244,255	446,620	0
	Allocation Percent -	2.2	100.0000%	0.256051%	0.018314%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	519,079	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.059111%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	6,244,255	965,699	0
	Allocation Percent -	4.4	100.0000%	0.188260%	0.029115%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	45,393	87,287	33,891
	Allocation Percent -	5.5	100.0000%	0.094365%	0.181456%	0.070454%
22	Allocable Distribution Maintenance Expenses		39,629,143	62,156	27,304	0
	Allocation Percent -	6.6	100.0000%	0.156845%	0.068900%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	314,190	3,980,193
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.055684%	0.705406%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	8,666	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.035461%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	167,509	163,726	82,806
	Allocation Percent -	11.2	100.0000%	0.118130%	0.115461%	0.058396%

SCHEDULE H

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Revenues: Present Rates [1]	Revenues: Proposed Rates [2]	Increase/(Decrease) [3]: Dollars	Increase/(Decrease) [3]: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 496,439,665	$ 562,093,455	$ 65,653,790	13.22%	1
2	Multi-Family Residential Gas Service	G-6	12,725,065	14,780,585	2,055,520	16.15%	2
3	Single-Family Low Income Residential Gas Service	G-10	19,372,131	21,792,039	2,419,908	12.49%	3
4	Multi-Family Low Income Residential Gas Service	G-11	1,167,062	1,350,385	183,323	15.71%	4
5	Special Residential Gas Service for Air Conditioning	G-15	65,316	74,512	9,196	14.08%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	1,187,195	1,268,775	81,580	6.87%	6
	General Gas Service	G-25					
7	Small		11,113,694	12,454,200	1,340,506	12.06%	7
8	Medium		49,740,465	56,332,102	6,591,637	13.25%	8
9	Large-1		87,870,155	93,390,870	5,520,715	6.28%	9
10	Large-2		22,881,170	24,660,715	1,779,545	7.78%	10
11	Transportation Eligible		42,264,478	46,005,928	3,741,450	8.85%	11
12	Optional Gas Service	G-30	6,028,363	6,028,363	0	0.00%	12
13	Air Conditioning Gas Service	G-40	141,732	148,393	6,661	4.70%	13
14	Street Lighting Gas Service	G-45	11,253	13,393	2,140	19.02%	14
	Gas Service for Compression on Customer's Premises	G-55					
15	Residential		10,126	10,419	293	2.89%	15
16	Small		9,175	9,453	278	3.03%	16
17	Large		6,815,904	7,202,125	386,221	5.67%	17
18	Electric Generation Gas Service	G-60	3,093,592	3,426,473	332,881	10.76%	18
19	Biogas and Renewable Natural Gas Service	G-65	68,400	68,400	0	0.00%	19
20	Small Essential Agriculture User Gas Service	G-75	2,552,122	2,681,243	129,121	5.06%	20
21	Natural Gas Engine Gas Service	G-80	11,799,584	12,059,583	259,999	2.20%	21
22	Total Gas Sales		$ 775,356,648	$ 865,851,411	$ 90,494,764	11.67%	22
23	Special Contract Service	B-1	5,344,383	5,344,383	0	0.00%	23
24	Other Operating Revenue		8,262,618	8,262,618	0	0.00%	24
25	Total Arizona Revenue		$ 788,963,649	$ 879,458,412	$ 90,494,764	11.47%	25
26	Total Requirement			$ 879,458,033			26
27	Over/(Under) Requirement			$ 379			27

[1] Schedule H-2, Sheets 1-4, column (l).
[2] Schedule H-2, Sheets 1-4, column (k).
[3] Includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUE AT PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Revenues Present Rates [1]	Revenues Proposed Rates [2]	Increase/(Decrease) [3] Dollars	Increase/(Decrease) [3] Percent	Line No.
	(a)	(b)	(c)	(g)	(h)	(i)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 2,653,409	$ 3,267,741	$ 614,332	23.15%	1
	General Gas Service	G-25					
2	Small		86,146	93,087	6,941	8.06%	2
3	Medium		278,341	321,621	43,280	15.55%	3
4	Large-1		231,344	247,450	16,106	6.96%	4
5	Large-2		237,907	227,567	(10,340)	-4.35%	5
6	Natural Gas Engine Gas Service	G-80	7,079	8,792	1,713	24.20%	6
7	Total Sales and Full Margin Transportation		$ 3,494,226	$ 4,166,258	$ 672,032	19.23%	7
8	Other Operating Revenue		38,576	38,576	0	0.00%	8
9	Total Graham County Utilities Margin		$ 3,532,802	$ 4,204,834	$ 672,032	19.02%	9

[1] Schedule H-2, Sheet 5, column (l).
[2] Schedule H-2, Sheet 5, column (k).
[3] Includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF MARGIN AT PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Southwest Gas Margin: Margin at Present Rates [1]	Southwest Gas Margin: DCA Adjustment [2]	Southwest Gas Margin: Revenue at Present Rates [3]	GCU Margin at Present Rates [4]	Total Margin at Present Rates	Margin at Proposed Rates [5]	Increase/(Decrease): Dollars	Increase/(Decrease): Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)		(g) (e) + (f)	(h)	(i)	
	Residential Service										
1	Single-Family Residential Gas Service	G-5	$ 385,618,735	$ (1,347,014)	$ 384,271,721	$ 1,824,201	$ 386,095,922	$ 451,910,252	$ 65,814,330	17.05%	1
2	Multi-Family Residential Gas Service	G-6	10,411,804	(22,864)	10,388,940		10,388,940	12,444,460	2,055,520	19.79%	2
3	Single-Family Low Income Residential Gas Service	G-10	15,168,886	15,587	15,184,473		15,184,473	17,604,382	2,419,909	15.94%	3
4	Multi-Family Low Income Residential Gas Service	G-11	940,133	7,554	947,687		947,687	1,131,010	183,323	19.34%	4
5	Special Residential Gas Service for Air Conditioning	G-15	44,287	0	44,287		44,287	53,483	9,196	20.76%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	712,032	0	712,032		712,032	793,612	81,580	11.46%	6
	General Gas Service	G-25									
7	Small		9,072,825	590,780	9,663,605	72,962	9,736,567	11,079,626	1,343,059	13.79%	7
8	Medium		29,973,176	1,821,104	31,794,280	158,517	31,952,797	38,567,632	6,614,835	20.70%	8
9	Large-1		49,080,249	1,863,405	50,943,654	108,804	51,052,458	56,596,898	5,544,440	10.86%	9
10	Large-2		12,497,690	301,325	12,799,015	107,285	12,906,300	14,711,133	1,804,833	13.98%	10
11	Transportation Eligible		33,502,947	0	33,502,947		33,502,947	37,244,397	3,741,450	11.17%	11
12	Optional Gas Service	G-30	1,268,350	0	1,268,350		1,268,350	1,268,350	0	0.00%	12
13	Air Conditioning Gas Service	G-40	53,239	0	53,239		53,239	59,900	6,661	12.51%	13
14	Street Lighting Gas Service	G-45	7,725	0	7,725		7,725	9,865	2,140	27.70%	14
	Gas Service for Compression on Customer's Premises	G-55									
15	Residential		6,083	0	6,083		6,083	6,376	293	4.82%	15
16	Small		5,334	0	5,334		5,334	5,612	278	5.21%	16
17	Large		3,356,569	0	3,356,569		3,356,569	3,742,790	386,221	11.51%	17
18	Electric Generation Gas Service	G-60	2,500,772	0	2,500,772		2,500,772	2,833,653	332,881	13.31%	18
19	Biogas and Renewable Natural Gas Service	G-65	68,400	0	68,400		68,400	68,400	0	0.00%	19
20	Small Essential Agriculture User Gas Service	G-75	1,493,167	0	1,493,167		1,493,167	1,622,288	129,121	8.65%	20
21	Natural Gas Engine Gas Service	G-80	4,291,315	0	4,291,315	3,068	4,294,383	4,554,691	260,308	6.06%	21
22	Total Sales and Full Margin Transportation		$ 560,073,718	$ 3,229,877	$ 563,303,595	$ 2,274,837	$ 565,578,432	$ 656,308,810	$ 90,730,378	16.11%	22
23	Special Contract Service	B-1	5,344,383	0	5,344,383	0	5,344,383	5,344,383	0	0.00%	23
24	Other Operating Revenue		8,224,042	0	8,224,042	38,576	8,262,618	8,262,618	0	0.00%	24
25	Total Arizona Margin		$ 573,642,142	$ 3,229,877	$ 576,872,020	$ 2,313,413	$ 579,185,433	$ 669,915,811	$ 90,730,378	15.73%	25
26	Total Margin Requirement							$ 669,915,432			26
27	Over/(Under) Requirement							$ 379			27

[1] Schedule H-2, Sheets 6-9 column (i).
[2] Adjustment to authorized margin per customer for test period volumes.
[3] Test period margin at authorized margin per customer from 2019 Arizona General Rate Case.
[4] Schedule H-2, Sheet 10 column (i).
[5] Schedule H-2, Sheets 1-4 column (i).

SCHEDULE H-1
SHEET 3 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF MARGIN AT PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Margin Present Rates [1]	Margin Proposed Rates [2]	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(g)	(h)	(i)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 1,824,201	$ 2,599,073	$ 774,872	42.48%	1
	General Gas Service	G-25					
2	Small		72,962	82,456	9,494	13.01%	2
3	Medium		158,517	224,995	66,478	41.94%	3
4	Large-1		108,804	148,635	39,831	36.61%	4
5	Large-2		107,285	122,234	14,949	13.93%	5
6	Natural Gas Engine Gas Service	G-80	3,068	5,091	2,023	65.94%	6
7	Total Sales and Full Margin Transportation		$ 2,274,837	$ 3,182,484	$ 907,647	39.90%	7
8	Other Operating Revenue		38,576	38,576	0	0.00%	8
9	Total Graham County Utilities Margin		$ 2,313,413	$ 3,221,060	$ 907,647	39.23%	9

[1] Schedule H-2, Sheet 10, column (il).
[2] Schedule H-2, Sheet 5, column (i).

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Delivery Charge [1]	Basic Service Charge	Delivery Charge	Total Margin	Gas Cost [2]	Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Single-Family Residential Gas Service	G-5													
1	Basic Service Charge per Month		12,235,894		$ 10.70		$ 130,924,066		$ 130,924,066		$ 130,924,066	$ 131,429,129	$ (505,063)	-0.38%	1
	Commodity Charge per Therm														
2	All Usage			291,212,609		$ 1.10224		$ 320,986,186	320,986,186	$ 110,183,203	431,169,389	365,010,536	66,158,853	18.13%	2
3	Total Single-Family Residential		12,235,894	291,212,609			$ 130,924,066	$ 320,986,186	$ 451,910,252	$ 110,183,203	$ 562,093,455	$ 496,439,665	$ 65,653,790	13.22%	3
	Multi-Family Residential Gas Service	G-6													
4	Basic Service Charge per Month		451,619		$ 9.70		$ 4,380,704		$ 4,380,704		$ 4,380,704	$ 4,380,704	$ 0	0.00%	4
	Commodity Charge per Therm														
5	All Usage			6,174,345		$ 1.30601		$ 8,063,756	8,063,756	$ 2,336,125	10,399,881	8,344,361	2,055,520	24.63%	5
6	Total Multi-Family Residential		451,619	6,174,345			$ 4,380,704	$ 8,063,756	$ 12,444,460	$ 2,336,125	$ 14,780,585	$ 12,725,065	$ 2,055,520	16.15%	6
	Single-Family Low Income Residential Gas Service	G-10													
7	Basic Service Charge		505,129		$ 10.70		$ 5,404,880		$ 5,404,880		$ 5,404,880	$ 5,404,880	$ 0	0.00%	7
	Commodity Charge per Therm														
8	All Usage			11,067,918		$ 1.10224		$ 12,199,502	12,199,502	$ 4,187,657	16,387,159	13,967,251	2,419,908	17.33%	8
9	Total Single-Family Low-Income		505,129	11,067,918			$ 5,404,880	$ 12,199,502	$ 17,604,382	$ 4,187,657	$ 21,792,039	$ 19,372,131	$ 2,419,908	12.49%	9
	Multi-Family Low Income Residential Gas Service	G-11													
10	Basic Service Charge per Month		38,534		$ 9.70		$ 373,780		$ 373,780		$ 373,780	$ 373,780	$ 0	0.00%	10
	Commodity Charge per Therm														
11	All Usage			579,804		$ 1.30601		$ 757,230	757,230	$ 219,375	976,605	793,282	183,323	23.11%	11
12	Total Multi-Family Low-Income		38,534	579,804			$ 373,780	$ 757,230	$ 1,131,010	$ 219,375	$ 1,350,385	$ 1,167,062	$ 183,323	15.71%	12
	Special Residential Gas Service for Air Conditioning	G-15													
13	Basic Service Charge per Month		600		$ 10.70		$ 6,420		$ 6,420		$ 6,420	$ 6,420	$ 0	0.00%	13
	Commodity Charge per Therm														
	Summer (May - October)														
14	First 15 Therms			4,500		$ 1.10224		$ 4,960	4,960	$ 1,703	6,663	5,673	990	17.45%	14
15	Over 15 Therms			15,224		0.16952		2,581	2,581	5,760	8,341	8,025	316	3.94%	15
	Winter (November - April)														
16	All Usage			35,856		1.10224		39,522	39,522	13,566	53,088	45,198	7,890	17.46%	16
17	Total Special Residential AC		600	55,580			$ 6,420	$ 47,063	$ 53,483	$ 21,029	$ 74,512	$ 65,316	$ 9,196	14.08%	17
18	Total Residential Gas Service		13,231,776	309,090,256			$ 141,089,850	$ 342,053,737	$ 483,143,587	$ 116,947,389	$ 600,090,976	$ 529,769,239	$ 70,321,737	13.27%	18
	Master-Metered Mobile Home Park Gas Service	G-20													
19	Basic Service Charge per Month		1,164		$ 66.00		$ 76,824		$ 76,824		$ 76,824	$ 76,824	$ 0	0.00%	19
	Commodity Charge per Therm All Usage														
20	All Usage			1,255,848		$ 0.57076		$ 716,788	716,788	$ 475,163	1,191,951	1,110,371	81,580	7.35%	20
21	Total MMMHP		1,164	1,255,848			$ 76,824	$ 716,788	$ 793,612	$ 475,163	$ 1,268,775	$ 1,187,195	$ 81,580	6.87%	21

SCHEDULE H-2
SHEET 1 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	General Gas Service - Small	G-25(S)													
	Basic Service Charge Per Month														
1	Sales Customers		206,823		$ 27.50		$ 5,687,633		$ 5,687,633		$ 5,687,633	$ 5,709,136	$ (21,503)	-0.38%	1
2	Transportation Customers		84		27.50		2,310		2,310		2,310	2,310	0	0.00%	2
	Commodity Charge per Therm All Usage														
3	Sales Customers			3,632,980		$ 1.48314		$ 5,388,218	5,388,218	$ 1,374,574	6,762,792	5,401,195	1,361,597	25.21%	3
4	Transportation Customers			988		1.48314		1,465	1,465	0	1,465	1,054	411	39.03%	4
5	Total Small General		206,907	3,633,968			$ 5,689,943	$ 5,389,683	$ 11,079,626	$ 1,374,574	$ 12,454,200	$ 11,113,694	$ 1,340,506	12.06%	5
	General Gas Service - Medium	G-25(M)													
	Basic Service Charge Per Month														
6	Sales Customers		198,020		$ 43.50		$ 8,613,870		$ 8,613,870		$ 8,613,870	$ 8,611,674	$ 2,196	0.03%	6
7	Transportation Customers		1,092		43.50		47,502		47,502		47,502	47,502	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			46,951,237		$ 0.63165		$ 29,656,749	29,656,749	$ 17,764,470	47,421,219	40,893,621	6,527,598	15.96%	8
9	Transportation Customers			395,014		0.63165		249,511	249,511	0	249,511	187,668	61,843	32.95%	9
10	Total Medium General		199,112	47,346,251			$ 8,661,372	$ 29,906,260	$ 38,567,632	$ 17,764,470	$ 56,332,102	$ 49,740,465	$ 6,591,637	13.25%	10
	General Gas Service - Large-1	G-25(L1)													
	Basic Service Charge Per Month														
11	Sales Customers		79,316		$ 80.00		$ 6,345,280		$ 6,345,280		$ 6,345,280	$ 6,336,616	$ 8,664	0.14%	11
12	Transportation Customers		2,160		80.00		172,800		172,800		172,800	172,800	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			97,245,936		$ 0.49928		$ 48,552,951	48,552,951	$ 36,793,972	85,346,923	80,029,381	5,317,542	6.64%	13
14	Transportation Customers			3,056,134		0.49928		1,525,867	1,525,867	0	1,525,867	1,331,357	194,510	14.61%	14
15	Total Large-1 General		81,476	100,302,070			$ 6,518,080	$ 50,078,818	$ 56,596,898	$ 36,793,972	$ 93,390,870	$ 87,870,155	$ 5,520,715	6.28%	15
	General Gas Service - Large-2	G-25(L2)													
	Basic Service Charge Per Month														
16	Sales Customers		3,905		$ 470.00		$ 1,835,350		$ 1,835,350		$ 1,835,350	$ 1,819,942	$ 15,408	0.85%	16
17	Transportation Customers		876		470.00		411,720		411,720		411,720	411,720	0	0.00%	17
	Commodity Charge per Therm All Usage														
18	Sales Customers			26,296,600		$ 0.37829		$ 9,947,741	9,947,741	$ 9,949,582	19,897,323	18,527,649	1,369,674	7.39%	18
19	Transportation Customers			6,651,832		0.37829		2,516,322	2,516,322	0	2,516,322	2,121,860	394,462	18.59%	19
20	Total Large-2 General		4,781	32,948,432			$ 2,247,070	$ 12,464,063	$ 14,711,133	$ 9,949,582	$ 24,660,715	$ 22,881,170	$ 1,779,545	7.78%	20
	General Gas Service -Transportation Eligible	G-25(TE)													
	Basic Service Charge Per Month														
21	Sales Customers		744		$ 950.00		$ 706,800		$ 706,800		$ 706,800	$ 706,800	$ 0	0.00%	21
22	Transportation Customers		1,728		950.00		1,641,600		1,641,600		1,641,600	1,641,600	0	0.00%	22
	Demand Charge per Month														
23	Sales Customers			2,745,362	0.102445			$ 3,374,983	3,374,983		3,374,983	2,835,684	539,299	19.02%	23
24	Transportation Customers			12,310,429	0.102445			15,133,703	15,133,703		15,133,703	12,715,442	2,418,261	19.02%	24
	Commodity Charge per Therm (All Usage)														
25	Sales Customers			23,156,600		$ 0.12773		2,957,792	2,957,792	$ 8,761,531	11,719,323	11,577,837	141,486	1.22%	25
26	Transportation Customers			105,139,899		0.12773		13,429,519	13,429,519	0	13,429,519	12,787,115	642,404	5.02%	26
27	Total Transportation Eligible General		2,472	128,296,499			$ 2,348,400	$ 34,895,997	$ 37,244,397	$ 8,761,531	$ 46,005,928	$ 42,264,478	$ 3,741,450	8.85%	27
28	Total General Gas Service		494,748	312,527,220			$ 25,464,865	$ 132,734,821	$ 158,199,686	$ 74,644,129	$ 232,843,815	$ 213,869,962	$ 18,973,853	8.87%	28

SCHEDULE H-2
SHEET 2 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Air Conditioning Gas Service	G-40													
	Basic Service Charge														
1	Sales - With Other Service - No BSC		96		$ 0.00		$ 0		$ 0		$ 0	$ 0	$ 0	0.00%	1
2	General Service - Small		48		27.50		1,320		1,320		1,320	1,320	0	0.00%	2
3	General Service - Medium		60		43.50		2,610		2,610		2,610	2,610	0	0.00%	3
4	General Service - Large		0		80.00		0		0		0	0	0	0.00%	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	1,440	0	0.00%	5
6	Transportation - With Other Service - No BSC		12		0.00										6
	Commodity Charge per Therm All Usage														
7	Sales Customers			233,886		$ 0.16952		$ 39,648	39,648	$ 88,493	128,141	123,298	4,843	3.93%	7
8	Transportation Customers			87,790		0.16952		14,882	14,882	0	14,882	13,064	1,818	13.92%	8
9	Total Air Conditioning		228	321,676			$ 5,370	$ 54,530	$ 59,900	$ 88,493	$ 148,393	$ 141,732	$ 6,661	4.70%	9
	Street Lighting Gas Service	G-45													
	Commodity Charge per Therm of Rated Capacity														
10	All Usage		48	9,324		$ 1.05805		$ 9,865	$ 9,865	$ 3,528	$ 13,393	$ 11,253	$ 2,140	19.02%	10
11	Total Street Lighting		48	9,324			$ 0	$ 9,865	$ 9,865	$ 3,528	$ 13,393	$ 11,253	$ 2,140	19.02%	11
	Gas Service for Compression on Customer's Premises	G-55													
	Basic Service Charge														
12	Small		108		$ 27.50		$ 2,970		$ 2,970		$ 2,970	$ 2,970	$ 0	0.00%	12
13	Large		156		250.00		39,000		39,000		39,000	39,000	0	0.00%	13
14	Residential		336		10.70		3,595		3,595		3,595	3,595	0	0.00%	14
15	Transportation Customers		132		250.00		33,000		33,000		33,000	33,000	0	0.00%	15
	Commodity Charge per Therm All Usage														
	Sales Customers														
16	Small			10,153		$ 0.26023		$ 2,642	2,642	$ 3,841	6,483	6,205	278	4.48%	16
17	Large			9,142,972		0.26023		2,379,276	2,379,276	3,459,335	5,838,611	5,588,276	250,335	4.48%	17
18	Residential			10,686		0.26023		2,781	2,781	4,043	6,824	6,531	293	4.49%	18
19	Transportation Customers			4,962,972		0.26023		1,291,514	1,291,514	0	1,291,514	1,155,628	135,886	11.76%	19
20	Total CNG		732	14,126,783			$ 78,565	$ 3,676,213	$ 3,754,778	$ 3,467,219	$ 7,221,997	$ 6,835,205	$ 386,792	5.66%	20
	Electric Generation Gas Service	G-60													
	Basic Service Charge														
1	General Service - Small		84		$ 27.50		$ 2,310		$ 2,310		$ 2,310	$ 2,310	$ 0	0.00%	1
2	General Service - Medium		48		43.50		2,088		2,088		2,088	2,088	0	0.00%	2
3	General Service - Large		48		80.00		3,840		3,840		3,840	3,840	0	0.00%	3
4	General Service - TE		24		950.00		22,800		22,800		22,800	22,800	0	0.00%	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	1,440	0	0.00%	5
6	Transportation - General Service - Small		12		27.50		330		330		330	330	0	0.00%	6
7	Transportation - General Service - TE		72		950.00		68,400		68,400		68,400	68,400	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			1,566,814		$ 0.19175		$ 300,437	300,437	$ 592,820	893,257	856,656	36,601	4.27%	8
9	Transportation Customers			12,683,225		0.19175		2,432,008	2,432,008	0	2,432,008	2,135,728	296,280	13.87%	9
10	Total Electric Generation		300	14,250,039			$ 101,208	$ 2,732,445	$ 2,833,653	$ 592,820	$ 3,426,473	$ 3,093,592	$ 332,881	10.76%	10
	Small Essential Agriculture User Gas Service	G-75													
	Basic Service Charge Per Month														
11	Sales Customers		732		$ 120.00		$ 87,840		$ 87,840		$ 87,840	$ 87,840	$ 0	0.00%	11
12	Transportation Customers		72		120.00		8,640		8,640		8,640	8,640	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			2,798,803		$ 0.32721		$ 915,796	915,796	$ 1,058,955	1,974,751	1,897,252	77,499	4.08%	13
14	Transportation Customers			1,864,282		0.32721		610,012	610,012	0	610,012	558,390	51,622	9.24%	14
15	Total Small Essential Agricultural		804	4,663,085			$ 96,480	$ 1,525,808	$ 1,622,288	$ 1,058,955	$ 2,681,243	$ 2,552,122	$ 129,121	5.06%	15

SCHEDULE H-2
SHEET 3 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Delivery Charge [1]	Basic Service Charge	Delivery Charge	Total Margin	Gas Cost [2]	Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Natural Gas Engine Gas Service	G-80													
	Basic Service Charge														
1	Off-Peak Season (October - March)		2,505		$ 0.00		$ 0		$ 0		$ 0	$ 720	$ (720)	-100.00%	1
2	Peak Season (April - September)		2,526		125.00		315,750		315,750		315,750	313,470	2,280	0.73%	2
3	Transportation Customers - Off-Peak		0		0.00		0		0		0	0	0	0.00%	3
4	Transportation Customers - Peak		0		125.00		0		0		0	0	0	0.00%	4
	Commodity Charge per Therm All Usage														
5	Sales Customers			17,331,513		$ 0.24458		$ 4,238,941	4,238,941	$ 7,504,892	11,743,833	11,485,394	258,439	2.25%	5
6	Transportation Customers			0		0.24458		0	0	0	0	0	0	0.00%	6
7	Total Natural Gas Engine		5,031	17,331,513			$ 315,750	$ 4,238,941	$ 4,554,691	$ 7,504,892	$ 12,059,583	$ 11,799,584	$ 259,999	2.20%	7
8	Total Tariff Sales		13,734,831	673,575,744			$ 167,228,912	$ 487,743,148	$ 654,972,060	$ 204,782,588	$ 859,754,648	$ 769,259,884	$ 90,494,764	11.76%	8
9	Optional Gas Service	G-30	24	12,580,646					1,268,350	4,760,013	6,028,363	6,028,363	0	0.00%	9
10	Biogas and Renewable Natural Gas Service	G-65	12	380,867					68,400	0	68,400	68,400	0	0.00%	10
11	Potential Bypass/Standby Gas Service	B-1	264	39,840,288					5,344,383		5,344,383	5,344,383	0	0.00%	11
12	Other Operating Revenues						8,262,618		8,262,618		8,262,618	8,262,618	0	0.00%	12
13	Total		13,735,131	726,377,545			$ 175,491,530	$ 487,743,148	$ 669,915,811	$ 209,542,601	$ 879,458,412	$ 788,963,649	$ 90,494,764	11.47%	13
14	Total Revenue Requirement								669,915,432						14
15	Over/(Under)								$ 379						15

[1] Rates calculated to recover proposed Margin Schedule H-2, Sheet 11, Line 9.
[2] Gas Cost rate effective November 1, 2021.
[3] Schedule H-2, Sheets 6-10 column (k) and DCA Adjustment Schedule H-1, Sheet 2.

SCHEDULE H-2
SHEET 4 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Single-Family Residential Gas Service	G-5													
1	Basic Service Charge per Month		60,851		$ 10.70		$ 651,106		$ 651,106		$ 651,106	$ 1,156,169	$ (505,063)	-43.68%	1
	Commodity Charge per Therm														
2	All Usage			1,767,280		$ 1.10224		$ 1,947,967	1,947,967	$ 668,668	2,616,635	1,497,240	1,119,395	74.76%	2
3	Total Single-Family Residential		60,851	1,767,280			$ 651,106	$ 1,947,967	$ 2,599,073	$ 668,668	$ 3,267,741	$ 2,653,409	$ 614,332	23.15%	3
	General Gas Service - Small	G-25(S)													
	Basic Service Charge Per Month														
1	Sales Customers		1,483		$ 27.50		$ 40,783		$ 40,783		$ 40,783	$ 62,286	$ (21,503)	-34.52%	1
2	Transportation Customers		0		27.50		0		0		0	0	0	0.00%	2
	Commodity Charge per Therm All Usage														
3	Sales Customers			28,098		$ 1.48314		$ 41,673	41,673	$ 10,631	52,304	23,860	28,444	119.21%	3
4	Transportation Customers			0		1.48314		0	0	0	0	0	0	0.00%	4
5	Total Small General		1,483	28,098			$ 40,783	$ 41,673	$ 82,456	$ 10,631	$ 93,087	$ 86,146	$ 6,941	8.06%	5
	General Gas Service - Medium	G-25(M)													
	Basic Service Charge Per Month														
6	Sales Customers		1,464		$ 43.50		$ 63,684		$ 63,684		$ 63,684	$ 61,488	$ 2,196	3.57%	6
7	Transportation Customers		0		43.50		0		0		0	0	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			255,380		$ 0.63165		$ 161,311	161,311	$ 96,626	257,937	216,853	41,084	18.95%	8
9	Transportation Customers			0		0.63165		0	0	0	0	0	0	0.00%	9
10	Total Medium General		1,464	255,380			$ 63,684	$ 161,311	$ 224,995	$ 96,626	$ 321,621	$ 278,341	$ 43,280	15.55%	10
	General Gas Service - Large-1	G-25(L1)													
	Basic Service Charge Per Month														
11	Sales Customers		228		$ 80.00		$ 18,240		$ 18,240		$ 18,240	$ 9,576	$ 8,664	90.48%	11
12	Transportation Customers		0		80.00		0		0		0	0	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			261,167		$ 0.49928		$ 130,395	130,395	$ 98,815	229,210	221,768	7,442	3.36%	13
14	Transportation Customers			0		0.49928		0	0	0	0	0	0	0.00%	14
15	Total Large-1 General		228	261,167			$ 18,240	$ 130,395	$ 148,635	$ 98,815	$ 247,450	$ 231,344	$ 16,106	6.96%	15
	General Gas Service - Large-2	G-25(L2)													
	Basic Service Charge Per Month														
16	Sales Customers		36		$ 470.00		$ 16,920		$ 16,920		$ 16,920	$ 1,512	$ 15,408	1019.05%	16
17	Transportation Customers		0		470.00		0		0		0	0	0	0.00%	17
	Commodity Charge per Therm All Usage														
18	Sales Customers			278,394		$ 0.37829		$ 105,314	105,314	$ 105,333	210,647	236,395	(25,748)	-10.89%	18
19	Transportation Customers			0		0.37829		0	0	0	0	0	0	0.00%	19
20	Total Large-2 General		36	278,394			$ 16,920	$ 105,314	$ 122,234	$ 105,333	$ 227,567	$ 237,907	$ (10,340)	-4.35%	20
	Natural Gas Engine Gas Service	G-80													
	Basic Service Charge														
21	Off-Peak Season (October - March)		24		$ 0.00		$ 0		$ 0		$ 0	$ 720	$ (720)	-100.00%	21
22	Peak Season (April - September)		24		125.00		3,000		3,000		3,000	720	2,280	316.67%	22
	Commodity Charge per Therm All Usage														
23	Sales Customers			8,548		$ 0.24458		$ 2,091	2,091	$ 3,701	5,792	5,639	153	2.71%	23
23	Total Natural Gas Engine		48	8,548			$ 3,000	$ 2,091	$ 5,091	$ 3,701	$ 8,792	$ 7,079	$ 1,713	24.20%	23
24	Total Tariff Sales		64,110	2,598,867			$ 793,733	$ 2,388,751	$ 3,182,484	$ 983,774	$ 4,166,258	$ 3,494,226	$ 672,032	19.23%	24
25	Other Operating Revenues						38,576		38,576		38,576	38,576	0	0.00%	25
26	Total		64,110	2,598,867			$ 832,309	$ 2,388,751	$ 3,221,060	$ 983,774	$ 4,204,834	$ 3,532,802	$ 672,032	19.02%	26

[1] Rates calculated to recover proposed Margin Schedule H-2, Sheet 11, Line 9.
[2] Southwest Gas Cost rate effective November 1, 2021.
[3] Schedule H-2, Sheet 9 column (k).

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Single-Family Residential Gas Service	G-5										
1	Basic Service Charge per Month		12,175,043		$ 10.70		$ 130,272,960		$ 130,272,960		$ 130,272,960	1
	Commodity Charge per Therm											
2	All Usage			289,445,329		$ 0.88219		$ 255,345,775	255,345,775	$ 109,514,535	364,860,310	2
3	Total Single-Family Residential		12,175,043	289,445,329			$ 130,272,960	$ 255,345,775	$ 385,618,735	$ 109,514,535	$ 495,133,270	3
	Multi-Family Residential Gas Service	G-6										
4	Basic Service Charge per Month		451,619		$ 9.70		$ 4,380,704		$ 4,380,704		$ 4,380,704	4
	Commodity Charge per Therm											
5	All Usage			6,174,345		$ 0.97680		$ 6,031,100	6,031,100	$ 2,336,125	8,367,225	5
6	Total Multi-Family Residential		451,619	6,174,345			$ 4,380,704	$ 6,031,100	$ 10,411,804	$ 2,336,125	$ 12,747,929	6
	Single-Family Low Income Residential Gas Service	G-10										
7	Basic Service Charge		505,129		$ 10.70		$ 5,404,880		$ 5,404,880		$ 5,404,880	7
	Commodity Charge per Therm											
	Summer (May - October)											
8	All Usage			2,504,802		$ 0.88219		$ 2,209,711	2,209,711	$ 947,717	3,157,428	8
	Winter (November - April)											
9	First 150 Therms			8,147,719	395,214	0.88219		7,187,836	7,187,836	3,082,771	10,270,607	9
10	Over 150 Therms			415,397		0.88219		366,459	366,459	157,170	523,629	10
11	Total Single-Family Low-Income		505,129	11,067,918	579,804		$ 5,404,880	$ 9,764,006	$ 15,168,886	$ 4,187,658	$ 19,356,544	11
	Multi-Family Low Income Residential Gas Service	G-11										
12	Basic Service Charge per Month		38,534		$ 9.70		$ 373,780		$ 373,780		$ 373,780	12
	Commodity Charge per Therm											
	Summer (May - October)											
13	All Usage			184,590		$ 0.97680		$ 180,308	180,308	$ 69,841	250,149	13
	Winter (November - April)											
14	First 150 Therms			391,953		0.97680		382,860	382,860	148,300	531,160	14
15	Over 150 Therms			3,261		0.97680		3,185	3,185	1,234	4,419	15
16	Total Multi-Family Low-Income		38,534	579,804			$ 373,780	$ 566,353	$ 940,133	$ 219,375	$ 1,159,508	16
	Special Residential Gas Service for Air Conditioning	G-15										
17	Basic Service Charge per Month		600		$ 10.70		$ 6,420		$ 6,420		$ 6,420	17
	Commodity Charge per Therm											
	Summer (May - October)											
18	First 15 Therms			4,500		$ 0.88219		$ 3,970	3,970	$ 1,703	5,673	18
19	Over 15 Therms			15,224		0.14881		2,265	2,265	5,760	8,025	19
	Winter (November - April)											
20	All Usage			35,856		0.88219		31,632	31,632	13,566	45,198	20
21	Total Special Residential AC		600	55,580			$ 6,420	$ 37,867	$ 44,287	$ 21,029	$ 65,316	21
22	Total Residential Gas Service		13,170,925	307,322,976			$ 140,438,744	$ 271,745,101	$ 412,183,845	$ 116,278,722	$ 528,462,567	22
	Master-Metered Mobile Home Park Gas Service	G-20										
23	Basic Service Charge per Month		1,164		$ 66.00		$ 76,824		$ 76,824		$ 76,824	23
	Commodity Charge per Therm All Usage											
24	All Usage			1,255,848		$ 0.50580		$ 635,208	635,208	$ 475,163	1,110,371	24
25	Total MMMHP		1,164	1,255,848			$ 76,824	$ 635,208	$ 712,032	$ 475,163	$ 1,187,195	25

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	General Gas Service - Small	G-25(S)										
	Basic Service Charge Per Month											
1	Sales Customers		205,340		$ 27.50		$ 5,646,850		$ 5,646,850		$ 5,646,850	1
2	Transportation Customers		84		27.50		2,310		2,310		2,310	2
	Commodity Charge per Therm All Usage											
3	Sales Customers			3,604,882		$ 0.94947		$ 3,422,727	3,422,727	$ 1,363,943	4,786,670	3
4	Transportation Customers			988		0.94947		938	938	0	938	4
5	Total Small General		205,424	3,605,870			$ 5,649,160	$ 3,423,665	$ 9,072,825	$ 1,363,943	$ 10,436,768	5
	General Gas Service - Medium	G-25(M)										
	Basic Service Charge Per Month											
6	Sales Customers		196,556		$ 43.50		$ 8,550,186		$ 8,550,186		$ 8,550,186	6
7	Transportation Customers		1,092		43.50		47,502		47,502		47,502	7
	Commodity Charge per Therm All Usage											
8	Sales Customers			46,695,857		$ 0.45392		$ 21,196,183	21,196,183	$ 17,667,844	38,864,027	8
9	Transportation Customers			395,014		0.45392		179,305	179,305	0	179,305	9
10	Total Medium General		197,648	47,090,871			$ 8,597,688	$ 21,375,488	$ 29,973,176	$ 17,667,844	$ 47,641,020	10
	General Gas Service - Large-1	G-25(L1)										
	Basic Service Charge Per Month											
11	Sales Customers		79,088		$ 80.00		$ 6,327,040		$ 6,327,040		$ 6,327,040	11
12	Transportation Customers		2,160		80.00		172,800		172,800		172,800	12
	Commodity Charge per Therm All Usage											
13	Sales Customers			96,984,769		$ 0.42563		$ 41,279,627	41,279,627	$ 36,695,157	77,974,784	13
14	Transportation Customers			3,056,134		0.42563		1,300,782	1,300,782	0	1,300,782	14
15	Total Large-1 General		81,248	100,040,903			$ 6,499,840	$ 42,580,409	$ 49,080,249	$ 36,695,157	$ 85,775,406	15
	General Gas Service - Large-2	G-25(L2)										
	Basic Service Charge Per Month											
16	Sales Customers		3,869		$ 470.00		$ 1,818,430		$ 1,818,430		$ 1,818,430	16
17	Transportation Customers		876		470.00		411,720		411,720		411,720	17
	Commodity Charge per Therm All Usage											
18	Sales Customers			26,018,206		$ 0.31428		$ 8,177,002	8,177,002	$ 9,844,248	18,021,250	18
19	Transportation Customers			6,651,832		0.31428		2,090,538	2,090,538	0	2,090,538	19
20	Total Large-2 General		4,745	32,670,038			$ 2,230,150	$ 10,267,540	$ 12,497,690	$ 9,844,248	$ 22,341,938	20
	General Gas Service - Transportation Eligible	G-25(TE)										
	Basic Service Charge Per Month											
21	Sales Customers		744		$ 950.00		$ 706,800		$ 706,800		$ 706,800	21
22	Transportation Customers		1,728		950.00		1,641,600		1,641,600		1,641,600	22
	Demand Charge per Month											
23	Sales Customers			2,745,362	0.086075			$ 2,835,684	2,835,684		2,835,684	23
24	Transportation Customers			12,310,429	0.086075			12,715,442	12,715,442		12,715,442	24
	Commodity Charge per Therm (All Usage)											
25	Sales Customers			23,156,600		$ 0.12162		$ 2,816,306	2,816,306	$ 8,761,531	11,577,837	25
26	Transportation Customers			105,139,899		0.12162		12,787,115	12,787,115	0	12,787,115	26
27	Total Transportation Eligible General		2,472	128,296,499			$ 2,348,400	$ 31,154,547	$ 33,502,947	$ 8,761,531	$ 42,264,478	27
28	Total General Gas Service		491,537	311,704,181			$ 25,325,238	$ 108,801,649	$ 134,126,887	$ 74,332,723	$ 208,459,610	28

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Air Conditioning Gas Service	G-40										
	Basic Service Charge											
1	Sales - With Other Service - No BSC		96		$ 0.00		$ 0		$ 0		$ 0	1
2	General Service - Small		48		27.50		1,320		1,320		1,320	2
3	General Service - Medium		60		43.50		2,610		2,610		2,610	3
4	General Service - L1		0		80.00		0		0		0	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	5
6	Transportation - With Other Service - No BSC		12		0.00		0		0		0	6
	Commodity Charge per Therm All Usage											
7	Sales Customers			233,886		$ 0.14881		$ 34,805	34,805	$ 88,493	123,298	7
8	Transportation Customers			87,790		0.14881		13,064	13,064	0	13,064	8
9	Total Air Conditioning		228	321,676			$ 5,370	$ 47,869	$ 53,239	$ 88,493	$ 141,732	9
	Street Lighting Gas Service	G-45										
	Commodity Charge per Therm of Rated Capacity											
10	All Usage		48	9,324		$ 0.82846		$ 7,725	$ 7,725	$ 3,528	$ 11,253	10
11	Total Street Lighting		48	9,324			$ 0	$ 7,725	$ 7,725	$ 3,528	$ 11,253	11
	Gas Service for Compression on Customer's Premises	G-55										
	Basic Service Charge											
12	Small		108		$ 27.50		$ 2,970		$ 2,970		$ 2,970	12
13	Large		156		250.00		39,000		39,000		39,000	13
14	Residential		336		10.70		3,595		3,595		3,595	14
15	Transportation Customers		132		250.00		33,000		33,000		33,000	15
	Commodity Charge per Therm All Usage											
	Sales Customers											
16	Small			10,153		$ 0.23285		$ 2,364	2,364	$ 3,841	6,205	16
17	Large			9,142,972		0.23285		2,128,941	2,128,941	3,459,335	5,588,276	17
18	Residential			10,686		0.23285		2,488	2,488	4,043	6,531	18
19	Transportation Customers			4,962,972		0.23285		1,155,628	1,155,628	0	1,155,628	19
20	Total CNG		732	14,126,783			$ 78,565	$ 3,289,421	$ 3,367,986	$ 3,467,219	$ 6,835,205	20
	Electric Generation Gas Service	G-60										
	Basic Service Charge											
21	General Service - Small		84		$ 27.50		$ 2,310		$ 2,310		$ 2,310	21
22	General Service - Medium		48		43.50		2,088		2,088		2,088	22
23	General Service - L1		48		80.00		3,840		3,840		3,840	23
24	General Service - TE		24		950.00		22,800		22,800		22,800	24
25	Essential Agricultural		12		120.00		1,440		1,440		1,440	25
26	Transportation - General Service - Small		12		27.50		330		330		330	26
27	Transportation - General Service - TE		72		950.00		68,400		68,400		68,400	27
	Commodity Charge per Therm All Usage											
28	Sales Customers			1,566,814		$ 0.16839		$ 263,836	263,836	$ 592,820	856,656	28
29	Transportation Customers			12,683,225		0.16839		2,135,728	2,135,728	0	2,135,728	29
30	Total Electric Generation		300	14,250,039			$ 101,208	$ 2,399,564	$ 2,500,772	$ 592,820	$ 3,093,592	30

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Small Essential Agriculture User Gas Service	G-75										
	Basic Service Charge Per Month											
1	Sales Customers		732		$ 120.00		$ 87,840		$ 87,840		$ 87,840	1
2	Transportation Customers		72		120.00		8,640		8,640		8,640	2
	Commodity Charge per Therm All Usage											
3	Sales Customers			2,798,803		$ 0.29952		$ 838,297	838,297	$ 1,058,955	1,897,252	3
4	Transportation Customers			1,864,282		0.29952		558,390	558,390	0	558,390	4
5	Total Small Essential Agricultural		804	4,663,085			$ 96,480	$ 1,396,687	$ 1,493,167	$ 1,058,955	$ 2,552,122	5
	Natural Gas Engine Gas Service	G-80										
	Basic Service Charge											
6	Off-Peak Season (October - March)		2,481		$ 0.00		$ 0		$ 0		$ 0	6
7	Peak Season (April - September)		2,502		125.00		312,750		312,750		312,750	7
8	Transportation Customers - Off-Peak		0		0.00		0		0		0	8
9	Transportation Customers - Peak		0		125.00		0		0		0	9
	Commodity Charge per Therm All Usage											
10	Sales Customers			17,322,965		$ 0.22967		$ 3,978,565	3,978,565	$ 7,501,190	11,479,755	10
11	Transportation Customers			0		0.22967		0	0	0	0	11
12	Total Natural Gas Engine		4,983	17,322,965			$ 312,750	$ 3,978,565	$ 4,291,315	$ 7,501,190	$ 11,792,505	12
13	Total Tariff Sales		13,670,721	670,976,877			$ 166,435,179	$ 392,301,789	$ 558,736,968	$ 203,798,813	$ 762,535,781	13
14	Optional Gas Service	G-30	24	12,580,646					1,268,350	4,760,013	6,028,363	14
15	Biogas and Renewable Natural Gas Service	G-65	12	380,867					68,400	0	68,400	15
16	Potential Bypass/Standby Gas Service	B-1	264	39,840,288					5,344,383		5,344,383	16
17	Other Operating Revenues						8,224,042		8,224,042		8,224,042	17
18	Total		13,671,021	723,778,678			$ 174,659,221	$ 392,301,789	$ 573,642,142	$ 208,558,826	$ 782,200,969	18
19	DCA Adjustment								3,229,877			19
20	Margin at Present Rates with EEP Adjustment								$ 576,872,020			20
21	Total Revenue Requirement								669,915,432			21
22	Deficiency								$ (93,043,412)			22

[1] Present Margin rates effective January 1, 2021.
[2] Gas Cost rate effective November 1, 2021.

SCHEDULE H-2
SHEET 9 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Residential Gas Service	G-5										
1	Basic Service Charge per Month		60,851		$ 19.00		$ 1,156,169		$ 1,156,169		$ 1,156,169	1
	Commodity Charge per Therm											
2	All Usage			1,767,280		$ 0.37800		$ 668,032	668,032	$ 829,208	1,497,240	2
3	Total Single-Family Residential		60,851	1,767,280			$ 1,156,169	$ 668,032	$ 1,824,201	$ 829,208	$ 2,653,409	3
	Commercial Gas Service - Small General Gas Service	G-25S										
	Basic Service Charge Per Month											
4	Sales Customers		1,483		$ 42.00		$ 62,286		$ 62,286		$ 62,286	4
5	Transportation Customers		0		42.00		0		0		0	5
	Commodity Charge per Therm All Usage											
6	Sales Customers			28,098		$ 0.37994		$ 10,676	10,676	$ 13,184	23,860	6
7	Transportation Customers			0		0.37994		0	0	0	0	7
8	Total Small General		1,483	28,098			$ 62,286	$ 10,676	$ 72,962	$ 13,184	$ 86,146	8
	Commercial Gas Service - Medium General Gas Service	G-25M										
	Basic Service Charge Per Month											
9	Sales Customers		1,464		$ 42.00		$ 61,488		$ 61,488		$ 61,488	9
10	Transportation Customers		0		42.00		0		0		0	10
	Commodity Charge per Therm All Usage											
11	Sales Customers			255,380		$ 0.37994		$ 97,029	97,029	$ 119,824	216,853	11
12	Transportation Customers			0		0.37994		0	0	0	0	12
13	Total Small General		1,464	255,380			$ 61,488	$ 97,029	$ 158,517	$ 119,824	$ 278,341	13
	Commercial Gas Service - L1 General Gas Service	G-25L1										
	Basic Service Charge Per Month											
14	Sales Customers		228		$ 42.00		$ 9,576		$ 9,576		$ 9,576	14
15	Transportation Customers		0		42.00		0		0		0	15
	Commodity Charge per Therm All Usage											
16	Sales Customers			261,167		$ 0.37994		$ 99,228	99,228	$ 122,540	221,768	16
17	Transportation Customers			0		0.37994		0	0	0	0	17
18	Total Small General		228	261,167			$ 9,576	$ 99,228	$ 108,804	$ 122,540	$ 231,344	18
	Commercial Gas Service - L2 General Gas Service	G-25L2										
	Basic Service Charge Per Month											
19	Sales Customers		36		$ 42.00		$ 1,512		$ 1,512		$ 1,512	19
20	Transportation Customers		0		42.00		0		0		0	20
	Commodity Charge per Therm All Usage											
21	Sales Customers			278,394		$ 0.37994		$ 105,773	105,773	$ 130,622	236,395	21
22	Transportation Customers			0		0.37994		0	0	0	0	22
23	Total Small General		36	278,394			$ 1,512	$ 105,773	$ 107,285	$ 130,622	$ 237,907	23
	Irrigation Gas Service	G-80										
	Basic Service Charge											
24	Off-Peak Season (October - March)		24		$ 30.00		$ 720		$ 720		$ 720	24
25	Peak Season (April - September)		24		30.00		720		720		720	25
	Commodity Charge per Therm All Usage											
26	Sales Customers			8,548		$ 0.19050		$ 1,628	1,628	$ 4,011	5,639	26
27	Total Natural Gas Engine		48	8,548			$ 1,440	$ 1,628	$ 3,068	$ 4,011	$ 7,079	27
28	Total Tariff Sales		64,110	2,598,867			$ 1,292,471	$ 982,366	$ 2,274,837	$ 1,219,389	$ 3,494,226	28
29	Other Operating Revenues						38,576		38,576		38,576	29
30	Total		64,110	2,598,867			$ 1,331,047	$ 982,366	$ 2,313,413	$ 1,219,389	$ 3,532,802	30

[1] Present Margin rates effective April 1, 2017.
[2] Gas Cost rate effective on January 31, 2019.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
MARGIN ALLOCATION SPREAD TO CUSTOMER CLASSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Total	Single-Family Residential	Multi-Family Residential	MMMHP	General Gas Service: Small	Medium	Large-1	Large-2	Transportation Eligible	Air Conditioning	Street Lighting	CNG	Electric Generation	Small Essential Agriculture	Natural Gas Engines	G-30, G-65 & Bypass Transp.	Other Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	
1	Margin at Requested System Rate of Return [1]	$ 669,915,432	$ 492,641,786	$ 16,161,937	$ 588,896	$ 9,695,313	$ 47,751,195	$ 40,026,270	$ 13,029,455	$ 27,005,097	$ 48,077	$ 17,877	$ 2,791,944	$ 2,402,775	$ 932,242	$ 1,878,818	$ 6,681,133	$ 8,262,618	1
2	Margin at Present Rates [2]	$ 579,185,433	$ 401,324,683	$ 11,336,627	$ 712,032	$ 9,736,567	$ 31,952,797	$ 51,052,458	$ 12,906,300	$ 33,502,947	$ 53,239	$ 7,725	$ 3,367,986	$ 2,500,772	$ 1,493,167	$ 4,294,383	$ 6,681,133	$ 8,262,618	2
3	Difference	$ 90,729,998																	3
4	System Average Increase (Excluding B-1, G-30 & Other Revenues)	16.08%																	4
5	% Difference in Present & System ROR Margin Req.		1.2275	1.4256	0.8271	0.9958	1.4944	0.7840	1.0095	0.8061	0.9030	2.3142	0.8290	0.9608	0.6243	0.4375			5
6	Maximum Margin Increase Capped at 2.00 [3]	32.16%	19.74%	22.92%	13.30%	16.01%	24.03%	12.61%	16.23%	12.96%	14.52%	32.16%	13.33%	15.45%	10.04%	7.04%			6
7	Calculated Proposed Increase To Classes Not at System ROR	$ 105,318,982	$ 79,216,743.14	$ 2,598,837.60	$ 94,694	$ 1,559,005	$ 7,678,367	$ 6,436,220	$ 2,095,135	$ 4,342,416	$ 7,731	$ 2,484	$ 448,944	$ 386,366	$ 149,904	$ 302,114			7
8	Remaining Allocation of Margin Change [4]	$ (14,588,983)	$ (10,973,252)	$ (359,996)	$ (13,117)	$ (215,956)	$ (1,063,625)	$ (891,557)	$ (290,222)	$ (601,520)	$ (1,071)	$ (344)	$ (62,189)	$ (53,520)	$ (20,765)	$ (41,849)			8
9	Proposed Margin Requirement	$ 669,915,432	$ 469,568,174	$ 13,575,468	$ 793,609	$ 11,079,616	$ 38,567,559	$ 56,597,120	$ 14,711,213	$ 37,243,844	$ 59,899	$ 9,865	$ 3,754,742	$ 2,833,618	$ 1,622,306	$ 4,554,647	$ 6,681,133	$ 8,262,618	9
10	Proposed Percentage Increase in Margin	15.67%	17.00%	19.75%	11.46%	13.79%	20.70%	10.86%	13.98%	11.17%	12.51%	27.71%	11.48%	13.31%	8.65%	6.06%	0.00%	0.00%	10
11	Rate of Return on Rate Base at Present Rates	3.49%	2.84%	1.02%	8.16%	5.57%	(0.26%)	9.57%	5.36%	8.69%	7.05%	(2.35%)	8.35%	6.04%	13.52%	25.26%	N/A	N/A	11
12	Rate of Return on Rate Base at Proposed Rates	5.48%	4.81%	3.10%	9.85%	7.49%	2.17%	11.52%	7.43%	10.44%	8.97%	(0.65%)	10.19%	7.81%	15.23%	27.11%	N/A	N/A	12

[1] Class margin required to earn proposed overall system rate of return on rate base. Schedule G-2, Sheet 1.
[2] Schedule H-1, Sheet 2.
[3] Percentage increase in margin capped at 2 times the system average percent increase in margin.
[4] Remaining deficiency spread to classes on percentage of proposed increases on Line 7.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF BILLS AND VOLUMES WITH POST TEST YEAR ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Annual Number of Bills: Test Period as Adjusted at 08/31/2021	Annual Number of Bills: Graham County Adjustment [1]	Annual Number of Bills: Post Test Period	Annual Sales Volumes (Therms): 12 Months Ended 08/31/2021	Annual Sales Volumes (Therms): Graham County Adjustment [1]	Annual Sales Volumes (Therms): Post Test Period	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
	Residential Service								
1	Single-Family Residential Gas Service	G-5	12,175,043	60,851	12,235,894	289,445,329	1,767,280	291,212,609	1
2	Multi-Family Residential Gas Service	G-6	451,619		451,619	6,174,345		6,174,345	2
3	Single-Family Low Income Residential Gas Service	G-10	505,129		505,129	11,067,918		11,067,918	3
4	Multi-Family Low Income Residential Gas Service	G-11	38,534		38,534	579,804		579,804	4
5	Special Residential Gas Service for Air Conditioning	G-15	600		600	55,580		55,580	5
6	Master-Metered Mobile Home Park Gas Service	G-20	1,164		1,164	1,255,848		1,255,848	6
	General Gas Service	G-25							
7	Small		205,424	1,483	206,907	3,605,870	28,098	3,633,968	7
8	Medium		197,648	1,464	199,112	47,090,871	255,380	47,346,251	8
9	Large-1		81,248	228	81,476	100,040,903	261,167	100,302,070	9
10	Large-2		4,745	36	4,781	32,670,038	278,394	32,948,432	10
11	Transportation Eligible		2,472	0	2,472	128,296,499	0	128,296,499	11
12	Optional Gas Service	G-30	24		24	12,580,646		12,580,646	12
13	Air Conditioning Gas Service	G-40	228		228	321,676		321,676	13
14	Street Lighting Gas Service	G-45	48		48	9,324		9,324	14
	Gas Service for Compression on Customer's Premises	G-55							
15	Residential		336		336	10,686		10,686	15
16	Small		108		108	10,153		10,153	16
17	Large		288		288	14,105,944		14,105,944	17
18	Electric Generation Gas Service	G-60	300		300	14,250,039		14,250,039	18
19	Biogas and Renewable Natural Gas Service	G-65	12		12	380,867		380,867	19
20	Small Essential Agriculture User Gas Service	G-75	804		804	4,663,085		4,663,085	20
21	Natural Gas Engine Gas Service	G-80	4,983	48	5,031	17,322,965	8,548	17,331,513	21
22	Total Gas Sales		13,670,757	64,110	13,734,867	683,938,390	2,598,867	686,537,257	22
23	Transportation of Customer-Secured Natural Gas	T-1	0		0	0		0	23
24	Potential Bypass/Standby Gas Service	B-1	264		264	39,840,288		39,840,288	24
25	Other Operating Revenue								25
26	Total Arizona		13,671,021	64,110	13,735,131	723,778,678	2,598,867	726,377,545	26

[1] Addtion of Graham County Utilities bills and volumes.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Single-Family Residential Gas Service	G-5						Single-Family Residential Gas Service	G-5					
1	Basic Service Charge per Month		$ 10.70				$ 10.70	Basic Service Charge per Month		$ 10.70			$ 10.70	1
	Commodity Charge per Therm							Commodity Charge per Therm						
2	All Usage		$ 0.88219	$ 0.13191	$ 0.37836	$ 0.00658	$ 1.39904	All Usage		$ 1.10224	$ 0.13191	$ 0.37836	$ 1.61251	2
	Multi-Family Residential Gas Service	G-6						Multi-Family Residential Gas Service	G-6					
3	Basic Service Charge per Month		$ 9.70				$ 9.70	Basic Service Charge per Month		$ 9.70			$ 9.70	3
	Commodity Charge per Therm							Commodity Charge per Therm						
4	All Usage		$ 0.97680	$ 0.13191	$ 0.37836	$ 0.00658	$ 1.49365	All Usage		$ 1.30601	$ 0.13191	$ 0.37836	$ 1.81628	4
	Single-Family Low Income Residential Gas Service	G-10						Single-Family Low Income Residential Gas Service	G-10					
5	Basic Service Charge per Month		$ 7.50				$ 7.50	Basic Service Charge per Month		$ 7.50			$ 7.50	5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	Summer (May - October)							All Usage		$ 0.61007	$ 0.11512	$ 0.37836	$ 1.10355	6
7	All Usage		$ 0.88219	$ 0.11512	$ 0.37836	$ 0.00658	$ 1.38225							7
	Winter (November - April)													
8	First 150 Therms		$ 0.46811	$ 0.11512	$ 0.37836	$ 0.00658	$ 0.96818							8
9	Over 150 Therms		0.88219	$ 0.11512	$ 0.37836	$ 0.00658	1.38225							9
	Multi-Family Low Income Residential Gas Service	G-11						Multi-Family Low Income Residential Gas Service	G-11					
10	Basic Service Charge per Month		$ 7.50				$ 7.50	Basic Service Charge per Month		$ 7.50			$ 7.50	10
	Commodity Charge per Therm							Commodity Charge per Therm						
11	Summer (May - October)							All Usage		$ 0.59832	$ 0.11512	$ 0.37836	$ 1.09180	11
12	All Usage		$ 0.97680	$ 0.11512	$ 0.37836	$ 0.00658	$ 1.47686							12
	Winter (November - April)													
13	First 150 Therms		$ 0.53434	$ 0.11512	$ 0.37836	$ 0.00658	1.03440							13
14	Over 150 Therms		0.97680	$ 0.11512	$ 0.37836	$ 0.00658	1.47686							14
	Special Residential Gas Service for Air Conditioning	G-15						Special Residential Gas Service for Air Conditioning	G-15					
15	Basic Service Charge per Month		$ 10.70				$ 10.70	Basic Service Charge per Month		$ 10.70			$ 10.70	15
	Commodity Charge per Therm							Commodity Charge per Therm						
	Summer (May - October)							Summer (May - October)						
16	First 15 Therms		$ 0.88219	$ 0.11853	$ 0.37836		$ 1.37908	First 15 Therms		$ 1.10224	$ 0.11853	$ 0.37836	$ 1.59913	16
17	Over 15 Therms		0.14881	$ 0.11853	$ 0.37836		0.64570	Over 15 Therms		0.16952	$ 0.11853	$ 0.37836	0.66641	17
	Winter (November - April)							Winter (November - April)						
18	All Usage		$ 0.88219	$ 0.11853	$ 0.37836		$ 1.37908	All Usage		$ 1.10224	$ 0.11853	$ 0.37836	$ 1.59913	18
	Master-Metered Mobile Home Park Gas Service	G-20						Master-Metered Mobile Home Park Gas Service	G-20					
19	Basic Service Charge per Month		$ 66.00				$ 66.00	Basic Service Charge per Month		$ 66.00			$ 66.00	19
	Commodity Charge per Therm							Commodity Charge per Therm						
20	All Usage		$ 0.50580	$ 0.13191	$ 0.37836		$ 1.01607	All Usage		$ 0.57076	$ 0.13191	$ 0.37836	$ 1.08103	20

SCHEDULE H-3
SHEET 1 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	General Gas Service	G-25						General Gas Service	G-25					
	Basic Service Charge per Month							Basic Service Charge per Month						
1	Small		$ 27.50				$ 27.50	Small		$ 27.50			$ 27.50	1
2	Medium		43.50				43.50	Medium		43.50			43.50	2
3	Large-1		80.00				80.00	Large-1		80.00			80.00	3
4	Large-2		470.00				470.00	Large-2		470.00			470.00	4
5	Transportation Eligible		950.00				950.00	Transportation Eligible		950.00			950.00	5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	Small, All Usage		$ 0.94947	$ 0.11853	$ 0.37836	$ 0.00658	$ 1.44636	Small, All Usage		$ 1.48314	$ 0.11853	$ 0.37836	$ 1.98003	6
7	Medium, All Usage		0.45392	$ 0.11853	$ 0.37836	$ 0.00658	0.95081	Medium, All Usage		0.63165	$ 0.11853	$ 0.37836	1.12854	7
8	Large-1, All Usage		0.42563	$ 0.11853	$ 0.37836	$ 0.00658	0.92252	Large-1, All Usage		0.49928	$ 0.11853	$ 0.37836	0.99617	8
9	Large-2, All Usage		0.31428	$ 0.11853	$ 0.37836	$ 0.00658	0.81117	Large-2, All Usage		0.37829	$ 0.11853	$ 0.37836	0.87518	9
10	Transportation Eligible, All Usage		0.12162	$ 0.11853	$ 0.37836		0.61851	Transportation Eligible, All Usage		0.12773	$ 0.11853	$ 0.37836	0.62462	10
	Demand Charge per Month							Demand Charge per Month						
11	Transportation Eligible		$ 0.086075				$ 0.086075	Transportation Eligible		$ 0.102445			$ 0.102445	11
	Optional Gas Service	G-30						Optional Gas Service	G-30					
12	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.				12
	Commodity Charge per Therm							Commodity Charge per Therm						
13	All Usage		As Specified on A.C.C. Sheet No. 28.					All Usage		As Specified on A.C.C. Sheet No. 28.				13
	Air Conditioning Gas Service	G-40						Air Conditioning Gas Service	G-40					
14	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 32.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 32.				14
	Commodity Charge per Therm							Commodity Charge per Therm						
15	All Usage		$ 0.14881	$ 0.11853	$ 0.37836		$ 0.64570	All Usage		$ 0.16952	$ 0.11853	$ 0.37836	$ 0.66641	15
	Street Lighting Gas Service	G-45						Street Lighting Gas Service	G-45					
	Commodity Charge per Therm of Rated Capacity							Commodity Charge per Therm of Rated Capacity						
16	All Usage		$ 0.82846	$ 0.11853	$ 0.37836		$ 1.32535	All Usage		$ 1.05805	$ 0.11853	$ 0.37836	$ 1.55494	16
	Compression Gas Service	G-50						Compression Gas Service	G-50					
17	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 36.				17
	Commodity Charge per Therm							Commodity Charge per Therm						
18	All Usage		As Specified on A.C.C. Sheet No. 28.					All Usage		As Specified on A.C.C. Sheet No. 36.				18

SCHEDULE H-3
SHEET 2 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Gas Service for Compression on Customer's Premises	G-55						Gas Service for Compression on Customer's Premis	G-55					
	Basic Service Charge per Month							Basic Service Charge per Month						
1	Small		$ 27.50				$ 27.50	Small		$ 27.50			$ 27.50	1
2	Large		250.00				250.00	Large		250.00			250.00	2
3	Residential		10.70				10.70	Residential		10.70			10.70	3
	Commodity Charge per Therm							Commodity Charge per Therm						
4	All Usage		$ 0.23285	$ 0.11853	$ 0.37836		$ 0.72974	All Usage		$ 0.26023	$ 0.11853	$ 0.37836	$ 0.75712	4
	Electric Generation Gas Service	G-60						Electric Generation Gas Service	G-60					
5	Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 40.				Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 40.			5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	All Usage		$ 0.16839	$ 0.11853	$ 0.37836		$ 0.66528	All Usage		$ 0.19175	$ 0.11853	$ 0.37836	$ 0.68864	6
	Biogas and Renewable Natural Gas Service	G-65						Biogas and Renewable Natural Gas Service	G-65					
7	Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 41A.				Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 41A.			7
	Commodity Charge per Therm							Commodity Charge per Therm						
8	All Usage			As Specified on A.C.C. Sheet No. 41A.				All Usage			As Specified on A.C.C. Sheet No. 41A.			8
	Small Essential Agriculture User Gas Service	G-75						Small Essential Agriculture User Gas Service	G-75					
9	Basic Service Charge per Month		$ 120.00				$ 120.00	Basic Service Charge per Month		$ 120.00			$ 120.00	9
	Commodity Charge per Therm							Commodity Charge per Therm						
10	All Usage		$ 0.29952	$ 0.11853	$ 0.37836		$ 0.79641	All Usage		$ 0.32721	$ 0.11853	$ 0.37836	$ 0.82410	10
	Natural Gas Engine Gas Service	G-80						Natural Gas Engine Gas Service	G-80					
	Basic Service Charge per Month							Basic Service Charge per Month						
11	Off-Peak Season (October - March)		$ 0.00				$ 0.00	Off-Peak Season (October - March)		$ 0.00			$ 0.00	11
12	Peak Season (April - September)		125.00				125.00	Peak Season (April - September)		125.00			125.00	12
	Commodity Charge per Therm							Commodity Charge per Therm						
13	All Usage		$ 0.22967	$ 0.02853	$ 0.43302		$ 0.69122	All Usage		$ 0.24458	$ 0.02853	$ 0.43302	$ 0.70613	13
	Service Establishment Charge							Service Establishment Charge						
14	Normal						$ 35.00	Normal					$ 35.00	14
15	Expedited						$ 50.00	Expedited					$ 50.00	15

[1] Present Margin rates effective January 1, 2021.
[2] Present Rate Adjustment, including DOT of $.00304, and Gas Cost rates effective November 1, 2021.
[3] Calculated rates to recover proposed Margin per Schedule H-1, Sheet 3 of 4.
[4] Rate Adjustment and Gas Cost rates effective November 1, 2021.

SCHEDULE H-3
SHEET 3 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

			Present Rates							Proposed Rates				
Line No.	Description	Schedule	Delivery Charge [1]	Rate Adjustment [2]	Gas Cost [2]	Test Year DCA Adjustment	Currently Effective Tariff Rate	Description	Schedule	Delivery Charge [3]	Rate Adjustment [4]	Gas Cost [4]	Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Residential Gas Service	GCU						Single-Family Residential Gas Service	G-5					
1	Basic Service Charge per Month		$ 19.00				$ 19.00	Basic Service Charge per Month		$ 10.70			$ 10.70	1
	Commodity Charge per Therm							Commodity Charge per Therm						
2	All Usage		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720	All Usage		$ 1.10224	$ 0.13191	$ 0.37836	$ 1.61251	2
	Low Income Residential Gas Service	GCU						Single-Family Low Income Residential Gas Service	G-10					
3	Basic Service Charge per Month		$ 13.30				$ 13.30	Basic Service Charge per Month		$ 7.50			$ 7.50	3
	Commodity Charge per Therm							Commodity Charge per Therm						
	Summer (May - October)							All Usage		$ 0.61007	$ 0.11512	$ 0.37836	$ 1.10355	
4	All Usage		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720							4
	Winter (November - April)													
5	First 150 Therms		$ 0.12384	$ -	$ 0.46920	$ 0.00000	$ 0.59304							5
6	Over 150 Therms		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720							6
	Commercial Gas Service	GCU						General Gas Service	G-25					
	Basic Service Charge per Month							Basic Service Charge per Month						
7	All Customers		$ 42.00				$ 42.00	Small		$ 27.50			$ 27.50	7
8								Medium		43.50			43.50	8
9								Large-1		80.00			80.00	9
10								Large-2		470.00			470.00	10
	Commodity Charge per Therm							Commodity Charge per Therm						
11	All Customers		$ 0.37994	$ -	$ 0.46920	$ 0.00000	$ 0.84914	Small, All Usage		$ 1.48314	$ 0.11853	$ 0.37836	$ 1.98003	11
12								Medium, All Usage		0.63165	$ 0.11853	$ 0.37836	1.12854	12
13								Large-1, All Usage		0.49928	$ 0.11853	$ 0.37836	0.99617	13
14								Large-2, All Usage		0.37829	$ 0.11853	$ 0.37836	0.87518	14
	Natural Gas Engine Gas Service	GCU						Natural Gas Engine Gas Service	G-80					
	Basic Service Charge per Month							Basic Service Charge per Month						
15	Off-Peak Season (October - March)		$ 30.00				$ 30.00	Off-Peak Season (October - March)		$ 0.00			$ 0.00	15
16	Peak Season (April - September)		30.00				30.00	Peak Season (April - September)		125.00			125.00	16
	Commodity Charge per Therm							Commodity Charge per Therm						
17	All Usage		$ 0.19050	$ -	$ 0.46920		$ 0.65970	All Usage		$ 0.24458	$ 0.02853	$ 0.43302	$ 0.70613	17
								Service Establishment Charge						
18								Normal					$ 35.00	18
19								Expedited					$ 50.00	19

[1] Present Margin rates effective April 1, 2017.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
SINGLE-FAMILY RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 21.89	$ 23.60	$ 1.71	7.81%	1
2	Average Summer Use [1]	11	26.09	28.44	2.35	9.01%	2
3	125 Percent Average Use	14	30.29	33.28	2.99	9.87%	3
	Winter Season Bills						
4	75 Percent Average Use	27	$ 48.47	$ 54.24	$ 5.77	11.90%	4
5	Average Winter Use [1]	36	61.07	68.75	7.68	12.58%	5
6	125 Percent Average Use	45	73.66	83.26	9.60	13.03%	6
7	Annual Average Use	24	44.28	49.40	5.12	11.56%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 10.70
Commodity Charge	
All Usage	$ 1.39904

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 10.70
Commodity Charge	
All Usage	$ 1.61251

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MULTI-FAMILY RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	7	$ 20.16	$ 22.41	$ 2.25	11.16%	1
2	Average Summer Use [1]	9	23.14	26.05	2.91	12.58%	2
3	125 Percent Average Use	11	26.13	29.68	3.55	13.59%	3
	Winter Season Bills						
4	75 Percent Average Use	14	$ 30.61	$ 35.13	$ 4.52	14.77%	4
5	Average Winter Use [1]	18	36.59	42.39	5.80	15.85%	5
6	125 Percent Average Use	23	44.05	51.47	7.42	16.84%	6
7	Annual Average Use	14	30.12	34.53	4.41	14.64%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 9.70
Commodity Charge	
All Usage	$ 1.49365

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 9.70
Commodity Charge	
All Usage	$ 1.81628

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 18.56	$ 16.33	$(2.23)	-12.02%	1
2	Average Summer Use [1]	10	21.32	18.54	(2.78)	-13.04%	2
3	125 Percent Average Use	13	25.47	21.85	(3.62)	-14.21%	3
	Winter Season Bills						
4	75 Percent Average Use	26	$ 32.67	$ 36.19	$ 3.52	10.77%	4
5	Average Winter Use [1]	34	40.42	45.02	4.60	11.38%	5
6	125 Percent Average Use	43	49.13	54.95	5.82	11.85%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 7.50
Commodity Charge	
Summer (May-October)	
All Usage	$ 1.38225
Winter (November-April)	
First 150 Therms	$ 0.96818
Over 150 Therms	1.38225

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 7.50
Commodity Charge	
All Usage	$ 1.10355

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	At Currently Effective Rates	At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 19.31	$ 16.23	$(3.08)	-15.95%	1
2	Average Summer Use [1]	10	22.27	18.42	(3.85)	-17.29%	2
3	125 Percent Average Use	13	26.70	21.69	(5.01)	-18.76%	3
	Winter Season Bills						
4	75 Percent Average Use	15	$ 23.02	$ 23.88	$ 0.86	3.74%	4
5	Average Winter Use [1]	20	28.19	29.34	1.15	4.08%	5
6	125 Percent Average Use	25	33.36	34.79	1.43	4.29%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 7.50
Commodity Charge	
Summer (May-October)	
All Usage	$ 1.47686
Winter (November-April)	
First 150 Therms	$ 1.03440
Over 150 Therms	1.47686

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 7.50
Commodity Charge	
All Usage	$ 1.09180

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MASTER-METERED MOBILE HOME PARK GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	211	$ 280.39	$ 294.10	$ 13.71	4.89%	1
2	Average Summer Use [1]	281	351.52	369.77	18.25	5.19%	2
3	125 Percent Average Use	351	422.64	445.44	22.80	5.39%	3
	Winter Season Bills						
4	75 Percent Average Use	678	$ 754.90	$ 798.94	$ 44.04	5.83%	4
5	Average Winter Use [1]	904	984.53	1,043.25	58.72	5.96%	5
6	125 Percent Average Use	1,130	1,214.16	1,287.56	73.40	6.05%	6
7	Annual Average Use	592	667.51	705.97	38.46	5.76%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 66.00
Commodity Charge	
All Usage	$ 1.01607

Proposed Tariff Rates [3]	
Basic Service Charge	$ 66.00
Commodity Charge	
All Usage	$ 1.08103

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - SMALL

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	6	$ 36.18	$ 39.38	$ 3.20	8.84%	1
2	Average Summer Use [1]	8	39.07	43.34	4.27	10.93%	2
3	125 Percent Average Use	10	41.96	47.30	5.34	12.73%	3
	Winter Season Bills						
4	75 Percent Average Use	20	$ 56.43	$ 67.10	$ 10.67	18.91%	4
5	Average Winter Use [1]	27	66.55	80.96	14.41	21.65%	5
6	125 Percent Average Use	34	76.68	94.82	18.14	23.66%	6
7	Annual Average Use	18	53.53	63.14	9.61	17.95%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 1.44636

Proposed Tariff Rates [3]	
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 1.98003

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - MEDIUM

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	129	$ 166.15	$ 189.08	$ 22.93	13.80%	1
2	Average Summer Use [1]	172	207.04	237.61	30.57	14.77%	2
3	125 Percent Average Use	215	247.92	286.14	38.22	15.42%	3
	Winter Season Bills						
4	75 Percent Average Use	227	$ 259.33	$ 299.68	$ 40.35	15.56%	4
5	Average Winter Use [1]	302	330.64	384.32	53.68	16.24%	5
6	125 Percent Average Use	378	402.91	470.09	67.18	16.67%	6
7	Annual Average Use	238	269.79	312.09	42.30	15.68%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 43.50
Commodity Charge	
All Usage	$ 0.95081
Proposed Tariff Rates [3]	
Basic Service Charge	$ 43.50
Commodity Charge	
All Usage	$ 1.12854

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - LARGE-1

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	675	$ 702.70	$ 752.41	$ 49.71	7.07%	1
2	Average Summer Use [1]	900	910.27	976.55	66.28	7.28%	2
3	125 Percent Average Use	1,125	1,117.84	1,200.69	82.85	7.41%	3
	Winter Season Bills						
4	75 Percent Average Use	1,167	$ 1,156.58	$ 1,242.53	$ 85.95	7.43%	4
5	Average Winter Use [1]	1,556	1,515.44	1,630.04	114.60	7.56%	5
6	125 Percent Average Use	1,945	1,874.30	2,017.55	143.25	7.64%	6
7	Annual Average Use	1,226	1,211.01	1,301.30	90.29	7.46%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 80.00
Commodity Charge	
All Usage	$ 0.92252

Proposed Tariff Rates [3]	
Basic Service Charge	$ 80.00
Commodity Charge	
All Usage	$ 0.99617

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

Southwest Gas Corporation

DOCKET NO. G-01551A-21-0368

2021 General Rate Case

Schedules

Vol. 3 of 3

December 3, 2021

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ARIZONA
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SCHEDULE A

SOUTHWEST GAS CORPORATION
ARIZONA
INCREASE IN GROSS REVENUE REQUIREMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Original Cost	Reproduction Cost New Less Depreciation	Fair Value	Line No.
	(a)	(b)	(c)	(d)	(e) [(c) + (d)] / 2	
1	Adjusted Rate Base	Sch B-1, Sh 1, Ln 15	$ 2,642,067,938	$ 4,186,764,441	$ 3,414,416,189	1
2	Adjusted Operating Income	Sch C-1, Sh 1, Ln 19(e)	119,106,029	119,106,029	119,106,029	2
3	Current Rate of Return	Ln 2 / Ln 1	4.51%	2.84%	3.49%	3
4	Required Operating Income	Sch A-1, Sh 2, Ln 19(g)	$ 187,124,462	$ 187,124,462	$ 187,124,462	4
5	Required Rate of Return	Ln 4 / Ln 1	7.08%	4.47%	5.48%	5
6	Operating Income Deficiency	Ln 4 - Ln 2	$ 68,018,433	$ 68,018,433	$ 68,018,433	6
7	Gross Revenue Conversion Factor	Sch C-3, Sh 1, Ln 8(c)	1.3339	1.3339	1.3339	7
8	Increase in Gross Revenue Requirements	Ln 6 * Ln 7	90,730,183	90,730,183	$ 90,730,183	8

Note: Spread of revenue increase by customer classification is shown on Schedule A-1, Sheet 3.

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF THE OVERALL RESULTS OF OPERATIONS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Deficiency	Adjusted for Deficiency	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			Sch C-1, Sh 1, Col (c)	Sch C-1, Sh 1, Col (d)	(c) + (d)		(e) + (f)	
1	Operating Revenue		$ 722,593,622	$ (143,408,188)	$ 579,185,433	$ 90,730,183	$ 669,915,616	1
2	Gas Cost		157,575,309	(157,575,309)	0	0	0	2
3	Operating Margin	Ln 1 - Ln 2	$ 565,018,312	$ 14,167,121	$ 579,185,433	$ 90,730,183	$ 669,915,616	3
	Operating Expenses							
4	Other Gas Costs		$ 1,306,683	$ 28,691	$ 1,335,375	$ 0	$ 1,335,375	4
5	Storage		1,973,882	27,219	2,001,101	0	2,001,101	5
6	Distribution		109,198,435	2,126,260	111,324,695	0	111,324,695	6
7	Customer Accounts		28,049,178	(1,077,005)	26,972,173	194,660	27,166,834	7
8	Customer Service & Info.		188,705	(20,780)	167,925	0	167,925	8
9	Sales		3,425	(3,628)	(203)	0	(203)	9
	Administrative & General							
10	Direct		4,455,155	810,190	5,265,344	0	5,265,344	10
11	System Allocable		93,755,791	(2,895,888)	90,859,903	0	90,859,903	11
	Depreciation & Amortization							
12	Direct		112,464,317	7,427,002	119,891,319	0	119,891,319	12
13	System Allocable		13,602,014	3,051,686	16,653,700	0	16,653,700	13
14	Regulatory Amortizations		2,620,521	1,695,436	4,315,957	0	4,315,957	14
15	Taxes Other Than Income		51,219,448	18,088,148	69,307,596	0	69,307,596	15
16	Interest on Customer Deposits		803,794	(766,669)	37,125	0	37,125	16
17	Income Taxes		23,660,630	(11,713,236)	11,947,394	22,517,090	34,464,483	17
18	Total Operating Expenses	Sum Lns 4-17	$ 443,301,978	$ 16,777,427	$ 460,079,404	$ 22,711,750	$ 482,791,154	18
19	Net Operating Income	Ln 3 - Ln 18	$ 121,716,335	$ (2,610,306)	$ 119,106,029	$ 68,018,433	$ 187,124,462	19
	Rate Base							
	Gross Plant in Service							
20	Direct	Sch B-1	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	$ 1,268,522,852	$ 5,943,147,875	20
21	System Allocable	Sch B-1	292,288,904	(13,944,432)	278,344,472	7,048,873	285,393,345	21
22	Total Gross Plant in Service	Ln 20 + Ln 21	$ 4,783,540,551	$ 169,428,943	$ 4,952,969,495	$ 1,275,571,725	$ 6,228,541,219	22
	Accumulated Depreciation							
23	Direct	Sch B-1	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	$ 437,059,287	$ 1,971,783,582	23
24	System Allocable	Sch B-1	150,488,680	(9,299,788)	141,188,892	1,780,360	142,969,252	24
25	Total Accumulated Depreciati	Ln 23 + Ln 24	$ 1,679,021,624	$ (3,108,437)	$ 1,675,913,187	$ 438,839,647	$ 2,114,752,833	25
26	Net Plant in Service	Ln 22 - Ln 25	$ 3,104,518,927	$ 172,537,381	$ 3,277,056,308	$ 836,732,078	$ 4,113,788,386	26
	Other Rate Base							
	Allowance for Working Capital							
27	Cash Working Capital	Sch B-1, Sh 2, Ln 8	$ (16,619,324)	$ 0	$ (16,619,324)	$ 0	$ (16,619,324)	27
28	Materials and Supplies	Sch B-1, Sh 2, Ln 9	30,847,268	0	30,847,268	0	30,847,268	28
29	Prepayments	Sch B-1, Sh 2, Ln 10	14,121,283	0	14,121,283	0	14,121,283	29
30	Customer Deposits	Sch B-1, Sh 2, Ln 11	(33,750,043)	0	(33,750,043)	0	(33,750,043)	30
31	Customer Advances	Sch B-1, Sh 2, Ln 12	(59,445,400)	0	(59,445,400)	0	(59,445,400)	31
32	Deferred Taxes	Sch B-1, Sh 2, Ln 13	(568,880,614)	(1,261,540)	(570,142,154)	(64,383,826)	(634,525,981)	32
33	Total Other Rate Base	Sum Lns 27-32	$ (633,726,830)	$ (1,261,540)	$ (634,988,370)	$ (64,383,826)	$ (699,372,197)	33
34	Total Rate Base	Ln 26 + Ln 33	$ 2,470,792,097	$ 171,275,840	$ 2,642,067,938	$ 772,348,252	$ 3,414,416,189	34
35	Rate of Return	Ln 19 / Ln 34	4.93%		4.51%		5.48%	35

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SPREAD OF REVENUE INCREASE BY CUSTOMER CLASS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Present Schedule Number	Increase/(Decrease) [1] Dollars	Increase/(Decrease) [1] Percent	Line No.
	(a)	(b)	(c)	(d)	
	Residential Service				
1	Single-Family Residential Gas Service	G-5	$ 65,653,790	13.22%	1
2	Multi-Family Residential Gas Service	G-6	2,055,520	16.15%	2
3	Single-Family Low Income Residential Gas Service	G-10	2,419,908	12.49%	3
4	Multi-Family Low Income Residential Gas Service	G-11	183,323	15.71%	4
5	Special Residential Gas Service for Air Conditioning	G-15	9,196	14.08%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	81,580	6.87%	6
	General Gas Service				
7	Small	G-25(S)	1,340,506	12.06%	7
8	Medium	G-25(M)	6,591,637	13.25%	8
9	Large-1	G-25(L1)	5,520,715	6.28%	9
10	Large-2	G-25(L2)	1,779,545	7.78%	10
11	Transportation Eligible	G-25(TE)	3,741,450	8.85%	11
12	Optional Gas Service	G-30	0	0.00%	12
13	Air Conditioning Gas Service	G-40	6,661	4.70%	13
14	Street Lighting Gas Service	G-45	2,140	19.02%	14
	Gas Service for Compression on Customer's Premises				
15	Residential	G-55 (R)	293	2.89%	15
16	Small	G-55 (S)	278	3.03%	16
17	Large	G-55 (L)	386,221	5.67%	17
18	Electric Generation Gas Service	G-60	332,881	10.76%	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0.00%	
20	Small Essential Agriculture User Gas Service	G-75	129,121	5.06%	20
21	Natural Gas Engine Gas Service	G-80	259,999	2.20%	21
22	Total Sales and Full Margin Transportation		$ 90,494,764	11.67%	22
23	Potential Bypass/Standby Gas Service	B-1	0	0.00%	23
24	Other Operating Revenue		0	0.00%	24
25	Total Arizona Revenue		$ 90,494,764	11.47%	25

[1] Schedule H-1, Sheet 1, includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY RESULTS OF OPERATIONS

Line No.	Description	Prior Years		Test Year		Projected Year		Line No.
		Year Ended 2019	Year Ended 2020	Actual 08/31/21	Adjusted 08/31/21	Present Rates 08/31/22	Proposed Rates 08/31/22	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
		Sch E-2, Sh 1	Sch E-2, Sh 1	Sch E-2, Sh 1	Sch A-1, Sh 2 Sch C-1, Sh 16	Sch A-1, Sh 2 Sch F-1, Sh 1	Sch A-1, Sh 2 Sch F-1, Sh 1	
1	Operating Revenues	$ 635,764,607	$ 603,406,659	$ 722,593,620	$ 736,760,742	$ 733,328,970	$ 827,490,925	1
2	Operating Expenses and Taxes	518,160,685	492,428,775	600,877,287	617,654,713	613,647,351	640,366,464	2
3	Net Operating Income	$ 117,603,922	$ 110,977,884	$ 121,716,333	$ 119,106,029	$ 119,681,619	$ 187,124,462	3
4	Other Income and Deductions	0	0	0	0	0	0	4
5	Interest Expense	52,165,576	55,794,384	50,243,557	53,726,452	50,243,557	53,726,452	5
6	Net Income	$ 65,438,346	$ 55,183,500	$ 71,472,776	$ 65,379,577	$ 69,438,062	$ 133,398,010	6

SCHEDULE A-2
SHEET 1 OF 2

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY RESULTS OF OPERATIONS [1]

Line No.	Description	Prior Years Year Ended 2019	Prior Years Year Ended 2020	Test Year 12 Months Ended 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-2, Sh 2	Sch E-2, Sh 2	Sch E-2, Sh 2	
1	Gross Revenues	$ 1,368,939,322	$ 1,350,585,255	$ 1,426,586,982	1
2	Revenue Deductions & Operating Expenses	1,133,568,149	1,102,717,806	1,159,762,501	2
3	Operating Income	$ 235,371,174	$ 247,867,450	$ 266,824,481	3
4	Other Income and (Deductions)	23,444,854	12,658,846	20,639,306	4
5	Income Before Interest Deductions	$ 258,816,028	$ 260,526,295	$ 287,463,788	5
6	Interest Expense	$ 100,203,047	$ 104,610,314	$ 99,049,167	6
7	Allowance for Debt Funds Used During Construction	(4,557,906)	(3,202,278)	(1,986,649)	7
8	Net Interest Expense	$ 95,645,141	$ 101,408,036	$ 97,062,517	8
9	Net Income	$ 163,170,886	$ 159,118,260	$ 190,401,270	9
10	Preferred and Preference Dividend Requirements	0	0	0	10
11	Net Income Applicable to Common Stock	$ 163,170,886	$ 159,118,260	$ 190,401,270	11
12	Weighted Average Shares of Common Stock Outstanding	54,245,358	55,997,806	57,888,515	12
13	Earnings per Common Share	$ 3.01	$ 2.84	$ 3.29	13
14	Dividends Paid per Common Share	2.16	2.26	2.33	14
15	Dividend Pay-Out Ratio	71.64%	79.36%	70.84%	15
16	Return on Average Invested Capital	8.31%	7.24%	7.80%	16
17	Return on Year-End Invested Capital	7.78%	6.93%	7.36%	17
18	Return on Average Common Equity	8.31%	7.24%	7.80%	18
19	Return on Year-End Common Equity	7.78%	6.93%	7.36%	19
20	Times Bond Interest Earned-Before Income Taxes	3.90	3.73	4.25	20
21	Times Total Interest and Preferred Dividend Earned - After Income Taxes	2.71	2.57	2.96	21

[1] In this proceeding, the Company is requesting rate relief for the Arizona rate jurisdiction of its system only. Projections for the total Company's financial position are not compiled or available.

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY OF CAPITAL STRUCTURE

Line No.	Description	Prior Years At 12/31/2019	Prior Years At 12/31/2020	Test Year At 08/31/2021	Projected At 08/31/2022 [1]	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Capital Amounts					
1	Short-Term Debt	$ 194,000,000	$ 57,000,000	$ 250,000,000	$ -	1
2	Long-Term Debt[2]	2,116,333,121	2,438,205,444	2,576,234,865	2,964,245,608	2
3	Total Debt	2,310,333,121	2,495,205,444	2,826,234,865	2,964,245,608	3
4	Preferred Equity	-	-	-	-	4
5	Common Equity[3]	2,060,303,652	2,294,602,422	2,504,476,216	2,896,476,216	5
6	Total Capital	$ 4,370,636,773	$ 4,789,807,866	$ 5,330,711,081	$ 5,860,721,824	6
	Capitalization Ratios					
7	Short-Term Debt	4.44%	1.19%	4.69%	0.00%	7
8	Long-Term Debt	48.42%	50.90%	48.33%	50.58%	8
9	Total Debt	52.86%	52.09%	53.02%	50.58%	9
10	Preferred Equity	0.00%	0.00%	0.00%	0.00%	10
11	Common Equity	47.14%	47.91%	46.98%	49.42%	11
12	Total	100.00%	100.00%	100.00%	100.00%	12
	Weighted Cost of Capital					
13	Short-Term Debt	0.12%	0.03%	0.05%	0.00%	13
14	Long-Term Debt	2.16%	1.93%	1.88%	1.80%	14
15	Preferred Equity	0.00%	0.00%	0.00%	0.00%	15
16	Common Equity	4.48%	4.55%	4.65%	4.89%	16
17	Total Weighted Cost of Capital	6.76%	6.51%	6.58%	6.69%	17

[1] Estimated
[2] Includes current maturities of long-term debt
[3] Common equity does not reflect accumulated other comprehensive income balances

SCHEDULE A-3
SHEET 1 OF 1

SOUTHWEST GAS CORPORATION
ARIZONA
HISTORICAL AND PROJECTED
CONSTRUCTION EXPENDITURES, PLANT PLACED IN SERVICE, AND GROSS PLANT

Line No.	Description	Actual Year Ended 2019	Actual Year Ended 2020	Actual Test Year Ended 8/31/2021	Projected Year Ending 8/31/2022	Projected Year Ending 8/31/2023	Projected Year Ending 8/30/2024	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
		Company Records	Company Records	Company Records	Company Records	Company Records	Company Records	
	Construction Expenditures							
1	Arizona Direct	$ 476,026,507	$ 312,242,045	$ 248,316,924	$ 319,307,105	$ 288,570,896	$ 342,650,680	1
2	System Allocable [1]	20,729,899	24,713,363	81,031,108	27,918,101	37,654,617	37,946,486	2
3	Total Construction Expenditures	$ 496,756,406	$ 336,955,407	$ 329,348,031	$ 347,225,206	$ 326,225,513	$ 380,597,166	3
	Net Plant Placed in Service							
4	Arizona Direct	$ 965,722,838	$ 263,201,755	$ 108,454,342	$ 279,307,105	$ 248,570,896	$ 302,650,680	4
5	System Allocable [1]	27,619,243	22,582,097	69,121,107	22,292,149	32,028,665	32,320,534	5
6	Total Net Plant Placed in Service	$ 993,342,082	$ 285,783,852	$ 177,575,450	$ 301,599,254	$ 280,599,561	$ 334,971,214	6
	Gross Utility Plant in Service							
7	Arizona Direct	$ 4,119,595,550	$ 4,382,797,305	$ 4,491,251,647	$ 4,770,558,752	$ 5,019,129,648	$ 5,321,780,328	7
8	System Allocable [1]	200,585,700	223,167,796	292,288,904	314,581,053	346,609,718	378,930,252	8
9	Total Gross Utility Plant in Service	$ 4,320,181,250	$ 4,605,965,101	$ 4,783,540,551	$ 5,085,139,806	$ 5,365,739,366	$ 5,700,710,581	9

[1] After 4-Factor allocation to AZ. Schedule C-1,Sheet 17, Ln 9(c)

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
SUMMARY STATEMENT OF CASH FLOWS
CHANGES IN FINANCIAL POSITION
($ THOUSANDS)

Line No.	Description	Prior Years		Test Year	Projected Year Year Ended 1/31/20		Line No.
		Year Ended 2019	Year Ended 2020	12 Months Ended 8/31/2021	At Present Rates	At Proposed Rates	
	(a)	(b)	(c)	(d)	(e)	(f)	
		Sch E-3, Sh 1	Sch E-3, Sh 1	Sch E-3, Sh 1	Sch F-2, Sh 1	Sch F-2, Sh 1	
1	Cash Flows from Operating Activities	$ 367,360	$ 425,903	$ 43,043	$ 52,791	$ 120,809	1
2	Cash Flows from Investing Activities	(759,380)	(679,254)	(580,395)	(305,289)	(305,289)	2
3	Cash Flows from Financing Activities	400,575	253,932	517,310	353,000	353,000	3
4	Increase (Decrease) in Cash and Cash Equivalents	$ 8,555	$ 581	$ (20,042)	$ 100,502	$ 168,521	4

SCHEDULE A-5
SHEET 1 OF 1

SCHEDULE B-1

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF ADJUSTED ORIGINAL COST AND RCND RATE BASE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Adjusted Original Cost Rate Base	Adjusted RCND Rate Base	Fair Value [1] Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Sch B-1, Sh 2, Col (e)	Net Plant: Sch B-3, Sh 1, Col (e)	[(c) + (d)] / 2	
	Gross Plant in Service					
1	Direct		$ 4,674,625,023	$ 7,211,670,727	$ 5,943,147,875	1
2	System Allocable		278,344,472	292,442,218	285,393,345	2
3	Total Gross Plant in Service	Ln 1 + Ln 2	$ 4,952,969,495	$ 7,504,112,944	$ 6,228,541,219	3
	Accumulated Depreciation					
4	Direct		$ 1,534,724,294	$ 2,408,842,869	$ 1,971,783,582	4
5	System Allocable		141,188,892	144,749,611	142,969,252	5
6	Total Accumulated Depreciation	Ln 4 + Ln 5	$ 1,675,913,187	$ 2,553,592,480	$ 2,114,752,833	6
7	Net Plant in Service	Ln 3 - Ln 6	$ 3,277,056,308	$ 4,950,520,464	$ 4,113,788,386	7
	Other Rate Base					
	Allowance for Working Capital					
8	Cash Working Capital		$ (16,619,324)	$ (16,619,324)	$ (16,619,324)	8
9	Materials and Supplies		30,847,268	30,847,268	30,847,268	9
10	Prepayments		14,121,283	14,121,283	14,121,283	10
11	Customer Deposits		(33,750,043)	(33,750,043)	(33,750,043)	11
12	Customer Advances		(59,445,400)	(59,445,400)	(59,445,400)	12
13	Deferred Taxes		(570,142,154)	(698,909,807)	(634,525,981)	13
14	Total Other Rate Base	Sum Lns 8-13	$ (634,988,370)	$ (763,756,023)	$ (699,372,197)	14
15	Total Rate Base	Ln 7 + Ln 14	$ 2,642,067,938	$ 4,186,764,441	$ 3,414,416,189	15
			Sch A-1, Sh 1, Ln 1(c)	Sch A-1, Sh 1, Ln 1(d)	Sch A-1, Sh 1, Ln 1(e)	

[1] 50/50 weighting of original cost rate base and reproduction cost new less depreciation (RCND) rate base.

SOUTHWEST GAS CORPORATION
ARIZONA
RECORDED RATE BASE, AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded at 8/31/2021	Adjustments	Adjusted at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
	Gross Plant in Service					
1	Direct	Sch B-2, Sh 1, Ln 5	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	1
2	System Allocable	Sch B-2, Sh 1, Ln 21	292,288,904	(13,944,432)	278,344,472	2
3	Total Gross Plant in Service	Ln 1 + Ln 2	$ 4,783,540,551	$ 169,428,943	$ 4,952,969,495	3
	Accumulated Depreciation					
4	Direct	Sch B-2, Sh 1, Ln 10	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	4
5	System Allocable	Sch B-2, Sh 1, Ln 22	150,488,680	(9,299,788)	141,188,892	5
6	Total Accumulated Depreciation	Ln 4 + Ln 5	$ 1,679,021,624	$ (3,108,437)	$ 1,675,913,187	6
7	Net Plant in Service	Ln 3 - Ln 6	$ 3,104,518,927	$ 172,537,381	$ 3,277,056,308	7
	Other Rate Base					
	Allowance for Working Capital					
8	Cash Working Capital	Sch B-5, Sh 1	$ (16,619,324)	$ 0	$ (16,619,324)	8
9	Materials and Supplies	Sch B-5, Sh 1	30,847,268	0	30,847,268	9
10	Prepayments	Sch B-5, Sh 1	14,121,283	0	14,121,283	10
11	Customer Deposits	Sch B-6, Sh 1	(33,750,043)	0	(33,750,043)	11
12	Customer Advances	Sch B-6, Sh 2	(59,445,400)	0	(59,445,400)	12
13	Deferred Taxes	Sch B-6, Sh 3	(568,880,614)	(1,261,540)	(570,142,154)	13
14	Total Other Rate Base	Sum Lns 8-13	$ (633,726,830)	$ (1,261,540)	$ (634,988,370)	14
15	Total Rate Base	Ln 7 + Ln 14	$ 2,470,792,098	$ 171,275,840	$ 2,642,067,938	15
			Sch A-1, Sh 2, Col (c)		Sch B-1, Sh 1, Col (c)	

SCHEDULE B-2

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF ORIGINAL COST OF GAS PLANT BY FUNCTION
AT AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded at 8/31/2021	Adjustments	Adjusted at 8/31/2021	Allocation of System Allocable Plant	Adjusted after Allocation at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, 3, 5, 7 Col (c)	WP B-2, Sh 1, 3, 5, 7 Col (d)	(c) + (d)	Lns 12-17(e) * Ln 20	(e) + (f)	
	Direct Gross Plant in Service (GPIS)							
1	Intangible Plant		$ 4,618,980	$ 42,522	$ 4,661,502	$ 221,471,045	$ 226,132,547	1
2	Storage Plant		75,025,126	1,929,350	76,954,475	0	76,954,475	2
3	Distribution Plant		4,213,201,374	156,015,466	4,369,216,840	0	4,369,216,840	3
4	General Plant		198,406,168	25,386,038	223,792,206	56,873,426	280,665,632	4
5	Total Direct Gross Plant in Service	Sum Lns 1-4	$ 4,491,251,647	$ 183,373,376	$ 4,674,625,023	$ 278,344,472	$ 4,952,969,495	5
	Direct Accumulated Depreciation							
6	Intangible Plant		$ 3,198,029	$ 0	$ 3,198,029	$ 129,966,315	$ 133,164,344	6
7	Storage Plant		5,705,215	45,822	5,751,038	0	5,751,038	7
8	Distribution Plant		1,453,228,121	5,121,805	1,458,349,926	0	1,458,349,926	8
9	General Plant		66,401,579	1,023,724	67,425,302	11,222,577	78,647,879	9
10	Total Direct Accumulated Depreciation	Sum Lns 6-9	$ 1,528,532,944	$ 6,191,351	$ 1,534,724,294	$ 141,188,892	$ 1,675,913,187	10
11	Total Direct Net Plant in Service	Ln 5 - Ln 10	$ 2,962,718,704	$ 177,182,025	$ 3,139,900,728	$ 137,155,580	$ 3,277,056,308	11
			Sch B-1, Sh 2, Col (c)	Sch B-1, Sh 2, Col (d)			Sch B-1, Sh 2, Col (e)	
	System Allocable GPIS							
12	Intangible Plant		$ 371,144,066	$ 22,515,607	$ 393,659,673			12
13	General Plant		148,392,717	(47,301,513)	101,091,203			13
14	Total System Allocable GPIS	Ln 12 + Ln 13	$ 519,536,782	$ (24,785,906)	$ 494,750,876			14
	System Allocable Accumulated Depreciation							
15	Intangible Plant		$ 230,010,063	$ 1,002,064	$ 231,012,127			15
16	General Plant		37,480,094	(17,532,222)	19,947,871			16
17	Total Sys. Alloc. Accumulated Depreciation	Ln 15 + Ln 16	$ 267,490,156	$ (16,530,158)	$ 250,959,998			17
18	Total System Allocable Net Plant in Service	Ln 14 - Ln 17	$ 252,046,626	$ (8,255,748)	$ 243,790,878			18
20	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%			20
21	Sys. Alloc. GPIS Allocated to AZ	Ln 14 * Ln 20	$ 292,288,904	$ (13,944,432)	$ 278,344,472			21
22	Sys. Alloc. Accum. Depreciation Allocated to AZ	Ln 17 * Ln 20	150,488,680	(9,299,788)	141,188,892			22
23	System Allocable Net Plant Allocated to AZ	Ln 21 - Ln 22	$ 141,800,224	$ (4,644,644)	$ 137,155,580			23

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY-OWNED VEHICLES
RATE BASE
ADJUSTMENT NO. 6

Line No.	Description	Reference	Remove Company-Owned Vehicles: Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Amortization Expense [1]	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c) + (d) + (e)	(g)	
1	Arizona	Company Records	$ (229,604)	$ 150,114	$ 1,463	$ (78,027)	$ (32,994)	1
2	System Allocable	Company Records	$ (1,690,665)	$ 985,201	$ 12,161	$ (693,303)	$ (175,322)	2
3	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * Ln 3	(1,619,802)	$ 943,907	$ 11,652	$ (664,244)	$ (167,973)	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%	56.26%	56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5	$ (911,293)	$ 531,037	$ 6,555	$ (373,700)	$ (94,501)	6
7	Total Adjustment	Ln 1 + Ln 6	$ (1,140,897)	$ 681,151	$ 8,019	$ (451,727) Sch C-2, Sh 1, Col (g)	$ (127,495)	7

Explanation:
To remove rate base related to company-owned vehicles used by Directors and above.

[1] Removed automatically in the Company's depreciation and annualization adjustment as a result of the adjustment to rate base.

SOUTHWEST GAS CORPORATION
ARIZONA
REMOVAL OF CORPORATE AIRCRAFT RATE BASE
ADJUSTMENT NO. 8

Line No.	Description	Reference	Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	System Allocable - Aircraft						
1	Aircraft 392.21	Company Records	$ (8,221,361)	$ 3,340,911	$	$ (4,880,450)	1
2	Airplane Hanger 390.1	Company Records	(944,271)	549,061		(395,210)	2
3	Deferred Taxes	Company Records			1,846,011	1,846,011	3
4	Total Adjustment	Sum Lns 1-3	$ (9,165,632)	$ 3,889,972	$ 1,846,011	$ (3,429,649)	4
5	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	5
6	Adjustment after MMF Allocation		$ (8,781,459)	$ 3,726,925	$ 1,768,636	$ (3,285,897)	6
7	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	7
8	Adjustment Allocated to AZ	Ln 6 * Ln 7	$ (4,940,407)	$ 2,096,750	$ 995,026	$ (1,848,630)	8

Explanation

To remove assets related to the company owned corporate aircraft

SOUTHWEST GAS CORPORATION
ARIZONA
CORPORATE HEADQUARTERS
RATE BASE
ADJUSTMENT NO. 17

Line No.	Description	Reference	Remove Corporate Headquarters No Longer In-Use Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c) + (d) + (e)	
1	Remove Spring Mountain [1]						1
2	389.00 Land & Land Rights	Company Records	$ (4,216,706)	$ 0	$ 0.00	$ (4,216,706)	2
3	390.10 Structures & Improvements	Company Records	(37,004,287)	8,292,146	0	(28,712,141)	3
4	390.20 Leasehold Improvements	Company Records	(1,241,835)	1,061,241	0	(180,595)	4
5	390.21 Leaseholds, Fully Amortized	Company Records	(543,423)	543,143	0	(280)	5
6	Deferred Taxes	Company Records	0	0	1,129,600	1,129,600	6
7	Total	Sum Lns 2-6	(43,006,251)	9,896,530	1,129,600	(31,980,122)	7
8	Less: MMF Allocation		4.19%	4.19%	4.19%	4.19%	8
9	Adjustment after MMF Allocation		(41,203,665)	$ 9,481,722	$ 1,082,253	$ (30,639,690)	9
10	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%	56.26%	10
11	Adjustment Allocated to AZ	Ln 3 * Ln 6	$ (23,180,984)	$ 5,334,371	$ 608,871	$ (17,237,743)	11
12							12
13							13
14	Allocate 11% of 8360 S Durango to Centuri		$				14
15	389.00 Land & Land Rights	Company Records	3,810,216	$ 0	$	$ 3,810,216	15
16	390.10 Structures & Improvements	Company Records	36,924,619	875,738	39,348	37,839,706	16
17	Total	Sum Lns 15-16	40,734,836	875,738	39,348	41,649,922	17
18	Adjustment	11%	(4,480,832)	96,331	4,328	(4,380,172)	18
19	Less: MMF Allocation	Sch C-1, Sh 17, Ln 6(c)	4.19%	4.19%	4.19%	4.19%	19
20	Adjustment after MMF Allocation		(4,293,020)	$ 92,294	$ 4,147	$ (4,196,580)	20
21	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	21
22	Adjustment Allocated to AZ	Ln 10 * Ln 13	$ (2,415,232)	$ 51,924	$ 2,333	$ (2,360,976)	22
	Total Adjustment	Ln 1 + Ln 7	$ (25,596,217) Sch C-2, Sh 1, Col (g)	$ 5,386,295 Sch C-2, Sh 1, Col (g)	$ 611,204	$ (19,598,718)	

Explanation:
[1] To remove the rate base associated with Spring Mountain campus because it is no longer used and useful.
[2] To remove 11% of rate base associated with 8360 S Durango (Southwest Gas Holdings) for allocation to Centuri.

SOUTHWEST GAS CORPORATION
ARIZONA
POST-TEST YEAR PLANT
ADJUSTMENT NO. 19

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
	Distribution Plant				
1	Land and Land Rights	n/a	374.1	$ 0	1
2	Mains	WP B-2, Adj. 19, Sh 2, Col (h)	376	93,817,414	2
3	Measuring and Reg. Stations	WP B-2, Adj. 19, Sh 2, Col (i)	378	5,229,491	3
4	Services	WP B-2, Adj. 19, Sh 2, Col (j)	380	51,122,724	4
5	Industrial Measuring and Reg. Sta.	n/a	385	31,162	5
6	Total Distribution Plant	Sum Lns 1-5		$ 150,200,790	6
7					7
8	Storage Plant				8
9	Compressor Equipment	WP B-2, Adj. 19, Sh 2, Col (f)	363.3	1,929,350	9
10	Total Storage Plant			1,929,350	10
11					11
12	Structures and Improv - Co. Owned	WP B-2, Adj. 19, Sh 2, Col (l)	390.1	$ 10,380,000	12
13	Office Furniture and Fixtures	WP B-2, Adj. 19, Sh 2, Col (n)	391	800,000	13
14	Computer Software and Hardware	WP B-2, Adj. 19, Sh 2, Col (o)	391.1	0	14
15	Transportation Equipment - Light	n/a	392.11	7,895,681	15
16	Stores Equipment	n/a	393	2,969,255	16
17	Tool, Shop, and Garage Equip.	WP B-2, Adj. 19, Sh 2, Col (r)	394	1,299,669	17
18	Communication Equipment	n/a	397	1,708,700	18
19	Misc. Equipment	WP B-2, Adj. 19, Sh 2, Col (u)	398	150,000	19
20	Total General Plant	Sum Lns 12-19		$ 25,203,305	20
21					21
22	Total Arizona	Ln 6 + Ln 20		$ 177,333,445	22
				Sch C-2, Sh 2, Col (j)	

Explanation: to include direct Arizona non-revenue producing plant projects with an in-service date by August 31, 2021

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
POST-TEST YEAR PLANT
ADJUSTMENT NO. 19

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
	Intangible Plant				
1	Miscellaneous Intangible	WP B-2, Adj. 19, Sh 5, Col (e)	303	$ 22,515,607	1
2	Total Intangible Plant	Ln 1		$ 22,515,607	2
	General Plant				
3	Land and Land Rights	WP B-2, Adj. 19, Sh 6, Col (d)	389.0	$ 0	3
4	Structures and Improv - Co. Owned	WP B-2, Adj. 19, Sh 6, Col (e)	390.1	10,470,421	4
5	Structures and Improv - Leasehold	WP B-2, Adj. 19, Sh 6, Col (f)	390.2	0	5
6	Office Furniture and Fixtures	WP B-2, Adj. 19, Sh 6, Col (g)	391	0	6
7	Computer Software and Hardware	WP B-2, Adj. 19, Sh 6, Col (h)	391.1	1,266,013	7
8	Transportation Equip - Light	WP B-2, Adj. 19, Sh 6, Col (i)	392.11	0	8
9	Laboratory Equipment	WP B-2, Adj. 19, Sh 6, Col (j)	395	0	9
10	Communication Equipment	WP B-2, Adj. 19, Sh 6, Col (k)	397	488,624	10
11	Miscellaneous Equipment	WP B-2, Adj. 19, Sh 6, Col (l)	398	393,773	11
12	Total General Plant	Sum Lns 3-11		$ 12,618,831	12
13	Total System Allocable Plant	Ln 2 + Ln 12		$ 35,134,438	13
14	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	14
15	Amount Allocated to AZ	Ln 13 * Ln 14		$ 19,766,467	15
				Sch C-2, Sh 2, Col (j)	

Explanation: to include estimated System Allocable general plant additions
with an in-service date by August 31, 2021 and Account 303 additions through August 31, 2021.

SOUTHWEST GAS CORPORATION
ARIZONA
GRAHAM COUNTY UTILITIES (GCU)
RATE BASE
ADJUSTMENT NO. 20

Line No.	Description	Reference	Account Number	Estimated Amount	Line No.
	(a)		(b)	(c)	
1	**Distribution Plant**				1
2	Organizational Costs	Company Records	301.00	$ 42,522	2
3					3
4	Land & Land Rights	Company Records	374.00	1,416	4
5	Distribution Mains	Company Records	376.00	2,488,029	5
6	Services	Company Records	380.00	1,329,652	6
7	Meters & Regulators	Company Records	381.00	1,995,578	7
8	Structures & Improvements	Company Records	390.00	8,259	8
9	**Total Distribution Plant**	Sum Lns 4-8		$ 5,822,935	9
					0
10	**General Plant**				10
11	Office Equipment	Company Records	391.00	2,750	11
12	Shop & Garage Equipment	Company Records	394.00	283,018	12
13	Power Equipment	Company Records	396.20	118,310	13
14	**Total General Plant**	Sum Lns 11-13		$ 404,078	14
	Accumulated Depreciation				
15	Distribution Plant	Company Records	108.60	3,450,459	15
16	General Plant	Company Records	108.70	275,332	16
17	**Total Accumulated Depreciation**	Sum Lns 15-16		$ 3,725,791	17
18					18
	Total Net Utility Plant	Ln 14 + Ln 9 +Ln 2 - Ln 17		**$ 2,543,744**	
19					19
20				Sch C-2, Sh 2, Col (k)	20

Explanation:
To add in assets related to the Graham County Utility acquistion in Docket No. G-01551A-21-0092

SOUTHWEST GAS CORPORATION
ARIZONA
REMITTANCE PROCESSING AND PRINT TO MAIL ASSETS
ADJUSTMENT NO. 23

Line No.	Description	Reference	Original Cost	Accum. Reserve	Deferred Taxes	Rate Base	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	System Allocable						
1	Remittance Processing -391	Company Records	$ (400,691)	$ 227,848	$	$ (172,843)	1
2	Remittance Processing -391.1	Company Records	(231,084)	210,885		(20,199)	2
3	Print to Mail Assets - 391	Company Records	(3,358,611)	3,095,337		(263,274)	3
4	Print to Mail Assets - 393	Company Records	(28,869)	27,059		(1,810)	4
5	Print to Mail Assets - 394	Company Records	(3,144)	2,685		(459)	5
6	Deferred Taxes	Company Records			240,814	240,814	6
7	Total Adjustment	Sum Lns 1-3	$ (4,022,399)	$ 3,563,814	$ 240,814	$ (217,771)	7
8	AZ 4-Factor		56.26%	56.26%	56.26%	56.26%	8
	Adjustment Allocated to AZ	Ln 6 * Ln 7	$ (2,262,982)	$ 2,004,985	$ 135,481	$ (122,517)	

To remove the rate base associated with Remittance Processing and Print to Mail functions.

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES ADJUSTMENT
ADJUSTMENT NO. 24

Line No.	Description	Reference	AZ Direct	System Allocable	Line No.
	(a)	(b)	(c)	(d)	
			Company Records	Company Records	
	Tie Deferred Taxes to Recorded Plant at End of Test Year				
1	Deferred Tax Liability - State	Account 282	$ 322,127	$ 280,021	1
2	Deferred Tax Liability - Federal	Account 282	1,747,523	1,519,099	2
3	Excess Deferred Income Taxes	Account 254	0	0	3
4	Subtotal	Sum Lns 1 - 3	$ 2,069,649	$ 1,799,120	4
5	Company-Owned Vehicles - Adjustment No. 6				5
6	Deferred Tax Liability - State	Account 282	$ (228)	$ (1,893)	6
7	Deferred Tax Liability - Federal	Account 282	(1,236)	(10,269)	7
8	Excess Deferred Income Taxes	Account 254	0	0	8
9	Subtotal	Sum Lns 6 - 8	$ (1,463)	$ (12,161)	9
10	Corporate Aircraft - Adjustment No. 8				10
11	Deferred Tax Liability - State	Account 282	$	$ (190,146)	11
12	Deferred Tax Liability - Federal	Account 282		(1,031,534)	12
13	Excess Deferred Income Taxes	Account 254	0	(624,331)	13
14	Subtotal	Sum Lns 11 - 13	$ 0	$ (1,846,011)	14
15	Corporate Headquarters - Adjustment No. 17				15
16	Deferred Tax Liability - State	Account 282	$ 0	$ (131,195)	16
17	Deferred Tax Liability - Federal	Account 282	0	(711,729)	17
18	Excess Deferred Income Taxes	Account 254	0	(291,003)	18
19	Subtotal	Sum Lns 16 - 18	$ 0	$ (1,133,927)	19
20	Remittance Processing and Print to Mail Assets				
21	Deferred Tax Liability - State	Account 282	0	$ (15,768)	
22	Deferred Tax Liability - Federal	Account 282	0	(85,542)	
23	Excess Deferred Income Taxes	Account 254	0	(139,504)	
24		Sum Lns 21 - 23	0	$ (240,814)	
25	Total Deferred Tax Adjustments Excluding Corporate Headquarters				25
26	Deferred Tax Liability - State	Ln 1 + Ln 6	$ 321,899	$ (58,982)	26
27	Deferred Tax Liability - Federal	Ln 2 + Ln 7	1,746,287	(319,975)	27
28	Excess Deferred Income Taxes	Ln 3 + Ln 8	0	(1,054,837)	28
29	Total	Sum Lns 26 - 28	$ 2,068,186	$ (1,433,793)	29
			Sch B-6, Sh 4	Sch B-6, Sh 4	

SCHEDULE B-3

SOUTHWEST GAS CORPORATION
ARIZONA
SUMMARY OF REPRODUCTION COST NEW LESS DEPRECIATION (RCND) OF GAS PLANT BY FUNCTION
AT AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	RCND 8/31/2021	Adjustments	Adjusted at 8/31/2021	Allocation of System Allocable Plant	Adjusted after Allocation at 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
				Sch B-2, Sh 1, Col (d)	(c) + (d)	Lns 12-17(e) * Ln 19	(e) + (f)	
	Direct Gross Plant in Service (GPIS)							
1	Intangible Plant	Sch B-4, Sh 41	$ 4,618,980	$ 42,522	$ 4,661,502	$ 221,471,045	$ 226,132,547	1
2	Storage Plant	Sch B-4, Sh 41	77,222,700	1,929,350	79,152,050	0	79,152,050	2
3	Distribution Plant	Sch B-4, Sh 2-26	6,711,475,589	156,015,466	6,867,491,055	0	6,867,491,055	3
4	General Plant	Sch B-4, Sh 2-26	234,980,082	25,386,038	260,366,120	70,971,172	331,337,292	4
5	Total Direct Gross Plant in Service	Sum Lns 1-4	$ 7,028,297,351	$ 183,373,376	$ 7,211,670,727	$ 292,442,218	$ 7,504,112,944	5
	Direct Accumulated Depreciation							
6	Intangible Plant	Sch B-4, Sh 41	$ 3,198,029	$ 0	$ 3,198,029	$ 129,966,315	$ 133,164,344	6
7	Storage Plant	Sch B-4, Sh 41	5,872,327	45,822	5,918,149	0	5,918,149	7
8	Distribution Plant	Ln 3 * Sch B-4, Sh 41, Ln 13(b)	2,314,939,210	5,121,805	2,320,061,014	0	2,320,061,014	8
9	General Plant	Ln 4 * Sch B-4, Sh 41, Ln 14(b)	78,641,952	1,023,724	79,665,676	14,783,296	94,448,972	9
10	Total Direct Accumulated Depreciation	Sum Lns 6-9	$ 2,402,651,518	$ 6,191,351	$ 2,408,842,869	$ 144,749,611	$ 2,553,592,480	10
11	Total Direct Net Plant in Service	Ln 5 - Ln 10	$ 4,625,645,833	$ 177,182,025	$ 4,802,827,858	$ 147,692,607	$ 4,950,520,464	11
					Sch B-1, Sh 1, Col (d)			
	System Allocable GPIS							
12	Intangible Plant	Sch B-4, Sh 41	$ 371,144,066	$ 22,515,607	$ 393,659,673			12
13	General Plant	Sch B-4, Sh 27-40	173,451,135	(47,301,513)	126,149,622			13
14	Total System Allocable GPIS	Ln 12 + Ln 13	$ 544,595,201	$ (24,785,906)	$ 519,809,295			14
	System Allocable Accumulated Depreciation							
15	Intangible Plant	Sch B-4, Sh 41	$ 230,010,063	$ 1,002,064	$ 231,012,127			15
16	General Plant	Ln 13 * Sch B-4, Sh 41, Ln 14(c)	43,809,190	(17,532,222)	26,276,967			16
17	Total Sys. Alloc. Accumulated Depreciation	Ln 15 + Ln 16	$ 273,819,253	$ (16,530,158)	$ 257,289,094			17
18	Total System Allocable Net Plant in Service	Ln 14 - Ln 17	$ 270,775,948	$ (8,255,748)	$ 262,520,200			18
19	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	56.26%			19
20	Sys. Alloc. GPIS Allocated to AZ	Ln 14 * Ln 19	$ 306,386,650	$ (13,944,432)	$ 292,442,218			20
21	Sys. Alloc. Accum. Depreciation Allocated to AZ	Ln 17 * Ln 19	154,049,399	(9,299,788)	144,749,611			21
22	System Allocable Net Plant Allocated to AZ	Ln 20 - Ln 21	$ 152,337,251	$ (4,644,644)	$ 147,692,607			22
					Sch B-1, Sh 1, Col (d)			

SCHEDULE B-4

SOUTHWEST GAS CORPORATION
ARIZONA
HANDY - WHITMAN INDEX OF PUBLIC UTILITY CONSTRUCTION COSTS
PLATEAU DIVISION - GAS UTILITY

Line No.	Year	FERC Account Number 360 374 389	375 390	378 385 386 387	397 398	391 395	392 393 394 396	376 Steel	376 Plastic	380 Steel	380 Plastic	381	382	383	384	Storage Plant	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)		
1	1930	1	19	24	15	11	22	19	0	16	0	27	22	37	21	14	1
2	1931	1	17	24	15	11	20	18	0	15	0	26	22	36	21	13	2
3	1932	1	16	23	15	11	19	18	0	15	0	25	22	34	21	12	3
4	1933	1	17	22	15	11	19	17	0	14	0	25	21	34	19	12	4
5	1934	1	19	22	15	11	20	18	0	15	0	25	21	34	19	14	5
6	1935	1	18	22	15	11	21	19	0	15	0	25	20	34	20	14	6
7	1936	1	19	22	15	12	21	18	0	16	0	25	20	34	20	14	7
8	1937	1	20	24	17	13	23	20	0	17	0	26	22	35	22	15	8
9	1938	1	20	24	17	13	23	20	0	17	0	26	22	37	23	16	9
10	1939	1	20	24	17	13	23	20	0	17	0	26	22	40	22	16	10
11	1940	1	20	26	17	13	24	20	0	18	0	26	22	48	22	16	11
12	1941	1	22	26	18	13	25	20	0	18	0	26	22	48	23	17	12
13	1942	1	23	26	19	15	28	21	0	19	0	26	22	48	23	18	13
14	1943	1	23	26	19	15	29	21	0	19	0	26	22	48	23	19	14
15	1944	1	24	26	19	15	29	21	0	19	0	26	23	48	23	19	15
16	1945	1	24	26	19	16	29	22	0	19	0	26	23	48	24	19	16
17	1946	1	27	29	21	20	34	24	0	22	0	33	25	53	25	21	17
18	1947	1	32	34	24	23	37	27	0	25	0	41	29	63	28	26	18
19	1948	1	36	37	26	26	39	31	0	28	0	42	32	64	31	30	19
20	1949	1	37	39	28	26	40	33	0	30	0	45	34	68	34	30	20
21	1950	1	39	40	30	27	42	35	0	32	0	48	35	69	34	31	21
22	1951	1	42	44	31	29	45	37	0	33	0	55	38	74	36	34	22
23	1952	1	44	45	33	31	46	39	0	35	0	55	39	74	38	36	23
24	1953	1	44	46	34	33	49	41	0	37	45	55	40	74	40	38	24
25	1954	1	46	47	36	34	49	44	0	39	46	55	43	74	42	40	25
26	1955	1	48	49	37	36	51	46	0	41	47	56	44	74	44	44	26
27	1956	1	52	54	39	39	55	48	0	45	49	63	50	74	49	47	27
28	1957	1	55	57	41	41	59	52	0	48	52	66	55	76	53	50	28
29	1958	1	57	60	42	42	62	54	0	50	54	71	57	80	55	51	29
30	1959	1	58	62	45	45	64	57	0	53	56	71	60	80	58	52	30
31	1960	1	59	64	46	46	65	58	0	54	57	71	62	80	60	54	31
32	1961	1	58	64	49	51	67	61	0	58	59	73	63	81	61	56	32
33	1962	1	59	66	51	53	67	63	71	60	61	79	64	82	62	56	33
34	1963	1	60	67	52	55	68	64	72	60	62	79	65	82	63	58	34
35	1964	1	61	68	54	57	70	66	73	63	64	79	65	82	64	60	35
36	1965	1	64	68	57	60	71	68	74	64	65	79	66	80	64	61	36
37	1966	1	65	70	58	62	73	69	76	66	68	86	67	80	66	63	37
38	1967	1	67	72	62	66	76	73	79	69	71	88	69	80	68	64	38
39	1968	1	71	73	64	70	80	75	81	72	74	88	71	81	70	66	39
40	1969	1	75	76	69	74	84	80	84	77	78	89	75	83	74	72	40
41	1970	1	79	83	78	81	88	84	87	84	84	94	83	92	82	79	41
42	1971	1	87	90	88	87	93	90	92	90	89	100	88	98	88	89	42
43	1972	1	93	97	95	94	95	96	96	95	95	100	96	100	96	96	43
44	1973	1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	44
45	1974	1	118	116	109	109	117	117	112	113	111	111	120	106	120	109	45
46	1975	1	133	135	122	123	141	133	130	129	127	128	135	125	134	129	46
47	1976	1	138	148	131	130	153	142	137	138	134	131	145	132	144	145	47
48	1977	1	148	158	142	141	164	155	147	149	144	136	157	136	156	157	48
49	1978	1	161	173	151	151	178	171	158	161	155	139	175	144	174	172	49
50	1979	1	177	187	160	164	197	187	174	176	170	143	191	171	189	188	50
51	1980	1	194	203	170	178	222	200	193	192	184	149	201	201	199	206	51
52	1981	1	204	224	185	186	246	219	209	208	197	158	223	210	220	230	52
53	1982	1	207	246	206	203	263	239	224	226	218	158	246	217	243	245	53
54	1983	1	215	246	218	209	269	246	232	232	227	146	254	221	252	256	54
55	1984	1	224	248	220	212	273	251	236	237	230	147	260	230	258	259	55
56	1985	1	226	243	214	211	276	245	235	234	226	158	249	237	247	259	56
57	1986	1	231	243	215	218	280	233	238	233	230	166	232	236	232	261	57
58	1987	1	232	250	216	226	286	241	245	241	236	165	240	243	239	264	58
59	1988	1	233	267	215	219	295	258	256	246	240	170	263	247	260	263	59
60	1989	1	232	278	214	213	281	270	273	251	247	177	280	253	277	266	60
61	1990	1	237	276	220	228	298	276	281	262	256	185	282	269	279	273	61
62	1991	1	233	279	225	242	320	283	288	272	265	190	287	283	283	280	62
63	1992	1	238	288	232	249	316	286	290	278	269	192	289	294	286	283	63
64	1993	1	250	298	236	260	324	294	297	285	277	191	296	297	293	290	64
65	1994	1	261	310	239	257	331	315	302	293	281	189	325	303	320	297	65
66	1995	1	265	313	247	246	333	317	305	292	279	190	329	302	324	297	66
67	1996	1	276	323	254	250	336	319	313	296	287	192	331	303	327	307	67
68	1997	1	282	332	257	251	351	327	319	301	292	196	341	303	337	311	68
69	1998	1	286	335	265	253	380	330	324	305	296	196	344	307	340	315	69
70	1999	1	286	342	275	262	385	340	330	313	304	191	355	306	351	321	70
71	2000	1	295	352	285	267	389	356	336	323	312	202	376	305	371	326	71
72	2001	1	303	357	299	280	391	361	344	330	322	209	381	311	377	336	72
73	2002	1	311	364	309	290	396	367	351	338	333	202	387	319	384	344	73
74	2003	1	318	364	317	293	402	382	356	346	339	193	406	317	401	349	74
75	2004	1	342	420	326	298	414	461	367	379	347	183	510	323	497	383	75
76	2005	1	352	476	335	303	435	559	386	422	362	185	632	339	610	400	76
77	2006	1	362	494	342	303	455	593	404	439	372	193	689	356	661	409	77
78	2007	1	377	495	350	310	467	558	427	432	387	218	634	377	613	379	78
79	2008	1	399	535	365	335	479	623	441	465	403	246	789	392	755	360	79
80	2009	1	387	550	372	351	501	637	473	484	430	257	701	400	678	372	80
81	2010	1	396	531	402	374	501	637	458	494	436	255	741	414	716	384	81
82	2011	1	407	614	413	378	511	706	469	524	449	254	825	430	794	390	82
83	2012	1	419	671	423	405	533	809	492	576	468	266	935	438	894	405	83
84	2013	1	429	644	427	405	550	793	495	574	471	272	909	443	872	412	84
85	2014	1	437	664	433	426	558	788	496	582	480	342	908	454	872	418	85
86	2015	1	443	661	445	429	566	775	502	580	486	372	871	469	838	425	86
87	2016	1	442	650	449	442	572	736	509	572	495	388	838	481	810	424	87
88	2017	1	460	680	473	449	577	785	513	594	503	442	913	487	879	427	88
89	2018	1	481	712	481	468	578	828	520	618	514	476	991	533	951	438	89
90	2019	1	492	745	485	470	605	876	536	642	523	511	997	565	956	452	90
91	2020	1	498	773	506	500	617	952	553	684	543	490	1091	559	1043	466	91
92	2021	1	496	767	506	500	617	945	555	684	543	490	1091	559	1043	467	92

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 360.0 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2015	$ 1,702,773	1	1.00	$ 1,702,773	1
2	2016	69,900	1	1.00	69,900	2
3	2017	0	1	1.00	0	
4	2018	0	1	1.00	0	
5	2019	0	1	1.00	0	
6	2020	0	1	1.00	0	
7	2021	0	1	1.00	0	
8	Total	$ 1,772,673			$ 1,772,673	3

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 361 - Structures & Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 14,907,302	452	1.03	$ 15,354,521	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 14,907,302			$ 15,354,521	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 362 - Gas Holders

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 32,984,650	452	1.03	$ 33,974,190	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 32,984,650			$ 33,974,190	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.20 - Vaporizing Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 9,108,497	452	1.03	$ 9,381,752	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 9,108,497			$ 9,381,752	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.30 - Compressor Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 7,785,900	452	1.03	$ 8,019,477	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 7,785,900			$ 8,019,477	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 363.50 - Other Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	2019	$ 8,466,104	452	1.03	$ 8,720,087	1
2	2020	0	466	1.00	0	2
3	2021	0	467	1.00	0	3
4	Total	$ 8,466,104			$ 8,720,087	4

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 374.1 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	9,746	1	1.00	9,746	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	0	1	1.00	0	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	254	1	1.00	254	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	0	1	1.00	0	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	0	1	1.00	0	55
56	1985	331,290	1	1.00	331,290	56
57	1986	0	1	1.00	0	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	0	1	1.00	0	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	2,500	1	1.00	2,500	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	0	1	1.00	0	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	0	1	1.00	0	78
79	2008	0	1	1.00	0	79
80	2009	12,113	1	1.00	12,113	80
81	2010	10,139	1	1.00	10,139	81
82	2011	22,262	1	1.00	22,262	82
83	2012	17,362	1	1.00	17,362	83
84	2013	0	1	1.00	0	84
85	2014	0	1	1.00	0	85
86	2015	0	1	1.00	0	86
87	2016	0	1	1.00	0	87
88	2017	0	1	1.00	0	88
89	2018	0	1	1.00	0	89
90	2019	0	1	1.00	0	90
91	2020	0	1	1.00	0	
92	2021	325,000	1	1.00	325,000	
93	Total	$ 730,666			$ 730,666	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 374.2 - Rights of Way

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	111	1	1.00	111	11
12	1941	14	1	1.00	14	12
13	1942	0	1	1.00	0	13
14	1943	160	1	1.00	160	14
15	1944	0	1	1.00	0	15
16	1945	2	1	1.00	2	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	952	1	1.00	952	19
20	1949	139	1	1.00	139	20
21	1950	101	1	1.00	101	21
22	1951	667	1	1.00	667	22
23	1952	183	1	1.00	183	23
24	1953	124	1	1.00	124	24
25	1954	104	1	1.00	104	25
26	1955	121	1	1.00	121	26
27	1956	116	1	1.00	116	27
28	1957	138	1	1.00	138	28
29	1958	146	1	1.00	146	29
30	1959	75	1	1.00	75	30
31	1960	164	1	1.00	164	31
32	1961	178	1	1.00	178	32
33	1962	896	1	1.00	896	33
34	1963	2,944	1	1.00	2,944	34
35	1964	2,322	1	1.00	2,322	35
36	1965	849	1	1.00	849	36
37	1966	1,145	1	1.00	1,145	37
38	1967	664	1	1.00	664	38
39	1968	896	1	1.00	896	39
40	1969	4,059	1	1.00	4,059	40
41	1970	20,184	1	1.00	20,184	41
42	1971	18,376	1	1.00	18,376	42
43	1972	11,259	1	1.00	11,259	43
44	1973	16,606	1	1.00	16,606	44
45	1974	29,634	1	1.00	29,634	45
46	1975	8,365	1	1.00	8,365	46
47	1976	15,469	1	1.00	15,469	47
48	1977	13,306	1	1.00	13,306	48
49	1978	12,233	1	1.00	12,233	49
50	1979	5,998	1	1.00	5,998	50
51	1980	3,835	1	1.00	3,835	51
52	1981	69,501	1	1.00	69,501	52
53	1982	21,828	1	1.00	21,828	53
54	1983	13,467	1	1.00	13,467	54
55	1984	5,304	1	1.00	5,304	55
56	1985	56,285	1	1.00	56,285	56
57	1986	20,552	1	1.00	20,552	57
58	1987	8,770	1	1.00	8,770	58
59	1988	3,206	1	1.00	3,206	59
60	1989	3,127	1	1.00	3,127	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	2,250	1	1.00	2,250	64
65	1994	6,025	1	1.00	6,025	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	44,591	1	1.00	44,591	68
69	1998	1,768	1	1.00	1,768	69
70	1999	0	1	1.00	0	70
71	2000	39,620	1	1.00	39,620	71
72	2001	15,864	1	1.00	15,864	72
73	2002	36,423	1	1.00	36,423	73
74	2003	12,148	1	1.00	12,148	74
75	2004	104,102	1	1.00	104,102	75
76	2005	78,132	1	1.00	78,132	76
77	2006	284,871	1	1.00	284,871	77
78	2007	745,071	1	1.00	745,071	78
79	2008	196,021	1	1.00	196,021	79
80	2009	14,416	1	1.00	14,416	80
81	2010	155,388	1	1.00	155,388	81
82	2011	18,196	1	1.00	18,196	82
83	2012	37,200	1	1.00	37,200	83
84	2013	31,066	1	1.00	31,066	84
85	2014	192,215	1	1.00	192,215	85
86	2015	167,804	1	1.00	167,804	86
87	2016	148,089	1	1.00	148,089	87
88	2017	526,016	1	1.00	526,016	88
89	2018	80,584	1	1.00	80,584	89
90	2019	52,421	1	1.00	52,421	90
91	2020	296,599	1	1.00	296,599	91
92	2021	39,245	1	1.00	39,245	92
93	Total	$ 3,700,700			$ 3,700,700	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 375 - Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	197	20	24.80	4,886	8
9	1938	94	20	24.80	2,331	9
10	1939	1,659	20	24.80	41,143	10
11	1940	373	20	24.80	9,250	11
12	1941	2,797	22	22.55	63,072	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	5,437	24	20.67	112,383	16
17	1946	2,032	27	18.37	37,328	17
18	1947	895	32	15.50	13,873	18
19	1948	4,989	36	13.78	68,748	19
20	1949	6,441	37	13.41	86,374	20
21	1950	8,724	39	12.72	110,969	21
22	1951	21,212	42	11.81	250,514	22
23	1952	1,568	44	11.27	17,671	23
24	1953	4,318	44	11.27	48,664	24
25	1954	2,625	46	10.78	28,298	25
26	1955	959	48	10.33	9,906	26
27	1956	4,816	52	9.54	45,945	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	394	64	7.75	3,054	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	23,733	100	4.96	117,716	44
45	1974	8,122	118	4.20	34,112	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	437	148	3.35	1,464	48
49	1978	674	161	3.08	2,076	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	0	232	2.14	0	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	2,068	237	2.09	4,323	61
62	1991	2,033	233	2.13	4,330	62
63	1992	0	238	2.08	0	63
64	1993	0	250	1.98	0	64
65	1994	0	261	1.90	0	65
66	1995	3,960	265	1.87	7,405	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	0	342	1.45	0	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	0	377	1.32	0	78
79	2008	0	399	1.24	0	79
80	2009	0	387	1.28	0	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	0	419	1.18	0	83
84	2013	0	429	1.16	0	84
85	2014	0	437	1.14	0	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	0	460	1.08	0	88
89	2018	0	481	1.03	0	89
90	2019	0	492	1.01	0	90
91	2020	0	498	1.00	0	91
92	2021	0	496	1.00	0	92
93	Total	$ 110,557			$ 1,125,835	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 376 - Mains - Steel

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 60,790	19	49.74	$ 3,023,695	1
2	1931	2,440	18	52.50	128,100	2
3	1932	0	18	52.50	0	3
4	1933	0	17	55.59	0	4
5	1934	2,208	18	52.50	115,920	5
6	1935	7,454	19	49.74	370,762	6
7	1936	2	18	52.50	105	7
8	1937	13,831	20	47.25	653,515	8
9	1938	19,657	20	47.25	928,793	9
10	1939	0	20	47.25	0	10
11	1940	91	20	47.25	4,300	11
12	1941	26,161	20	47.25	1,236,107	12
13	1942	15,792	21	45.00	710,640	13
14	1943	19,170	21	45.00	862,650	14
15	1944	11,552	21	45.00	519,840	15
16	1945	43,932	22	42.95	1,886,879	16
17	1946	753	24	39.38	29,653	17
18	1947	175,044	27	35.00	6,126,540	18
19	1948	569,433	31	30.48	17,356,318	19
20	1949	447,076	33	28.64	12,804,257	20
21	1950	564,410	35	27.00	15,239,070	21
22	1951	579,961	37	25.54	14,812,204	22
23	1952	544,284	39	24.23	13,188,001	23
24	1953	305,313	41	23.05	7,037,465	24
25	1954	504,939	44	21.48	10,846,090	25
26	1955	2,341,031	46	20.54	48,084,777	26
27	1956	869,398	48	19.69	17,118,447	27
28	1957	679,755	52	18.17	12,351,148	28
29	1958	1,312,030	54	17.50	22,960,525	29
30	1959	1,318,697	57	16.58	21,863,996	30
31	1960	1,353,297	58	16.29	22,045,208	31
32	1961	1,232,365	61	15.49	19,089,334	32
33	1962	1,302,643	63	15.00	19,539,645	33
34	1963	802,921	64	14.77	11,859,143	34
35	1964	1,276,881	66	14.32	18,284,936	35
36	1965	1,564,991	68	13.90	21,753,375	36
37	1966	1,321,980	69	13.70	18,111,126	37
38	1967	839,771	73	12.95	10,875,034	38
39	1968	581,698	75	12.60	7,329,395	39
40	1969	1,304,743	80	11.81	15,409,015	40
41	1970	750,606	84	11.25	8,444,318	41
42	1971	1,718,631	90	10.50	18,045,626	42
43	1972	2,889,541	96	9.84	28,433,083	43
44	1973	2,346,503	100	9.45	22,174,453	44
45	1974	2,461,868	117	8.08	19,891,893	45
46	1975	1,270,941	133	7.11	9,036,391	46
47	1976	556,530	142	6.65	3,700,925	47
48	1977	1,107,144	155	6.10	6,753,578	48
49	1978	1,081,715	171	5.53	5,981,884	49
50	1979	912,185	187	5.05	4,606,534	50
51	1980	1,220,149	200	4.73	5,771,305	51
52	1981	2,805,377	219	4.32	12,119,229	52
53	1982	1,441,775	239	3.95	5,695,011	53
54	1983	2,042,088	246	3.84	7,841,618	54
55	1984	2,164,416	251	3.76	8,138,204	55
56	1985	1,664,787	245	3.86	6,426,078	56
57	1986	2,714,878	233	4.06	11,022,405	57
58	1987	2,426,814	241	3.92	9,513,111	58
59	1988	1,947,092	258	3.66	7,126,357	59
60	1989	1,657,001	270	3.50	5,799,504	60
61	1990	1,664,303	276	3.42	5,691,916	61
62	1991	3,830,829	283	3.34	12,794,969	62
63	1992	4,639,431	286	3.30	15,310,122	63
64	1993	4,846,871	294	3.21	15,558,456	64
65	1994	5,991,105	315	3.00	17,973,315	65
66	1995	6,955,972	317	2.98	20,728,797	66
67	1996	6,373,164	319	2.96	18,864,565	67
68	1997	6,550,358	327	2.89	18,930,535	68
69	1998	6,704,322	330	2.86	19,174,361	69
70	1999	6,180,879	340	2.78	17,182,844	70
71	2000	8,641,819	356	2.65	22,900,820	71
72	2001	11,978,277	361	2.62	31,383,086	72
73	2002	13,532,092	367	2.57	34,777,476	73
74	2003	12,852,956	382	2.47	31,746,801	74
75	2004	21,459,313	461	2.05	43,991,592	75
76	2005	27,565,598	559	1.69	46,585,861	76
77	2006	15,694,051	593	1.59	24,953,541	77
78	2007	29,288,820	558	1.70	49,790,994	78
79	2008	13,490,642	623	1.52	20,505,776	79
80	2009	13,406,277	637	1.48	19,841,290	80
81	2010	18,278,235	637	1.48	27,051,788	81
82	2011	51,038,948	706	1.34	68,392,190	82
83	2012	42,829,529	809	1.17	50,110,549	83
84	2013	21,846,906	793	1.19	25,997,818	84
85	2014	41,299,977	788	1.20	49,559,972	85
86	2015	45,123,269	775	1.22	55,050,388	86
87	2016	27,927,345	736	1.28	35,747,002	87
88	2017	69,620,733	785	1.20	83,544,880	88
89	2018	110,845,514	828	1.14	126,363,886	89
90	2019	96,497,350	876	1.08	104,217,138	90
91	2020	28,630,960	952	0.99	28,344,650	91
92	2021	9,279,479	945	1.00	9,279,479	92
93	Total	$ 842,061,859			$ 1,753,424,372	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 376 - Mains - Plastic

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	0	0.00	$ 0	1
2	1931	0	0	0.00	0	2
3	1932	0	0	0.00	0	3
4	1933	0	0	0.00	0	4
5	1934	0	0	0.00	0	5
6	1935	0	0	0.00	0	6
7	1936	0	0	0.00	0	7
8	1937	0	0	0.00	0	8
9	1938	0	0	0.00	0	9
10	1939	0	0	0.00	0	10
11	1940	0	0	0.00	0	11
12	1941	188	0	0.00	0	12
13	1942	0	0	0.00	0	13
14	1943	0	0	0.00	0	14
15	1944	0	0	0.00	0	15
16	1945	0	0	0.00	0	16
17	1946	8,678	0	0.00	0	17
18	1947	0	0	0.00	0	18
19	1948	0	0	0.00	0	19
20	1949	0	0	0.00	0	20
21	1950	0	0	0.00	0	21
22	1951	9	0	0.00	0	22
23	1952	0	0	0.00	0	23
24	1953	64	0	0.00	0	24
25	1954	0	0	0.00	0	25
26	1955	265	0	0.00	0	26
27	1956	4,564	0	0.00	0	27
28	1957	7,776	0	0.00	0	28
29	1958	13,487	0	0.00	0	29
30	1959	9,006	0	0.00	0	30
31	1960	21,408	0	0.00	0	31
32	1961	80,521	0	0.00	0	32
33	1962	272,925	71	7.82	2,134,274	33
34	1963	284,437	72	7.71	2,193,009	34
35	1964	336,254	73	7.60	2,555,530	35
36	1965	206,628	74	7.50	1,549,710	36
37	1966	725,101	76	7.30	5,293,237	37
38	1967	838,769	79	7.03	5,896,546	38
39	1968	365,671	81	6.85	2,504,846	39
40	1969	767,977	84	6.61	5,076,328	40
41	1970	480,020	87	6.38	3,062,528	41
42	1971	1,080,297	92	6.03	6,514,191	42
43	1972	1,615,531	96	5.78	9,337,769	43
44	1973	922,673	100	5.55	5,120,835	44
45	1974	1,185,072	112	4.96	5,877,957	45
46	1975	750,403	130	4.27	3,204,221	46
47	1976	301,334	137	4.05	1,220,403	47
48	1977	406,715	147	3.78	1,537,383	48
49	1978	168,805	158	3.51	592,506	49
50	1979	522,401	174	3.19	1,666,459	50
51	1980	858,383	193	2.88	2,472,143	51
52	1981	1,348,657	209	2.66	3,587,428	52
53	1982	1,122,995	224	2.48	2,785,028	53
54	1983	3,310,833	232	2.39	7,912,891	54
55	1984	5,365,101	236	2.35	12,607,987	55
56	1985	4,076,960	235	2.36	9,621,626	56
57	1986	14,940,308	238	2.33	34,810,918	57
58	1987	15,839,807	245	2.27	35,956,362	58
59	1988	18,588,724	256	2.17	40,337,531	59
60	1989	14,032,416	273	2.03	28,485,804	60
61	1990	19,270,550	281	1.98	38,155,689	61
62	1991	6,137,262	288	1.93	11,844,916	62
63	1992	7,848,583	290	1.91	14,990,794	63
64	1993	21,381,988	297	1.87	39,984,318	64
65	1994	25,175,604	302	1.84	46,323,111	65
66	1995	31,049,844	305	1.82	56,510,716	66
67	1996	30,932,914	313	1.77	54,751,258	67
68	1997	27,072,205	319	1.74	47,105,637	68
69	1998	31,724,635	324	1.71	54,249,126	69
70	1999	39,867,447	330	1.68	66,977,311	70
71	2000	41,989,261	336	1.65	69,282,281	71
72	2001	44,148,593	344	1.61	71,079,235	72
73	2002	46,770,987	351	1.58	73,898,159	73
74	2003	40,095,624	356	1.56	62,549,173	74
75	2004	47,658,100	367	1.51	71,963,731	75
76	2005	35,217,667	386	1.44	50,713,440	76
77	2006	40,967,445	404	1.37	56,125,400	77
78	2007	38,588,945	427	1.30	50,165,629	78
79	2008	34,186,400	441	1.26	43,074,864	79
80	2009	24,714,564	473	1.17	28,916,040	80
81	2010	42,018,048	458	1.21	50,841,838	81
82	2011	66,995,222	469	1.18	79,054,362	82
83	2012	41,745,705	492	1.13	47,172,647	83
84	2013	65,644,101	495	1.12	73,521,393	84
85	2014	83,238,685	496	1.12	93,227,327	85
86	2015	90,840,644	502	1.11	100,833,115	86
87	2016	79,938,872	509	1.09	87,133,370	87
88	2017	92,092,861	513	1.08	99,460,290	88
89	2018	115,009,610	520	1.07	123,060,283	89
90	2019	145,973,303	536	1.04	151,812,235	90
91	2020	116,802,722	553	1.00	116,802,722	
92	2021	33,467,076	555	1.00	33,467,076	
93	Total	$ 1,699,426,630			$ 2,308,962,936	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 378 - Measuring and Regulating Equipment - Gen.

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	624	54	14.20	8,861	27
28	1957	0	57	13.46	0	28
29	1958	1,705	60	12.78	21,790	29
30	1959	8,044	62	12.37	99,504	30
31	1960	415	64	11.98	4,972	31
32	1961	1,226	64	11.98	14,687	32
33	1962	297	66	11.62	3,451	33
34	1963	329	67	11.45	3,767	34
35	1964	3,436	68	11.28	38,758	35
36	1965	7,891	68	11.28	89,010	36
37	1966	14,447	70	10.96	158,339	37
38	1967	861	72	10.65	9,170	38
39	1968	5,822	73	10.51	61,189	39
40	1969	7,948	76	10.09	80,195	40
41	1970	6,059	83	9.24	55,985	41
42	1971	20,140	90	8.52	171,593	42
43	1972	96,771	97	7.91	765,459	43
44	1973	2,273	100	7.67	17,434	44
45	1974	19,880	116	6.61	131,407	45
46	1975	8,724	135	5.68	49,552	46
47	1976	0	148	5.18	0	47
48	1977	1,092	158	4.85	5,296	48
49	1978	41,852	173	4.43	185,404	49
50	1979	19,178	187	4.10	78,630	50
51	1980	38,905	203	3.78	147,061	51
52	1981	7,960	224	3.42	27,223	52
53	1982	57,805	246	3.12	180,352	53
54	1983	39,211	246	3.12	122,338	54
55	1984	34,975	248	3.09	108,073	55
56	1985	6,979	243	3.16	22,054	56
57	1986	96,722	243	3.16	305,642	57
58	1987	61,078	250	3.07	187,509	58
59	1988	150,704	267	2.87	432,520	59
60	1989	33,037	278	2.76	91,182	60
61	1990	122,292	276	2.78	339,972	61
62	1991	76,255	279	2.75	209,701	62
63	1992	214,899	288	2.66	571,631	63
64	1993	309,542	298	2.57	795,523	64
65	1994	597,474	310	2.47	1,475,761	65
66	1995	592,229	313	2.45	1,450,961	66
67	1996	915,045	323	2.37	2,168,657	67
68	1997	408,692	332	2.31	944,079	68
69	1998	1,729,601	335	2.29	3,960,786	69
70	1999	3,594,142	342	2.24	8,050,878	70
71	2000	794,905	352	2.18	1,732,893	71
72	2001	1,340,915	357	2.15	2,882,967	72
73	2002	2,737,341	364	2.11	5,775,790	73
74	2003	1,301,783	364	2.11	2,746,762	74
75	2004	2,094,735	420	1.83	3,833,365	75
76	2005	1,792,756	476	1.61	2,886,337	76
77	2006	3,435,008	494	1.55	5,324,262	77
78	2007	5,357,661	495	1.55	8,304,375	78
79	2008	2,561,898	535	1.43	3,663,514	79
80	2009	4,158,447	550	1.40	5,821,826	80
81	2010	9,384,854	531	1.45	13,608,038	81
82	2011	5,066,962	614	1.25	6,333,703	82
83	2012	4,025,610	671	1.14	4,589,195	83
84	2013	2,936,149	644	1.19	3,494,017	84
85	2014	3,205,669	664	1.16	3,718,576	85
86	2015	11,748,221	661	1.16	13,627,936	86
87	2016	2,345,164	650	1.18	2,767,294	87
88	2017	3,448,127	680	1.13	3,896,384	88
89	2018	5,970,707	712	1.08	6,448,364	89
90	2019	5,868,941	745	1.03	6,045,009	90
91	2020	5,712,392	773	0.99	5,655,268	
92	2021	143,753	767	1.00	143,753	
93	Total	$ 94,788,559			$ 136,945,984	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 380 - Services - Steel

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 6,562	16	42.72	$ 280,329	1
2	1931	0	15	45.57	0	2
3	1932	85	15	45.57	3,873	3
4	1933	0	14	48.82	0	4
5	1934	3	15	45.57	137	5
6	1935	0	15	45.57	0	6
7	1936	0	16	42.72	0	7
8	1937	0	17	40.21	0	8
9	1938	9	17	40.21	362	9
10	1939	144	17	40.21	5,790	10
11	1940	41	18	37.97	1,557	11
12	1941	3,990	18	37.97	151,500	12
13	1942	10,087	19	35.97	362,829	13
14	1943	679	19	35.97	24,424	14
15	1944	14,494	19	35.97	521,349	15
16	1945	29,113	19	35.97	1,047,195	16
17	1946	61,409	22	31.07	1,907,978	17
18	1947	116,834	25	27.34	3,194,242	18
19	1948	206,176	28	24.41	5,032,756	19
20	1949	29,730	30	22.78	677,249	20
21	1950	250,788	32	21.36	5,356,832	21
22	1951	353,147	33	20.71	7,313,674	22
23	1952	427,303	35	19.53	8,345,228	23
24	1953	292,881	37	18.47	5,409,512	24
25	1954	290,037	39	17.53	5,084,349	25
26	1955	880,107	41	16.67	14,671,384	26
27	1956	502,554	45	15.19	7,633,795	27
28	1957	530,910	48	14.24	7,560,158	28
29	1958	481,948	50	13.67	6,588,229	29
30	1959	181,195	53	12.90	2,337,416	30
31	1960	7,911	54	12.66	100,153	31
32	1961	22,959	58	11.78	270,457	32
33	1962	23,681	60	11.39	269,727	33
34	1963	16,395	60	11.39	186,739	34
35	1964	7,117	63	10.85	77,219	35
36	1965	32,574	64	10.68	347,890	36
37	1966	7,342	66	10.36	76,063	37
38	1967	1,485	69	9.91	14,716	38
39	1968	5,279	72	9.49	50,098	39
40	1969	1,473	77	8.88	13,080	40
41	1970	8,413	84	8.14	68,482	41
42	1971	5,325	90	7.59	40,417	42
43	1972	29,853	95	7.19	214,643	43
44	1973	17,710	100	6.84	121,136	44
45	1974	50,422	113	6.05	305,053	45
46	1975	5,293	129	5.30	28,053	46
47	1976	3,508	138	4.95	17,365	47
48	1977	9,257	149	4.59	42,490	48
49	1978	2,792	161	4.25	11,866	49
50	1979	87,368	176	3.88	338,988	50
51	1980	193,831	192	3.56	690,038	51
52	1981	211,163	208	3.29	694,726	52
53	1982	15,581	226	3.02	47,055	53
54	1983	345,963	232	2.95	1,020,591	54
55	1984	182,779	237	2.88	526,404	55
56	1985	17,909	234	2.92	52,294	56
57	1986	137,218	233	2.93	402,049	57
58	1987	9,176	241	2.84	26,060	58
59	1988	10,788	246	2.78	29,991	59
60	1989	1,000	251	2.72	2,720	60
61	1990	80,559	262	2.61	210,259	61
62	1991	78,810	272	2.51	197,813	62
63	1992	71,446	278	2.46	175,757	63
64	1993	1,015,238	285	2.40	2,436,571	64
65	1994	371,449	293	2.33	865,476	65
66	1995	603,621	292	2.34	1,412,473	66
67	1996	176,682	296	2.31	408,135	67
68	1997	242,387	301	2.27	550,218	68
69	1998	415,551	305	2.24	930,834	69
70	1999	218,029	313	2.18	475,303	70
71	2000	170,108	323	2.12	360,629	71
72	2001	200,670	330	2.07	415,387	72
73	2002	274,328	338	2.02	554,143	73
74	2003	238,827	346	1.98	472,877	74
75	2004	379,330	379	1.80	682,794	75
76	2005	163,708	422	1.62	265,207	76
77	2006	78,510	439	1.56	122,476	77
78	2007	307,884	432	1.58	486,457	78
79	2008	205,023	465	1.47	301,384	79
80	2009	271,850	484	1.41	383,309	80
81	2010	121,258	494	1.39	168,549	81
82	2011	149,734	524	1.31	196,152	82
83	2012	140,176	576	1.19	166,809	83
84	2013	221,869	574	1.19	264,024	84
85	2014	264,425	582	1.18	312,022	85
86	2015	116,108	580	1.18	137,007	86
87	2016	524,796	572	1.20	629,755	87
88	2017	426,453	594	1.15	490,421	88
89	2018	1,395,080	618	1.11	1,548,539	89
90	2019	2,857,914	642	1.07	3,057,968	90
91	2020	807,504	684	1.00	807,504	
92	2021	2,524,337	684	1.00	2,524,337	
94	Total	$ 21,255,455			$ 111,609,299	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 380 - Services - Plastic

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 1	0	0.00	$ 0	1
2	1931	0	0	0.00	0	2
3	1932	0	0	0.00	0	3
4	1933	0	0	0.00	0	4
5	1934	0	0	0.00	0	5
6	1935	92	0	0.00	0	6
7	1936	2	0	0.00	0	7
8	1937	77	0	0.00	0	8
9	1938	57	0	0.00	0	9
10	1939	1	0	0.00	0	10
11	1940	343	0	0.00	0	11
12	1941	0	0	0.00	0	12
13	1942	11	0	0.00	0	13
14	1943	0	0	0.00	0	14
15	1944	1	0	0.00	0	15
16	1945	0	0	0.00	0	16
17	1946	0	0	0.00	0	17
18	1947	5	0	0.00	0	18
19	1948	127	0	0.00	0	19
20	1949	12,199	0	0.00	0	20
21	1950	0	0	0.00	0	21
22	1951	329	0	0.00	0	22
23	1952	0	0	0.00	0	23
24	1953	7,411	45	12.07	89,451	24
25	1954	17,627	46	11.80	207,999	25
26	1955	85,609	47	11.55	988,784	26
27	1956	59,429	49	11.08	658,473	27
28	1957	133,978	52	10.44	1,398,730	28
29	1958	168,970	54	10.06	1,699,838	29
30	1959	418,601	56	9.70	4,060,430	30
31	1960	159,226	57	9.53	1,517,424	31
32	1961	195,068	59	9.20	1,794,626	32
33	1962	360,558	61	8.90	3,208,966	33
34	1963	377,085	62	8.76	3,303,265	34
35	1964	321,234	64	8.48	2,724,064	35
36	1965	352,651	65	8.35	2,944,636	36
37	1966	286,535	68	7.99	2,289,415	37
38	1967	322,025	71	7.65	2,463,491	38
39	1968	203,994	74	7.34	1,497,316	39
40	1969	3,374	78	6.96	23,483	40
41	1970	55,905	84	6.46	361,146	41
42	1971	104,308	89	6.10	636,279	42
43	1972	219,860	95	5.72	1,257,599	43
44	1973	102,529	100	5.43	556,732	44
45	1974	598,493	111	4.89	2,926,631	45
46	1975	140,144	127	4.28	599,816	46
47	1976	140,811	134	4.05	570,285	47
48	1977	78,938	144	3.77	297,596	48
49	1978	5,356	155	3.50	18,746	49
50	1979	723,980	170	3.19	2,309,496	50
51	1980	1,037,950	184	2.95	3,061,953	51
52	1981	1,389,555	197	2.76	3,835,172	52
53	1982	761,575	218	2.49	1,896,322	53
54	1983	12,967,957	227	2.39	30,993,417	54
55	1984	13,729,442	230	2.36	32,401,483	55
56	1985	6,940,868	226	2.40	16,658,083	56
57	1986	14,442,989	230	2.36	34,085,454	57
58	1987	13,921,276	236	2.30	32,018,935	58
59	1988	12,989,904	240	2.26	29,357,183	59
60	1989	9,482,084	247	2.20	20,860,585	60
61	1990	13,702,474	256	2.12	29,049,245	61
62	1991	5,758,922	265	2.05	11,805,790	62
63	1992	9,439,102	269	2.02	19,066,986	63
64	1993	12,480,069	277	1.96	24,460,935	64
65	1994	19,430,182	281	1.93	37,500,251	65
66	1995	21,751,533	279	1.95	42,415,489	66
67	1996	26,695,368	287	1.89	50,454,246	67
68	1997	23,612,671	292	1.86	43,919,568	68
69	1998	24,642,387	296	1.83	45,095,568	69
70	1999	31,146,253	304	1.79	55,751,793	70
71	2000	28,417,733	312	1.74	49,446,855	71
72	2001	29,574,255	322	1.69	49,980,491	72
73	2002	30,438,092	333	1.63	49,614,090	73
74	2003	29,679,440	339	1.60	47,487,104	74
75	2004	29,716,905	347	1.56	46,358,372	75
76	2005	27,522,023	362	1.50	41,283,035	76
77	2006	36,179,123	372	1.46	52,821,520	77
78	2007	29,338,380	387	1.40	41,073,732	78
79	2008	28,368,382	403	1.35	38,297,316	79
80	2009	20,710,119	430	1.26	26,094,750	80
81	2010	25,872,512	436	1.25	32,340,640	81
82	2011	20,278,937	449	1.21	24,537,514	82
83	2012	25,033,641	468	1.16	29,039,024	83
84	2013	26,759,857	471	1.15	30,773,836	84
85	2014	30,739,703	480	1.13	34,735,864	85
86	2015	38,847,834	486	1.12	43,509,574	86
87	2016	49,790,679	495	1.10	54,769,747	87
88	2017	71,346,393	503	1.08	77,054,104	88
89	2018	86,385,378	514	1.06	91,568,501	89
90	2019	99,226,902	523	1.04	103,195,978	90
91	2020	101,291,137	543	1.00	101,291,137	
92	2021	51,628,915	543	1.00	51,628,915	
93	Total	$ 1,199,125,845			$ 1,721,995,274	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 381 - Meters, Regulators, and Installations

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 36,644	27	18.15	$ 665,089	1
2	1931	61	26	18.85	1,150	2
3	1932	82	25	19.60	1,607	3
4	1933	61	25	19.60	1,196	4
5	1934	82	25	19.60	1,607	5
6	1935	80	25	19.60	1,568	6
7	1936	69,776	25	19.60	1,367,610	7
8	1937	10,495	26	18.85	197,831	8
9	1938	4,951	26	18.85	93,326	9
10	1939	2,085	26	18.85	39,302	10
11	1940	3,653	26	18.85	68,859	11
12	1941	9,829	26	18.85	185,277	12
13	1942	10,625	26	18.85	200,281	13
14	1943	10,701	26	18.85	201,714	14
15	1944	5,244	26	18.85	98,849	15
16	1945	5,793	26	18.85	109,198	16
17	1946	17,128	33	14.85	254,351	17
18	1947	33,155	41	11.95	396,202	18
19	1948	69,579	42	11.67	811,987	19
20	1949	56,256	45	10.89	612,628	20
21	1950	41,260	48	10.21	421,265	21
22	1951	76,133	55	8.91	678,345	22
23	1952	42,873	55	8.91	381,998	23
24	1953	63,194	55	8.91	563,059	24
25	1954	30,930	55	8.91	275,586	25
26	1955	31,874	56	8.75	278,898	26
27	1956	56,716	63	7.78	441,250	27
28	1957	49,067	66	7.42	364,077	28
29	1958	74,595	71	6.90	514,706	29
30	1959	79,055	71	6.90	545,480	30
31	1960	86,310	71	6.90	595,539	31
32	1961	80,403	73	6.71	539,504	32
33	1962	79,548	79	6.20	493,198	33
34	1963	73,998	79	6.20	458,788	34
35	1964	70,661	79	6.20	438,098	35
36	1965	54,118	79	6.20	335,532	36
37	1966	30,639	86	5.70	174,642	37
38	1967	78,088	88	5.57	434,950	38
39	1968	94,225	88	5.57	524,833	39
40	1969	81,744	89	5.51	450,409	40
41	1970	136,437	94	5.21	710,837	41
42	1971	190,471	100	4.90	933,308	42
43	1972	204,530	100	4.90	1,002,197	43
44	1973	302,089	100	4.90	1,480,236	44
45	1974	307,791	111	4.41	1,357,358	45
46	1975	269,093	128	3.83	1,030,626	46
47	1976	207,806	131	3.74	777,194	47
48	1977	235,146	136	3.60	846,526	48
49	1978	194,961	139	3.53	688,212	49
50	1979	206,105	143	3.43	706,940	50
51	1980	719,459	149	3.29	2,367,020	51
52	1981	515,214	158	3.10	1,597,163	52
53	1982	648,866	158	3.10	2,011,485	53
54	1983	1,068,377	146	3.36	3,589,747	54
55	1984	884,640	147	3.33	2,945,851	55
56	1985	1,053,544	158	3.10	3,265,986	56
57	1986	523,604	166	2.95	1,544,632	57
58	1987	876,922	165	2.97	2,604,458	58
59	1988	1,725,926	170	2.88	4,970,667	59
60	1989	1,592,950	177	2.77	4,412,472	60
61	1990	1,267,248	185	2.65	3,358,207	61
62	1991	2,371,412	190	2.58	6,118,243	62
63	1992	1,251,702	192	2.55	3,191,840	63
64	1993	150,025	191	2.57	385,564	64
65	1994	3,722,222	189	2.59	9,640,555	65
66	1995	4,093,781	190	2.58	10,561,955	66
67	1996	4,029,512	192	2.55	10,275,256	67
68	1997	3,201,276	196	2.50	8,003,190	68
69	1998	1,504,995	196	2.50	3,762,488	69
70	1999	8,686,689	191	2.57	22,324,791	70
71	2000	6,270,072	202	2.43	15,236,275	71
72	2001	7,320,988	209	2.34	17,131,112	72
73	2002	8,681,680	202	2.43	21,096,482	73
74	2003	9,159,347	193	2.54	23,264,741	74
75	2004	12,938,510	183	2.68	34,675,207	75
76	2005	11,659,762	185	2.65	30,898,369	76
77	2006	27,690,124	193	2.55	70,609,816	77
78	2007	23,369,788	218	2.25	52,582,023	78
79	2008	11,955,060	246	2.00	23,910,120	79
80	2009	4,864,469	257	1.91	9,291,136	80
81	2010	3,191,603	255	1.93	6,159,794	81
82	2011	3,670,084	254	1.93	7,083,262	82
83	2012	14,313,677	266	1.84	26,337,166	83
84	2013	13,597,654	272	1.80	24,475,777	84
85	2014	10,346,136	342	1.43	14,794,974	85
86	2015	25,480,735	372	1.32	33,634,570	86
87	2016	9,309,082	388	1.26	11,729,443	87
88	2017	11,412,135	442	1.11	12,667,470	88
89	2018	17,361,423	476	1.03	17,882,266	89
90	2019	23,485,333	511	0.96	22,545,920	90
91	2020	23,125,595	490	1.00	23,125,595	
92	2021	14,729,993	490	1.00	14,729,993	
93	Total	$ 337,697,754			$ 644,546,304	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 385 - Measuring and Regulating Equipment - Ind.

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	0	54	14.20	0	27
28	1957	0	57	13.46	0	28
29	1958	0	60	12.78	0	29
30	1959	0	62	12.37	0	30
31	1960	0	64	11.98	0	31
32	1961	0	64	11.98	0	32
33	1962	0	66	11.62	0	33
34	1963	0	67	11.45	0	34
35	1964	0	68	11.28	0	35
36	1965	0	68	11.28	0	36
37	1966	0	70	10.96	0	37
38	1967	0	72	10.65	0	38
39	1968	53,003	73	10.51	557,062	39
40	1969	0	76	10.09	0	40
41	1970	0	83	9.24	0	41
42	1971	0	90	8.52	0	42
43	1972	21,891	97	7.91	173,158	43
44	1973	32,288	100	7.67	247,649	44
45	1974	103,218	116	6.61	682,271	45
46	1975	76,790	135	5.68	436,167	46
47	1976	45,302	148	5.18	234,664	47
48	1977	16,356	158	4.85	79,327	48
49	1978	17,162	173	4.43	76,028	49
50	1979	31,941	187	4.10	130,958	50
51	1980	123,098	203	3.78	465,310	51
52	1981	102,045	224	3.42	348,994	52
53	1982	140,659	246	3.12	438,856	53
54	1983	172,078	246	3.12	536,883	54
55	1984	346,498	248	3.09	1,070,679	55
56	1985	61,717	243	3.16	195,026	56
57	1986	156,319	243	3.16	493,968	57
58	1987	14,460	250	3.07	44,392	58
59	1988	164,131	267	2.87	471,056	59
60	1989	89,818	278	2.76	247,898	60
61	1990	52,403	276	2.78	145,680	61
62	1991	61,230	279	2.75	168,383	62
63	1992	35,239	288	2.66	93,736	63
64	1993	190,450	298	2.57	489,457	64
65	1994	229,598	310	2.47	567,107	65
66	1995	326,694	313	2.45	800,400	66
67	1996	461,199	323	2.37	1,093,042	67
68	1997	546,746	332	2.31	1,262,983	68
69	1998	668,489	335	2.29	1,530,840	69
70	1999	521,190	342	2.24	1,167,466	70
71	2000	191,839	352	2.18	418,209	71
72	2001	289,260	357	2.15	621,909	72
73	2002	347,398	364	2.11	733,010	73
74	2003	231,876	364	2.11	489,258	74
75	2004	344,321	420	1.83	630,107	75
76	2005	398,466	476	1.61	641,530	76
77	2006	335,049	494	1.55	519,326	77
78	2007	459,744	495	1.55	712,603	78
79	2008	613,313	535	1.43	877,038	79
80	2009	2,161,353	550	1.40	3,025,894	80
81	2010	300,863	531	1.45	436,251	81
82	2011	208,165	614	1.25	260,206	82
83	2012	165,580	671	1.14	188,761	83
84	2013	302,603	644	1.19	360,098	84
85	2014	338,672	664	1.16	392,860	85
86	2015	152,546	661	1.16	176,953	86
87	2016	159,896	650	1.18	188,677	87
88	2017	163,998	680	1.13	185,318	88
89	2018	534,915	712	1.08	577,708	89
90	2019	308,628	745	1.03	317,887	90
91	2020	796,959	773	0.99	788,989	
92	2021	203,797	767	1.00	203,797	
93	Total	$ 13,871,253			$ 26,995,829	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 387 - Other Distribution Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	24	31.96	$ 0	1
2	1931	0	24	31.96	0	2
3	1932	0	23	33.35	0	3
4	1933	0	22	34.86	0	4
5	1934	0	22	34.86	0	5
6	1935	0	22	34.86	0	6
7	1936	0	22	34.86	0	7
8	1937	0	24	31.96	0	8
9	1938	0	24	31.96	0	9
10	1939	0	24	31.96	0	10
11	1940	0	26	29.50	0	11
12	1941	0	26	29.50	0	12
13	1942	0	26	29.50	0	13
14	1943	0	26	29.50	0	14
15	1944	0	26	29.50	0	15
16	1945	0	26	29.50	0	16
17	1946	0	29	26.45	0	17
18	1947	0	34	22.56	0	18
19	1948	0	37	20.73	0	19
20	1949	0	39	19.67	0	20
21	1950	0	40	19.18	0	21
22	1951	0	44	17.43	0	22
23	1952	0	45	17.04	0	23
24	1953	0	46	16.67	0	24
25	1954	0	47	16.32	0	25
26	1955	0	49	15.65	0	26
27	1956	0	54	14.20	0	27
28	1957	0	57	13.46	0	28
29	1958	0	60	12.78	0	29
30	1959	0	62	12.37	0	30
31	1960	0	64	11.98	0	31
32	1961	0	64	11.98	0	32
33	1962	0	66	11.62	0	33
34	1963	0	67	11.45	0	34
35	1964	0	68	11.28	0	35
36	1965	0	68	11.28	0	36
37	1966	0	70	10.96	0	37
38	1967	0	72	10.65	0	38
39	1968	0	73	10.51	0	39
40	1969	0	76	10.09	0	40
41	1970	0	83	9.24	0	41
42	1971	0	90	8.52	0	42
43	1972	0	97	7.91	0	43
44	1973	0	100	7.67	0	44
45	1974	0	116	6.61	0	45
46	1975	2,619	135	5.68	14,876	46
47	1976	0	148	5.18	0	47
48	1977	0	158	4.85	0	48
49	1978	0	173	4.43	0	49
50	1979	35,268	187	4.10	144,599	50
51	1980	34,199	203	3.78	129,272	51
52	1981	88,691	224	3.42	303,323	52
53	1982	254,179	246	3.12	793,038	53
54	1983	0	246	3.12	0	54
55	1984	12,674	248	3.09	39,163	55
56	1985	0	243	3.16	0	56
57	1986	4,468	243	3.16	14,119	57
58	1987	0	250	3.07	0	58
59	1988	0	267	2.87	0	59
60	1989	0	278	2.76	0	60
61	1990	0	276	2.78	0	61
62	1991	0	279	2.75	0	62
63	1992	0	288	2.66	0	63
64	1993	0	298	2.57	0	64
65	1994	0	310	2.47	0	65
66	1995	0	313	2.45	0	66
67	1996	0	323	2.37	0	67
68	1997	0	332	2.31	0	68
69	1998	0	335	2.29	0	69
70	1999	0	342	2.24	0	70
71	2000	0	352	2.18	0	71
72	2001	0	357	2.15	0	72
73	2002	0	364	2.11	0	73
74	2003	0	364	2.11	0	74
75	2004	0	420	1.83	0	75
76	2005	0	476	1.61	0	76
77	2006	0	494	1.55	0	77
78	2007	0	495	1.55	0	78
79	2008	0	535	1.43	0	79
80	2009	0	550	1.40	0	80
81	2010	0	531	1.45	0	81
82	2011	0	614	1.25	0	82
83	2012	0	671	1.14	0	83
84	2013	0	644	1.19	0	84
85	2014	0	664	1.16	0	85
86	2015	0	661	1.16	0	86
87	2016	0	650	1.18	0	87
88	2017	0	680	1.13	0	88
89	2018	0	712	1.08	0	89
90	2019	0	745	1.03	0	90
91	2020	0	773	0.99	0	
92	2021	0	767	1.00	0	
93	Total	$ 432,098			$ 1,438,390	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 389 - Land and Land Rights

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	0	1	1.00	0	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	2,027	1	1.00	2,027	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	0	1	1.00	0	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	573,337	1	1.00	573,337	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	792,870	1	1.00	792,870	55
56	1985	895,545	1	1.00	895,545	56
57	1986	288,000	1	1.00	288,000	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	3,091,145	1	1.00	3,091,145	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	0	1	1.00	0	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	173,927	1	1.00	173,927	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	1,963,827	1	1.00	1,963,827	78
79	2008	6,724,780	1	1.00	6,724,780	79
80	2009	49,980	1	1.00	49,980	80
81	2010	19,406	1	1.00	19,406	81
82	2011	0	1	1.00	0	82
83	2012	0	1	1.00	0	83
84	2013	0	1	1.00	0	84
85	2014	1,507,492	1	1.00	1,507,492	85
86	2015	0	1	1.00	0	86
87	2016	509,933	1	1.00	509,933	87
88	2017	421,201	1	1.00	421,201	88
89	2018	199,187	1	1.00	199,187	89
90	2019	173,131	1	1.00	173,131	90
91	2020	0	1	1.00	0	
92	2021	0	1	1.00	0	
93	Total	$ 17,385,788			$ 17,385,788	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 390.1 - Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	3,078,674	194	2.56	7,881,405	51
52	1981	28,662	204	2.43	69,649	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	2,122,140	224	2.21	4,689,929	55
56	1985	1,130,561	226	2.19	2,475,929	56
57	1986	979,247	231	2.15	2,105,381	57
58	1987	7,122	232	2.14	15,241	58
59	1988	4,672,049	233	2.13	9,951,464	59
60	1989	2,612,746	232	2.14	5,591,276	60
61	1990	151,850	237	2.09	317,367	61
62	1991	819,458	233	2.13	1,745,446	62
63	1992	17,942	238	2.08	37,319	63
64	1993	3,742	250	1.98	7,409	64
65	1994	0	261	1.90	0	65
66	1995	219,243	265	1.87	409,984	66
67	1996	39,764	276	1.80	71,575	67
68	1997	5,477	282	1.76	9,640	68
69	1998	170,137	286	1.73	294,337	69
70	1999	751,319	286	1.73	1,299,782	70
71	2000	91,037	295	1.68	152,942	71
72	2001	93,939	303	1.64	154,060	72
73	2002	168,587	311	1.59	268,053	73
74	2003	171,279	318	1.56	267,195	74
75	2004	258,120	342	1.45	374,274	75
76	2005	22,437	352	1.41	31,636	76
77	2006	97,332	362	1.37	133,345	77
78	2007	367,404	377	1.32	484,973	78
79	2008	792,951	399	1.24	983,259	79
80	2009	536,325	387	1.28	686,496	80
81	2010	539,193	396	1.25	673,991	81
82	2011	703,247	407	1.22	857,961	82
83	2012	6,164,776	419	1.18	7,274,436	83
84	2013	4,406,437	429	1.16	5,111,467	84
85	2014	10,704,441	437	1.14	12,203,063	85
86	2015	4,382,059	443	1.12	4,907,906	86
87	2016	5,750,872	442	1.12	6,440,977	87
88	2017	970,673	460	1.08	1,048,327	88
89	2018	4,862,107	481	1.03	5,007,970	89
90	2019	11,854,448	492	1.01	11,972,992	90
91	2020	1,811,834	498	1.00	1,811,834	
92	2021	24,120	496	1.00	24,120	
93	Total	$ 71,583,751			$ 97,844,410	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 390.2 - Leasehold Structures and Improvements

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	16,785	177	2.80	46,998	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	0	232	2.14	0	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	0	250	1.98	0	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	9,419	282	1.76	16,577	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	0	342	1.45	0	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	0	377	1.32	0	78
79	2008	0	399	1.24	0	79
80	2009	0	387	1.28	0	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	0	419	1.18	0	83
84	2013	0	429	1.16	0	84
85	2014	0	437	1.14	0	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	21,000	460	1.08	22,680	88
89	2018	78,545	481	1.03	80,901	89
90	2019	0	492	1.01	0	90
91	2020	0	498	1.00	0	
92	2021	0	496	1.00	0	
93	Total	$ 125,749			$ 167,156	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 391 - Office Furniture and Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	42.73	$ 0	1
2	1931	0	11	42.73	0	2
3	1932	0	11	42.73	0	3
4	1933	0	11	42.73	0	4
5	1934	0	11	42.73	0	5
6	1935	0	11	42.73	0	6
7	1936	0	12	39.17	0	7
8	1937	0	13	36.15	0	8
9	1938	0	13	36.15	0	9
10	1939	0	13	36.15	0	10
11	1940	0	13	36.15	0	11
12	1941	0	13	36.15	0	12
13	1942	0	15	31.33	0	13
14	1943	0	15	31.33	0	14
15	1944	0	15	31.33	0	15
16	1945	0	16	29.38	0	16
17	1946	0	20	23.50	0	17
18	1947	0	23	20.43	0	18
19	1948	0	26	18.08	0	19
20	1949	0	26	18.08	0	20
21	1950	0	27	17.41	0	21
22	1951	0	29	16.21	0	22
23	1952	0	31	15.16	0	23
24	1953	0	33	14.24	0	24
25	1954	0	34	13.82	0	25
26	1955	0	36	13.06	0	26
27	1956	0	39	12.05	0	27
28	1957	0	41	11.46	0	28
29	1958	0	42	11.19	0	29
30	1959	0	45	10.44	0	30
31	1960	0	46	10.22	0	31
32	1961	0	51	9.22	0	32
33	1962	0	53	8.87	0	33
34	1963	0	55	8.55	0	34
35	1964	0	57	8.25	0	35
36	1965	0	60	7.83	0	36
37	1966	0	62	7.58	0	37
38	1967	0	66	7.12	0	38
39	1968	0	70	6.71	0	39
40	1969	0	74	6.35	0	40
41	1970	0	81	5.80	0	41
42	1971	0	87	5.40	0	42
43	1972	0	94	5.00	0	43
44	1973	0	100	4.70	0	44
45	1974	0	109	4.31	0	45
46	1975	0	123	3.82	0	46
47	1976	0	130	3.62	0	47
48	1977	0	141	3.33	0	48
49	1978	0	151	3.11	0	49
50	1979	0	164	2.87	0	50
51	1980	0	178	2.64	0	51
52	1981	0	186	2.53	0	52
53	1982	0	203	2.32	0	53
54	1983	0	209	2.25	0	54
55	1984	0	212	2.22	0	55
56	1985	0	211	2.23	0	56
57	1986	0	218	2.16	0	57
58	1987	0	226	2.08	0	58
59	1988	0	219	2.15	0	59
60	1989	0	213	2.21	0	60
61	1990	0	228	2.06	0	61
62	1991	0	242	1.94	0	62
63	1992	0	249	1.89	0	63
64	1993	0	260	1.81	0	64
65	1994	0	257	1.83	0	65
66	1995	0	246	1.91	0	66
67	1996	0	250	1.88	0	67
68	1997	0	251	1.87	0	68
69	1998	0	253	1.86	0	69
70	1999	0	262	1.79	0	70
71	2000	0	267	1.76	0	71
72	2001	0	280	1.68	0	72
73	2002	0	290	1.62	0	73
74	2003	4,836	293	1.71	8,270	74
75	2004	187,663	298	1.68	315,274	75
76	2005	8,828	303	1.65	14,566	76
77	2006	140,746	303	1.65	232,231	77
78	2007	1,193,984	310	1.61	1,922,314	78
79	2008	206,478	335	1.49	307,652	79
80	2009	555,580	351	1.42	788,924	80
81	2010	266,230	374	1.34	356,748	81
82	2011	570,548	378	1.32	753,123	82
83	2012	3,136	405	1.23	3,857	83
84	2013	94,153	405	1.23	115,808	84
85	2014	322,072	426	1.17	376,824	85
86	2015	630,206	429	1.17	737,341	86
87	2016	222,188	442	1.13	251,072	87
88	2017	102,534	449	1.11	113,813	88
89	2018	356,457	468	1.07	381,409	89
90	2019	431,152	470	1.06	457,021	90
91	2020	7,558	500	1.00	7,558	
92	2021	4,047	500	1.00	4,047	
93	Total	$ 5,308,396			$ 7,147,852	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 391.1 - Computer Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	0	303	1.65	0	77
78	2007	0	310	1.61	0	78
79	2008	0	335	1.49	0	79
80	2009	0	351	1.42	0	80
81	2010	0	374	1.34	0	81
82	2011	0	378	1.32	0	82
83	2012	0	405	1.23	0	83
84	2013	0	405	1.23	0	84
85	2014	0	426	1.17	0	85
86	2015	0	429	1.17	0	86
87	2016	325,173	442	1.13	367,445	87
88	2017	4,438,873	449	1.11	4,927,149	88
89	2018	4,404,858	468	1.07	4,713,198	89
90	2019	933,186	470	1.06	989,177	90
91	2020	972,011	500	1.00	972,011	91
92	2021	6,574	500	1.00	6,574	92
93	Total	$ 11,080,675			$ 11,975,554	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 392.1 - Transportation Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	389,610	501	1.23	479,221	80
81	2010	1,200,738	501	1.23	1,476,908	81
82	2011	1,432,094	511	1.21	1,732,834	82
83	2012	982,210	533	1.16	1,139,364	83
84	2013	2,413,115	550	1.12	2,702,688	84
85	2014	4,100,039	558	1.10	4,510,043	85
86	2015	4,370,262	566	1.09	4,763,585	86
87	2016	4,423,889	572	1.08	4,777,800	87
88	2017	4,754,907	577	1.07	5,087,751	88
89	2018	6,176,943	578	1.07	6,609,329	89
90	2019	9,777,257	605	1.02	9,972,802	90
91	2020	4,893,005	617	1.00	4,893,005	
92	2021	6,528,514	617	1.00	6,528,514	
93	Total	$ 51,442,584			$ 54,673,844	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 393 - Stores Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	41,959	351	1.76	73,848	68
69	1998	0	380	1.62	0	69
70	1999	50,326	385	1.60	80,522	70
71	2000	10,930	389	1.58	17,269	71
72	2001	4,375	391	1.58	6,913	72
73	2002	73,300	396	1.56	114,348	73
74	2003	0	402	1.53	0	74
75	2004	26,256	414	1.49	39,121	75
76	2005	64,821	435	1.42	92,046	76
77	2006	11,760	455	1.36	15,994	77
78	2007	0	467	1.32	0	78
79	2008	81,414	479	1.29	105,024	79
80	2009	0	501	1.23	0	80
81	2010	27,374	501	1.23	33,670	81
82	2011	45,503	511	1.21	55,059	82
83	2012	1,940	533	1.16	2,250	83
84	2013	41,240	550	1.12	46,189	84
85	2014	49,821	558	1.10	54,803	85
86	2015	69,873	566	1.09	76,162	86
87	2016	192,568	572	1.08	207,973	87
88	2017	11,437	577	1.07	12,238	88
89	2018	117,113	578	1.07	125,311	89
90	2019	71,388	605	1.02	72,816	90
91	2020	181,167	617	1.00	181,167	91
92	2021	0	617	1.00	0	92
93	Total	$ 1,174,565			$ 1,412,723	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 394 - Tools, Shop and Garage Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	296,381	455	1.36	403,078	77
78	2007	423,466	467	1.32	558,975	78
79	2008	343,919	479	1.29	443,656	79
80	2009	1,461,053	501	1.23	1,797,095	80
81	2010	395,084	501	1.23	485,953	81
82	2011	629,896	511	1.21	762,174	82
83	2012	481,562	533	1.16	558,612	83
84	2013	754,983	550	1.12	845,581	84
85	2014	1,043,422	558	1.10	1,147,764	85
86	2015	1,302,683	566	1.09	1,419,924	86
87	2016	1,188,647	572	1.08	1,283,739	87
88	2017	1,708,014	577	1.07	1,827,575	88
89	2018	1,475,023	578	1.07	1,578,275	89
90	2019	5,115,224	605	1.02	5,217,528	90
91	2020	1,607,065	617	1.00	1,607,065	
92	2021	1,148,707	617	1.00	1,148,707	
93	Total	$ 19,375,129			$ 21,085,701	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 395 - Laboratory Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	1,707	253	1.98	3,380	69
70	1999	142,885	262	1.91	272,910	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	59,897	290	1.72	103,023	73
74	2003	1,552	293	1.71	2,654	74
75	2004	2,421	298	1.68	4,067	75
76	2005	0	303	1.65	0	76
77	2006	2,466	303	1.65	4,069	77
78	2007	42,853	310	1.61	68,993	78
79	2008	2,421	335	1.49	3,607	79
80	2009	336	351	1.42	477	80
81	2010	8,738	374	1.34	11,709	81
82	2011	32,281	378	1.32	42,611	82
83	2012	62,679	405	1.23	77,095	83
84	2013	0	405	1.23	0	84
85	2014	99,164	426	1.17	116,022	85
86	2015	0	429	1.17	0	86
87	2016	19,722	442	1.13	22,286	87
88	2017	52,425	449	1.11	58,192	88
89	2018	3,349	468	1.07	3,583	89
90	2019	7,524	470	1.06	7,975	90
91	2020	0	500	1.00	0	91
92	2021	0	500	1.00	0	92
91	Total	$ 542,420			$ 802,653	91

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 396 - Power Operated Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	91,819	467	1.32	121,201	78
79	2008	1,204,692	479	1.29	1,554,053	79
80	2009	598,438	501	1.23	736,079	80
81	2010	1,032,051	501	1.23	1,269,423	81
82	2011	613,696	511	1.21	742,572	82
83	2012	388,221	533	1.16	450,336	83
84	2013	272,897	550	1.12	305,645	84
85	2014	235,577	558	1.10	259,135	85
86	2015	760,294	566	1.09	828,720	86
87	2016	608,650	572	1.08	657,342	87
88	2017	283,390	577	1.07	303,227	88
89	2018	1,358,932	578	1.07	1,454,057	89
90	2019	1,418,698	605	1.02	1,447,072	90
91	2020	952,742	617	1.00	952,742	91
92	2021	169,763	617	1.00	169,763	92
93	Total	$ 9,989,860			$ 11,251,367	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.1 - Communication Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	0	365	1.39	0	79
80	2009	16,980	372	1.36	23,093	80
81	2010	156,463	402	1.26	197,143	81
82	2011	260,259	413	1.23	320,119	82
83	2012	548,932	423	1.20	658,718	83
84	2013	22,458	427	1.19	26,725	84
85	2014	577,846	433	1.17	676,080	85
86	2015	60,221	445	1.14	68,652	86
87	2016	84,327	449	1.13	95,290	87
88	2017	107,006	473	1.07	114,496	88
89	2018	289,055	481	1.05	303,508	89
90	2019	3,557,456	485	1.04	3,699,754	90
91	2020	23,028	506	1.00	23,028	91
92	2021	5,174	506	1.00	5,174	92
93	Total	$ 5,709,205			$ 6,211,780	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.2 - Telemetering Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	0	365	1.39	0	79
80	2009	0	372	1.36	0	80
81	2010	0	402	1.26	0	81
82	2011	0	413	1.23	0	82
83	2012	0	423	1.20	0	83
84	2013	0	427	1.19	0	84
85	2014	0	433	1.17	0	85
86	2015	0	445	1.14	0	86
87	2016	9,312	449	1.13	10,523	87
88	2017	0	473	1.07	0	88
89	2018	0	481	1.05	0	89
90	2019	0	485	1.04	0	90
91	2020	0	506	1.00	0	91
92	2021	0	506	1.00	0	92
93	Total	$ 9,312			$ 10,523	93

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 398 - Miscellaneous Equipment

Line No.	Year Installed	Original Cost Total Arizona	H - W Index	Ratio To Current Index	RCN Total Arizona	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	4,815	342	1.48	7,126	77
78	2007	46,258	350	1.45	67,074	78
79	2008	15,323	365	1.39	21,299	79
80	2009	27,716	372	1.36	37,694	80
81	2010	119,593	402	1.26	150,687	81
82	2011	103,655	413	1.23	127,496	82
83	2012	14,500	423	1.20	17,400	83
84	2013	66,876	427	1.19	79,582	84
85	2014	209,061	433	1.17	244,601	85
86	2015	132,790	445	1.14	151,381	86
87	2016	946,154	449	1.13	1,069,154	87
88	2017	146,605	473	1.07	156,867	88
89	2018	502,108	481	1.05	527,213	89
90	2019	246,971	485	1.04	256,850	90
91	2020	1,939,115	506	1.00	1,939,115	91
92	2021	157,192	506	1.00	157,192	92
91	Total	$ 4,678,732			$ 5,010,731	91
92	Grand Total	$ 4,486,632,669			$ 7,023,678,371	92

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 389 - Land and Land Rights					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	1	1.00	$ 0	1
2	1931	0	1	1.00	0	2
3	1932	0	1	1.00	0	3
4	1933	0	1	1.00	0	4
5	1934	0	1	1.00	0	5
6	1935	0	1	1.00	0	6
7	1936	0	1	1.00	0	7
8	1937	0	1	1.00	0	8
9	1938	0	1	1.00	0	9
10	1939	0	1	1.00	0	10
11	1940	0	1	1.00	0	11
12	1941	0	1	1.00	0	12
13	1942	0	1	1.00	0	13
14	1943	0	1	1.00	0	14
15	1944	0	1	1.00	0	15
16	1945	0	1	1.00	0	16
17	1946	0	1	1.00	0	17
18	1947	0	1	1.00	0	18
19	1948	0	1	1.00	0	19
20	1949	0	1	1.00	0	20
21	1950	0	1	1.00	0	21
22	1951	0	1	1.00	0	22
23	1952	0	1	1.00	0	23
24	1953	0	1	1.00	0	24
25	1954	0	1	1.00	0	25
26	1955	0	1	1.00	0	26
27	1956	0	1	1.00	0	27
28	1957	0	1	1.00	0	28
29	1958	0	1	1.00	0	29
30	1959	0	1	1.00	0	30
31	1960	0	1	1.00	0	31
32	1961	0	1	1.00	0	32
33	1962	0	1	1.00	0	33
34	1963	0	1	1.00	0	34
35	1964	0	1	1.00	0	35
36	1965	0	1	1.00	0	36
37	1966	0	1	1.00	0	37
38	1967	0	1	1.00	0	38
39	1968	0	1	1.00	0	39
40	1969	0	1	1.00	0	40
41	1970	0	1	1.00	0	41
42	1971	0	1	1.00	0	42
43	1972	0	1	1.00	0	43
44	1973	0	1	1.00	0	44
45	1974	0	1	1.00	0	45
46	1975	0	1	1.00	0	46
47	1976	0	1	1.00	0	47
48	1977	0	1	1.00	0	48
49	1978	0	1	1.00	0	49
50	1979	0	1	1.00	0	50
51	1980	0	1	1.00	0	51
52	1981	0	1	1.00	0	52
53	1982	0	1	1.00	0	53
54	1983	0	1	1.00	0	54
55	1984	0	1	1.00	0	55
56	1985	0	1	1.00	0	56
57	1986	0	1	1.00	0	57
58	1987	0	1	1.00	0	58
59	1988	0	1	1.00	0	59
60	1989	248,909	1	1.00	248,909	60
61	1990	0	1	1.00	0	61
62	1991	0	1	1.00	0	62
63	1992	0	1	1.00	0	63
64	1993	142,398	1	1.00	142,398	64
65	1994	0	1	1.00	0	65
66	1995	0	1	1.00	0	66
67	1996	0	1	1.00	0	67
68	1997	0	1	1.00	0	68
69	1998	0	1	1.00	0	69
70	1999	0	1	1.00	0	70
71	2000	0	1	1.00	0	71
72	2001	0	1	1.00	0	72
73	2002	0	1	1.00	0	73
74	2003	0	1	1.00	0	74
75	2004	0	1	1.00	0	75
76	2005	0	1	1.00	0	76
77	2006	0	1	1.00	0	77
78	2007	0	1	1.00	0	78
79	2008	0	1	1.00	0	79
80	2009	0	1	1.00	0	80
81	2010	0	1	1.00	0	81
82	2011	0	1	1.00	0	82
83	2012	0	1	1.00	0	83
84	2013	0	1	1.00	0	84
85	2014	3,825,399	1	1.00	3,825,399	85
86	2015	0	1	1.00	0	86
87	2016	0	1	1.00	0	87
88	2017	0	1	1.00	0	88
89	2018	0	1	1.00	0	89
90	2019	2,007,241	1	1.00	2,007,241	90
91	2020	0	1	1.00	0	91
92	2021	1,802,975	1	1.00	1,802,975	92
93	Total	$ 8,026,922			$ 8,026,922	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 390.1 - General Plant Structures					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	0	215	2.31	0	54
55	1984	0	224	2.21	0	55
56	1985	0	226	2.19	0	56
57	1986	0	231	2.15	0	57
58	1987	477,495	232	2.14	1,021,839	58
59	1988	0	233	2.13	0	59
60	1989	9,517,325	232	2.14	20,367,076	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	21,094	250	1.98	41,766	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	4,191	286	1.73	7,250	69
70	1999	0	286	1.73	0	70
71	2000	0	295	1.68	0	71
72	2001	24,594	303	1.64	40,334	72
73	2002	0	311	1.59	0	73
74	2003	0	318	1.56	0	74
75	2004	265,902	342	1.45	385,558	75
76	2005	2,018,722	352	1.41	2,846,398	76
77	2006	132,672	362	1.37	181,761	77
78	2007	356,318	377	1.32	470,340	78
79	2008	435,364	399	1.24	539,851	79
80	2009	146,749	387	1.28	187,839	80
81	2010	546,888	396	1.25	683,610	81
82	2011	0	407	1.22	0	82
83	2012	476,843	419	1.18	562,675	83
84	2013	188,416	429	1.16	218,563	84
85	2014	12,351,377	437	1.14	14,080,570	85
86	2015	798,504	443	1.12	894,324	86
87	2016	1,437,730	442	1.12	1,610,258	87
88	2017	4,136,879	460	1.08	4,467,829	88
89	2018	625,259	481	1.03	644,017	89
90	2019	15,693,941	492	1.01	15,850,880	90
91	2020	9,164,799	498	1.00	9,164,799	91
92	2021	17,039,960	496	1.00	17,039,960	92
93	Total	$ 75,861,022			$ 91,307,497	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 390.2 - Leasehold Improvements Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	19	26.11	$ 0	1
2	1931	0	17	29.18	0	2
3	1932	0	16	31.00	0	3
4	1933	0	17	29.18	0	4
5	1934	0	19	26.11	0	5
6	1935	0	18	27.56	0	6
7	1936	0	19	26.11	0	7
8	1937	0	20	24.80	0	8
9	1938	0	20	24.80	0	9
10	1939	0	20	24.80	0	10
11	1940	0	20	24.80	0	11
12	1941	0	22	22.55	0	12
13	1942	0	23	21.57	0	13
14	1943	0	23	21.57	0	14
15	1944	0	24	20.67	0	15
16	1945	0	24	20.67	0	16
17	1946	0	27	18.37	0	17
18	1947	0	32	15.50	0	18
19	1948	0	36	13.78	0	19
20	1949	0	37	13.41	0	20
21	1950	0	39	12.72	0	21
22	1951	0	42	11.81	0	22
23	1952	0	44	11.27	0	23
24	1953	0	44	11.27	0	24
25	1954	0	46	10.78	0	25
26	1955	0	48	10.33	0	26
27	1956	0	52	9.54	0	27
28	1957	0	55	9.02	0	28
29	1958	0	57	8.70	0	29
30	1959	0	58	8.55	0	30
31	1960	0	59	8.41	0	31
32	1961	0	58	8.55	0	32
33	1962	0	59	8.41	0	33
34	1963	0	60	8.27	0	34
35	1964	0	61	8.13	0	35
36	1965	0	64	7.75	0	36
37	1966	0	65	7.63	0	37
38	1967	0	67	7.40	0	38
39	1968	0	71	6.99	0	39
40	1969	0	75	6.61	0	40
41	1970	0	79	6.28	0	41
42	1971	0	87	5.70	0	42
43	1972	0	93	5.33	0	43
44	1973	0	100	4.96	0	44
45	1974	0	118	4.20	0	45
46	1975	0	133	3.73	0	46
47	1976	0	138	3.59	0	47
48	1977	0	148	3.35	0	48
49	1978	0	161	3.08	0	49
50	1979	0	177	2.80	0	50
51	1980	0	194	2.56	0	51
52	1981	0	204	2.43	0	52
53	1982	0	207	2.40	0	53
54	1983	42,489	215	2.31	98,150	54
55	1984	3,685	224	2.21	8,144	55
56	1985	2,427	226	2.19	5,315	56
57	1986	1,880	231	2.15	4,042	57
58	1987	4,071	232	2.14	8,712	58
59	1988	0	233	2.13	0	59
60	1989	0	232	2.14	0	60
61	1990	0	237	2.09	0	61
62	1991	0	233	2.13	0	62
63	1992	0	238	2.08	0	63
64	1993	192,953	250	1.98	382,047	64
65	1994	0	261	1.90	0	65
66	1995	0	265	1.87	0	66
67	1996	0	276	1.80	0	67
68	1997	0	282	1.76	0	68
69	1998	0	286	1.73	0	69
70	1999	0	286	1.73	0	70
71	2000	20,560	295	1.68	34,541	71
72	2001	0	303	1.64	0	72
73	2002	0	311	1.59	0	73
74	2003	59,871	318	1.56	93,399	74
75	2004	60,915	342	1.45	88,327	75
76	2005	0	352	1.41	0	76
77	2006	0	362	1.37	0	77
78	2007	153,898	377	1.32	203,145	78
79	2008	0	399	1.24	0	79
80	2009	675	387	1.28	864	80
81	2010	0	396	1.25	0	81
82	2011	0	407	1.22	0	82
83	2012	296,119	419	1.18	349,420	83
84	2013	293,648	429	1.16	340,632	84
85	2014	660,042	437	1.14	752,448	85
86	2015	0	443	1.12	0	86
87	2016	0	442	1.12	0	87
88	2017	378,695	460	1.08	408,991	88
89	2018	0	481	1.03	0	89
90	2019	1,017	492	1.01	1,027	90
91	2020	174,664	498	1.00	174,664	91
92	2021	0	496	1.00	0	92
93	Total	$ 2,347,609			$ 2,953,868	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 391 - Office Furniture and Equipment					Line No.
	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	1,300,485	303	1.65	2,145,800	77
78	2007	2,831,972	310	1.61	4,559,475	78
79	2008	125,388	335	1.49	186,828	79
80	2009	313,150	351	1.42	444,673	80
81	2010	222,355	374	1.34	297,956	81
82	2011	416,815	378	1.32	550,196	82
83	2012	281,912	405	1.23	346,752	83
84	2013	675,580	405	1.23	830,963	84
85	2014	364,405	426	1.17	426,354	85
86	2015	503,359	429	1.17	588,930	86
87	2016	653,396	442	1.13	738,337	87
88	2017	81,451	449	1.11	90,411	88
89	2018	185,420	468	1.07	198,399	89
90	2019	1,840,659	470	1.06	1,951,099	90
91	2020	1,875,800	500	1.00	1,875,800	91
92	2021	857,670	500	1.00	857,670	92
93	Total	$ 12,529,817			$ 16,089,643	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	Line No.
	Account 391.1 - Computer Equipment					
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	0	290	1.72	0	73
74	2003	0	293	1.71	0	74
75	2004	0	298	1.68	0	75
76	2005	0	303	1.65	0	76
77	2006	0	303	1.65	0	77
78	2007	0	310	1.61	0	78
79	2008	0	335	1.49	0	79
80	2009	0	351	1.42	0	80
81	2010	0	374	1.34	0	81
82	2011	0	378	1.32	0	82
83	2012	0	405	1.23	0	83
84	2013	0	405	1.23	0	84
85	2014	0	426	1.17	0	85
86	2015	0	429	1.17	0	86
87	2016	619,631	442	1.13	700,183	87
88	2017	5,726,511	449	1.11	6,356,427	88
89	2018	2,635,603	468	1.07	2,820,095	89
90	2019	4,423,492	470	1.06	4,688,902	90
91	2020	8,155,001	500	1.00	8,155,001	91
92	2021	860,186	500	1.00	860,186	92
93	Total	$ 22,420,424			$ 23,580,794	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 392.11 - Transportation Equip. - Light Vehicles

Line No.	Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	44,227	550	1.12	49,534	84
85	2014	1,027,779	558	1.10	1,130,557	85
86	2015	337,929	566	1.09	368,343	86
87	2016	278,379	572	1.08	300,649	87
88	2017	614,320	577	1.07	657,322	88
89	2018	206,476	578	1.07	220,929	89
90	2019	404,940	605	1.02	413,039	90
91	2020	40,732	617	1.00	40,732	91
92	2021	86,176	617	1.00	86,176	92
93	Total	$ 3,040,958			$ 3,267,281	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 392.21 - Transportation Equip - Aircraft					Line No.
	Year Installed	Original Cost	H - W Index	Ratio To Current Index	RCN Cost	
	(a)	(b)	(c)	(d)	(e)	
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	8,221,361	511	1.21	9,947,847	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	0	572	1.08	0	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	0	605	1.02	0	90
91	2020		617	1.00	0	91
92	2021		617	1.00	0	92
93	Total	$ 8,221,361			$ 9,947,847	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 393 - Stores Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	31,617	479	1.29	40,786	79
80	2009	0	501	1.23	0	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	31,420	572	1.08	33,934	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	0	605	1.02	0	90
91	2020	0	617	1.00	0	91
92	2021	0	617	1.00	0	92
93	Total	$ 63,037			$ 74,720	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 394 - Tools, Shop, and Garage Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	80,661	467	1.32	106,473	78
79	2008	0	479	1.29	0	79
80	2009	17,816	501	1.23	21,914	80
81	2010	44,295	501	1.23	54,483	81
82	2011	145,939	511	1.21	176,586	82
83	2012	115,235	533	1.16	133,673	83
84	2013	87,743	550	1.12	98,272	84
85	2014	60,700	558	1.10	66,770	85
86	2015	45,484	566	1.09	49,578	86
87	2016	19,608	572	1.08	21,177	87
88	2017	324,144	577	1.07	346,834	88
89	2018	120,024	578	1.07	128,426	89
90	2019	196,708	605	1.02	200,642	90
91	2020	62,174	617	1.00	62,174	91
92	2021	0	617	1.00	0	92
93	Total	$ 1,320,531			$ 1,467,002	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 395 - Laboratory Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	11	45.45	$ 0	1
2	1931	0	11	45.45	0	2
3	1932	0	11	45.45	0	3
4	1933	0	11	45.45	0	4
5	1934	0	11	45.45	0	5
6	1935	0	11	45.45	0	6
7	1936	0	12	41.67	0	7
8	1937	0	13	38.46	0	8
9	1938	0	13	38.46	0	9
10	1939	0	13	38.46	0	10
11	1940	0	13	38.46	0	11
12	1941	0	13	38.46	0	12
13	1942	0	15	33.33	0	13
14	1943	0	15	33.33	0	14
15	1944	0	15	33.33	0	15
16	1945	0	16	31.25	0	16
17	1946	0	20	25.00	0	17
18	1947	0	23	21.74	0	18
19	1948	0	26	19.23	0	19
20	1949	0	26	19.23	0	20
21	1950	0	27	18.52	0	21
22	1951	0	29	17.24	0	22
23	1952	0	31	16.13	0	23
24	1953	0	33	15.15	0	24
25	1954	0	34	14.71	0	25
26	1955	0	36	13.89	0	26
27	1956	0	39	12.82	0	27
28	1957	0	41	12.20	0	28
29	1958	0	42	11.90	0	29
30	1959	0	45	11.11	0	30
31	1960	0	46	10.87	0	31
32	1961	0	51	9.80	0	32
33	1962	0	53	9.43	0	33
34	1963	0	55	9.09	0	34
35	1964	0	57	8.77	0	35
36	1965	0	60	8.33	0	36
37	1966	0	62	8.06	0	37
38	1967	0	66	7.58	0	38
39	1968	0	70	7.14	0	39
40	1969	0	74	6.76	0	40
41	1970	0	81	6.17	0	41
42	1971	0	87	5.75	0	42
43	1972	0	94	5.32	0	43
44	1973	0	100	5.00	0	44
45	1974	0	109	4.59	0	45
46	1975	0	123	4.07	0	46
47	1976	0	130	3.85	0	47
48	1977	0	141	3.55	0	48
49	1978	0	151	3.31	0	49
50	1979	0	164	3.05	0	50
51	1980	0	178	2.81	0	51
52	1981	0	186	2.69	0	52
53	1982	0	203	2.46	0	53
54	1983	0	209	2.39	0	54
55	1984	0	212	2.36	0	55
56	1985	0	211	2.37	0	56
57	1986	0	218	2.29	0	57
58	1987	0	226	2.21	0	58
59	1988	0	219	2.28	0	59
60	1989	0	213	2.35	0	60
61	1990	0	228	2.19	0	61
62	1991	0	242	2.07	0	62
63	1992	0	249	2.01	0	63
64	1993	0	260	1.92	0	64
65	1994	0	257	1.95	0	65
66	1995	0	246	2.03	0	66
67	1996	0	250	2.00	0	67
68	1997	0	251	1.99	0	68
69	1998	0	253	1.98	0	69
70	1999	0	262	1.91	0	70
71	2000	0	267	1.87	0	71
72	2001	0	280	1.79	0	72
73	2002	46,970	290	1.72	80,788	73
74	2003	0	293	1.71	0	74
75	2004	15,738	298	1.68	26,440	75
76	2005	44,639	303	1.65	73,654	76
77	2006	0	303	1.65	0	77
78	2007	41,607	310	1.61	66,987	78
79	2008	15,774	335	1.49	23,503	79
80	2009	173,206	351	1.42	245,953	80
81	2010	0	374	1.34	0	81
82	2011	48,182	378	1.32	63,600	82
83	2012	4,376	405	1.23	5,382	83
84	2013	296,878	405	1.23	365,160	84
85	2014	224,898	426	1.17	263,131	85
86	2015	54,031	429	1.17	63,216	86
87	2016	13,913	442	1.13	15,722	87
88	2017	132,717	449	1.11	147,316	88
89	2018	75,331	468	1.07	80,604	89
90	2019	208,737	470	1.06	221,261	90
91	2020	110,890	500	1.00	110,890	91
92	2021	32,591	500	1.00	32,591	92
93	Total	$ 1,540,478			$ 1,886,198	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 396 - Power Operated Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	22	28.02	$ 0	1
2	1931	0	20	30.83	0	2
3	1932	0	19	32.45	0	3
4	1933	0	19	32.45	0	4
5	1934	0	20	30.83	0	5
6	1935	0	21	29.36	0	6
7	1936	0	21	29.36	0	7
8	1937	0	23	26.80	0	8
9	1938	0	23	26.80	0	9
10	1939	0	23	26.80	0	10
11	1940	0	24	25.69	0	11
12	1941	0	25	24.66	0	12
13	1942	0	28	22.02	0	13
14	1943	0	29	21.26	0	14
15	1944	0	29	21.26	0	15
16	1945	0	29	21.26	0	16
17	1946	0	34	18.13	0	17
18	1947	0	37	16.66	0	18
19	1948	0	39	15.81	0	19
20	1949	0	40	15.41	0	20
21	1950	0	42	14.68	0	21
22	1951	0	45	13.70	0	22
23	1952	0	46	13.40	0	23
24	1953	0	49	12.58	0	24
25	1954	0	49	12.58	0	25
26	1955	0	51	12.09	0	26
27	1956	0	55	11.21	0	27
28	1957	0	59	10.45	0	28
29	1958	0	62	9.94	0	29
30	1959	0	64	9.63	0	30
31	1960	0	65	9.48	0	31
32	1961	0	67	9.20	0	32
33	1962	0	67	9.20	0	33
34	1963	0	68	9.07	0	34
35	1964	0	70	8.81	0	35
36	1965	0	71	8.68	0	36
37	1966	0	73	8.45	0	37
38	1967	0	76	8.11	0	38
39	1968	0	80	7.71	0	39
40	1969	0	84	7.34	0	40
41	1970	0	88	7.01	0	41
42	1971	0	93	6.63	0	42
43	1972	0	95	6.49	0	43
44	1973	0	100	6.17	0	44
45	1974	0	117	5.27	0	45
46	1975	0	141	4.37	0	46
47	1976	0	153	4.03	0	47
48	1977	0	164	3.76	0	48
49	1978	0	178	3.46	0	49
50	1979	0	197	3.13	0	50
51	1980	0	222	2.78	0	51
52	1981	0	246	2.51	0	52
53	1982	0	263	2.34	0	53
54	1983	0	269	2.29	0	54
55	1984	0	273	2.26	0	55
56	1985	0	276	2.23	0	56
57	1986	0	280	2.20	0	57
58	1987	0	286	2.16	0	58
59	1988	0	295	2.09	0	59
60	1989	0	281	2.19	0	60
61	1990	0	298	2.07	0	61
62	1991	0	320	1.93	0	62
63	1992	0	316	1.95	0	63
64	1993	0	324	1.90	0	64
65	1994	0	331	1.86	0	65
66	1995	0	333	1.85	0	66
67	1996	0	336	1.83	0	67
68	1997	0	351	1.76	0	68
69	1998	0	380	1.62	0	69
70	1999	0	385	1.60	0	70
71	2000	0	389	1.58	0	71
72	2001	0	391	1.58	0	72
73	2002	0	396	1.56	0	73
74	2003	0	402	1.53	0	74
75	2004	0	414	1.49	0	75
76	2005	0	435	1.42	0	76
77	2006	0	455	1.36	0	77
78	2007	0	467	1.32	0	78
79	2008	0	479	1.29	0	79
80	2009	11,760	501	1.23	14,465	80
81	2010	0	501	1.23	0	81
82	2011	0	511	1.21	0	82
83	2012	0	533	1.16	0	83
84	2013	0	550	1.12	0	84
85	2014	0	558	1.10	0	85
86	2015	0	566	1.09	0	86
87	2016	0	572	1.08	0	87
88	2017	0	577	1.07	0	88
89	2018	0	578	1.07	0	89
90	2019	24,844	605	1.02	25,341	90
91	2020	222,838	617	1.00	222,838	91
92	2021	0	617	1.00	0	92
93	Total	$ 259,442			$ 262,644	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 397 - Communication Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	0	342	1.48	0	77
78	2007	0	350	1.45	0	78
79	2008	405,459	365	1.39	563,588	79
80	2009	1,742,481	372	1.36	2,369,774	80
81	2010	193,611	402	1.26	243,950	81
82	2011	594,239	413	1.23	730,914	82
83	2012	919,185	423	1.20	1,103,022	83
84	2013	1,046,489	427	1.19	1,245,322	84
85	2014	259,365	433	1.17	303,457	85
86	2015	16,807	445	1.14	19,160	86
87	2016	47,258	449	1.13	53,402	87
88	2017	0	473	1.07	0	88
89	2018	292,545	481	1.05	307,172	89
90	2019	2,019,941	485	1.04	2,100,739	90
91	2020	270,998	506	1.00	270,998	91
92	2021	9,611	506	1.00	9,611	92
93	Total	$ 7,817,989			$ 9,321,109	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Account 397.2 - Telemetry Equipment

Line No.	Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	32.33	$ 0	1
2	1931	0	15	32.33	0	2
3	1932	0	15	32.33	0	3
4	1933	0	15	32.33	0	4
5	1934	0	15	32.33	0	5
6	1935	0	15	32.33	0	6
7	1936	0	15	32.33	0	7
8	1937	0	17	28.53	0	8
9	1938	0	17	28.53	0	9
10	1939	0	17	28.53	0	10
11	1940	0	17	28.53	0	11
12	1941	0	18	26.94	0	12
13	1942	0	19	25.53	0	13
14	1943	0	19	25.53	0	14
15	1944	0	19	25.53	0	15
16	1945	0	19	25.53	0	16
17	1946	0	21	23.10	0	17
18	1947	0	24	20.21	0	18
19	1948	0	26	18.65	0	19
20	1949	0	28	17.32	0	20
21	1950	0	30	16.17	0	21
22	1951	0	31	15.65	0	22
23	1952	0	33	14.70	0	23
24	1953	0	34	14.26	0	24
25	1954	0	36	13.47	0	25
26	1955	0	37	13.11	0	26
27	1956	0	39	12.44	0	27
28	1957	0	41	11.83	0	28
29	1958	0	42	11.55	0	29
30	1959	0	45	10.78	0	30
31	1960	0	46	10.54	0	31
32	1961	0	49	9.90	0	32
33	1962	0	51	9.51	0	33
34	1963	0	52	9.33	0	34
35	1964	0	54	8.98	0	35
36	1965	0	57	8.51	0	36
37	1966	0	58	8.36	0	37
38	1967	0	62	7.82	0	38
39	1968	0	64	7.58	0	39
40	1969	0	69	7.03	0	40
41	1970	0	78	6.22	0	41
42	1971	0	88	5.51	0	42
43	1972	0	95	5.11	0	43
44	1973	0	100	4.85	0	44
45	1974	0	109	4.45	0	45
46	1975	0	122	3.98	0	46
47	1976	0	131	3.70	0	47
48	1977	0	142	3.42	0	48
49	1978	0	151	3.21	0	49
50	1979	0	160	3.03	0	50
51	1980	0	170	2.85	0	51
52	1981	0	185	2.62	0	52
53	1982	0	206	2.35	0	53
54	1983	0	218	2.22	0	54
55	1984	0	220	2.20	0	55
56	1985	0	214	2.27	0	56
57	1986	0	215	2.26	0	57
58	1987	0	216	2.25	0	58
59	1988	0	215	2.26	0	59
60	1989	0	214	2.27	0	60
61	1990	0	220	2.20	0	61
62	1991	0	225	2.16	0	62
63	1992	0	232	2.09	0	63
64	1993	0	236	2.06	0	64
65	1994	0	239	2.03	0	65
66	1995	0	247	1.96	0	66
67	1996	0	254	1.91	0	67
68	1997	0	257	1.89	0	68
69	1998	0	265	1.83	0	69
70	1999	0	275	1.76	0	70
71	2000	0	285	1.70	0	71
72	2001	0	299	1.62	0	72
73	2002	0	309	1.57	0	73
74	2003	0	317	1.53	0	74
75	2004	0	326	1.49	0	75
76	2005	0	335	1.45	0	76
77	2006	0	342	1.42	0	77
78	2007	0	350	1.39	0	78
79	2008	0	365	1.33	0	79
80	2009	0	372	1.30	0	80
81	2010	0	402	1.21	0	81
82	2011	0	413	1.17	0	82
83	2012	0	423	1.15	0	83
84	2013	0	427	1.14	0	84
85	2014	0	433	1.12	0	85
86	2015	0	445	1.09	0	86
87	2016	0	449	1.08	0	87
88	2017	0	473	1.03	0	88
89	2018	0	481	1.01	0	89
90	2019	0	485	1.00	0	90
91	2019	0	506	0.96	0	91
92	2019	0	506	0.96	0	92
93	Total	$ 0			$ 0	93

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
RCN COST OF GAS PLANT IN SERVICE AS OF AUGUST 31, 2021

Line No.	Account 398 - Miscellaneous Equipment Year Installed (a)	Original Cost (b)	H - W Index (c)	Ratio To Current Index (d)	RCN Cost (e)	Line No.
1	1930	$ 0	15	33.73	$ 0	1
2	1931	0	15	33.73	0	2
3	1932	0	15	33.73	0	3
4	1933	0	15	33.73	0	4
5	1934	0	15	33.73	0	5
6	1935	0	15	33.73	0	6
7	1936	0	15	33.73	0	7
8	1937	0	17	29.76	0	8
9	1938	0	17	29.76	0	9
10	1939	0	17	29.76	0	10
11	1940	0	17	29.76	0	11
12	1941	0	18	28.11	0	12
13	1942	0	19	26.63	0	13
14	1943	0	19	26.63	0	14
15	1944	0	19	26.63	0	15
16	1945	0	19	26.63	0	16
17	1946	0	21	24.10	0	17
18	1947	0	24	21.08	0	18
19	1948	0	26	19.46	0	19
20	1949	0	28	18.07	0	20
21	1950	0	30	16.87	0	21
22	1951	0	31	16.32	0	22
23	1952	0	33	15.33	0	23
24	1953	0	34	14.88	0	24
25	1954	0	36	14.06	0	25
26	1955	0	37	13.68	0	26
27	1956	0	39	12.97	0	27
28	1957	0	41	12.34	0	28
29	1958	0	42	12.05	0	29
30	1959	0	45	11.24	0	30
31	1960	0	46	11.00	0	31
32	1961	0	49	10.33	0	32
33	1962	0	51	9.92	0	33
34	1963	0	52	9.73	0	34
35	1964	0	54	9.37	0	35
36	1965	0	57	8.88	0	36
37	1966	0	58	8.72	0	37
38	1967	0	62	8.16	0	38
39	1968	0	64	7.91	0	39
40	1969	0	69	7.33	0	40
41	1970	0	78	6.49	0	41
42	1971	0	88	5.75	0	42
43	1972	0	95	5.33	0	43
44	1973	0	100	5.06	0	44
45	1974	0	109	4.64	0	45
46	1975	0	122	4.15	0	46
47	1976	0	131	3.86	0	47
48	1977	0	142	3.56	0	48
49	1978	0	151	3.35	0	49
50	1979	0	160	3.16	0	50
51	1980	0	170	2.98	0	51
52	1981	0	185	2.74	0	52
53	1982	0	206	2.46	0	53
54	1983	0	218	2.32	0	54
55	1984	0	220	2.30	0	55
56	1985	0	214	2.36	0	56
57	1986	0	215	2.35	0	57
58	1987	0	216	2.34	0	58
59	1988	0	215	2.35	0	59
60	1989	0	214	2.36	0	60
61	1990	0	220	2.30	0	61
62	1991	0	225	2.25	0	62
63	1992	0	232	2.18	0	63
64	1993	0	236	2.14	0	64
65	1994	0	239	2.12	0	65
66	1995	0	247	2.05	0	66
67	1996	0	254	1.99	0	67
68	1997	0	257	1.97	0	68
69	1998	0	265	1.91	0	69
70	1999	0	275	1.84	0	70
71	2000	0	285	1.78	0	71
72	2001	0	299	1.69	0	72
73	2002	0	309	1.64	0	73
74	2003	0	317	1.60	0	74
75	2004	0	326	1.55	0	75
76	2005	0	335	1.51	0	76
77	2006	20,318	342	1.48	30,071	77
78	2007	8,989	350	1.45	13,034	78
79	2008	42,617	365	1.39	59,238	79
80	2009	67,497	372	1.36	91,796	80
81	2010	83,004	402	1.26	104,585	81
82	2011	38,936	413	1.23	47,891	82
83	2012	32,528	423	1.20	39,034	83
84	2013	14,287	427	1.19	17,002	84
85	2014	315,147	433	1.17	368,722	85
86	2015	115,696	445	1.14	131,893	86
87	2016	272,684	449	1.13	308,133	87
88	2017	71,238	473	1.07	76,225	88
89	2018	212,797	481	1.05	223,437	89
90	2019	2,679,037	485	1.04	2,786,198	90
91	2020	843,740	506	1.00	843,740	91
92	2021	124,611	506	1.00	124,611	92
93	Total	$ 4,943,126			$ 5,265,610	93
94	Grand Total	$ 148,392,716			$ 173,451,135	94

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF RCND RESERVE BASED ON GAS PLANT IN SERVICE
AS OF AUGUST 31, 2021

Line No.	Description	Arizona	System Allocable	Line No.
	(a)	(b)	(c)	
		Company Records	Company Records	
	Gas Plant In Service			
1	Intangible Plant	$ 4,618,980	$ 371,144,066	1
2	Storage Plant	75,025,126	0	2
3	Distribution Plant	4,213,201,374	0	3
4	General Plant	198,406,168	148,392,717	4
5	Total Gas Plant In Service	$ 4,491,251,648	$ 519,536,783	5
	Accumulated Provision			
6	Intangible Plant	$ 3,198,029	$ 230,010,063	6
7	Storage Plant	5,705,215	0	7
8	Distribution Plant	1,453,228,121	0	8
9	General Plant	66,401,579	37,480,093	9
10	Total Accumulated Provision	$ 1,528,532,944	$ 267,490,156	10
	Percentage of Accumulated Reserve to Gas Plant In Service			
11	Intangible Plant	69.24%	61.97%	11
12	Storage Plant	7.60%	N/A	12
13	Distribution Plant	34.49%	N/A	13
14	General Plant	33.47%	25.26%	14

Source: Company Records

SOUTHWEST GAS CORPORATION
ARIZONA
RCN DEFERRED TAXES BY VINTAGE
AT AUGUST 31, 2021

Line No.	Year	Arizona			System Allocable					RCN Deferred Taxes			Line No.
		Total Federal 282 Deferred Tax Liability at 1/31/19	Total State 282 Deferred Tax Liability at 1/31/19	Total Arizona Deferred Tax Liability at 1/31/19	Total Federal 282 Deferred Tax Liability at 1/31/19	Total System Allocable at 1/31/19	4-Factor	Total Recorded Deferred Tax Liability at 1/31/19	Total AZ Recorded Deferred Tax Liability at 1/31/19	H - W Index	Ratio to Current Index	RCN Deferred Taxes for Arizona	
	(a)	(b) Company Records	(c) Company Records	(d) (b) + (c)	(e) Company Records	(g) (e) + (f)	(h) Sch C-1, Sh 17, Ln 9(c)	(i) (g) * (h)	(j) (d) + (i)	(k) Company Records	(l) Ln 62(k) / (k)	(m) (j) * (l)	
1	1958	$ (312)	$ (57)	$ (368)	$ 0	$ 0	56.26%	$ 0	$ (368)	61	12.47	$ (4,593)	1
2	1959	0	0	0	0	0	56.26%	0	0	63	12.07	0	2
3	1960	0	0	0	0	0	56.26%	0	0	65	11.70	0	3
4	1961	0	0	0	0	0	56.26%	0	0	66	11.52	0	4
5	1962	0	0	0	0	0	56.26%	0	0	67	11.35	0	5
6	1963	0	0	0	0	0	56.26%	0	0	68	11.18	0	6
7	1964	0	0	0	0	0	56.26%	0	0	69	11.02	0	7
8	1965	0	0	0	0	0	56.26%	0	0	71	10.71	0	8
9	1966	0	0	0	0	0	56.26%	0	0	72	10.56	0	9
10	1967	0	0	0	0	0	56.26%	0	0	74	10.28	0	10
11	1968	0	0	0	0	0	56.26%	0	0	76	10.01	0	11
12	1969	0	0	0	(12,198)	(12,198)	56.26%	(6,863)	(6,863)	79	9.63	(66,091)	12
13	1970	0	0	0	0	0	56.26%	0	0	84	9.05	0	13
14	1971	(737)	(134)	(871)	0	0	56.26%	0	(871)	90	8.45	(7,358)	14
15	1972	(7,514)	(1,369)	(8,883)	0	0	56.26%	0	(8,883)	95	8.01	(71,156)	15
16	1973	(3,270)	(596)	(3,866)	0	0	56.26%	0	(3,866)	100	7.61	(29,419)	16
17	1974	74	13	87	0	0	56.26%	0	87	115	6.61	577	17
18	1975	(186)	(34)	(219)	0	0	56.26%	0	(219)	133	5.72	(1,255)	18
19	1976	0	0	0	0	0	56.26%	0	0	143	5.32	0	19
20	1977	0	0	0	0	0	56.26%	0	0	155	4.91	0	20
21	1978	0	0	0	0	0	56.26%	0	0	169	4.50	0	21
22	1979	1,281,202	233,486	1,514,687	0	0	56.26%	0	1,514,687	184	4.13	6,255,658	22
23	1980	218,908	39,894	258,801	0	0	56.26%	0	258,801	198	3.84	993,797	23
24	1981	89,000	16,219	105,219	0	0	56.26%	0	105,219	223	3.41	358,796	24
25	1982	76,922	14,018	90,941	0	0	56.26%	0	90,941	235	3.24	294,647	25
26	1983	48,801	8,893	57,694	1,148	1,148	56.26%	646	58,340	241	3.16	184,354	26
27	1984	1,459,758	266,025	1,725,783	24,479	24,479	56.26%	13,772	1,739,555	246	3.09	5,375,226	27
28	1985	909,257	165,703	1,074,960	4,225	4,225	56.26%	2,377	1,077,337	241	3.16	3,404,385	28
29	1986	566,940	100,739	667,679	1,213	1,213	56.26%	682	668,361	234	3.25	2,172,173	29
30	1987	524,500	95,585	620,084	0	0	56.26%	0	620,084	242	3.14	1,947,065	30
31	1988	947,141	172,606	1,119,747	0	0	56.26%	0	1,119,747	255	2.98	3,336,847	31
32	1989	693,439	126,372	819,811	228,405	228,405	56.26%	128,500	948,311	264	2.88	2,731,137	32
33	1990	287,170	52,334	339,504	6,066	6,066	56.26%	3,413	342,917	271	2.81	963,597	33
34	1991	353,663	64,451	418,115	3,490	3,490	56.26%	1,964	420,079	278	2.74	1,151,016	34
35	1992	769,435	140,221	909,656	2,567	2,567	56.26%	1,444	911,100	283	2.69	2,450,860	35
36	1993	900,177	164,048	1,064,225	5,408	5,408	56.26%	3,043	1,067,268	291	2.61	2,785,569	36
37	1994	970,967	176,948	1,147,915	4,347	4,347	56.26%	2,446	1,150,361	307	2.48	2,852,896	37
38	1995	2,029,687	369,889	2,399,576	4,251	4,251	56.26%	2,391	2,401,967	309	2.46	5,908,839	38
39	1996	2,079,738	379,010	2,458,749	0	0	56.26%	0	2,458,749	312	2.44	5,999,347	39
40	1997	2,273,465	412,933	2,686,399	0	0	56.26%	0	2,686,399	320	2.38	6,393,629	40
41	1998	3,008,164	548,206	3,556,371	34,971	34,971	56.26%	19,674	3,576,045	323	2.35	8,403,705	41
42	1999	4,433,853	808,023	5,241,876	5,960	5,960	56.26%	3,353	5,245,229	331	2.30	12,064,027	42
43	2000	4,270,591	778,270	5,048,862	12,496	12,496	56.26%	7,030	5,055,892	346	2.20	11,122,961	43
44	2001	5,615,331	1,023,335	6,638,666	192,159	192,159	56.26%	108,108	6,746,774	352	2.16	14,573,032	44
45	2002	6,534,912	1,186,467	7,721,380	71,327	71,327	56.26%	40,128	7,761,508	358	2.12	16,454,396	45
46	2003	7,777,262	1,414,467	9,191,729	48,161	48,161	56.26%	27,095	9,218,824	373	2.04	18,806,401	46
47	2004	9,678,507	1,577,586	11,256,093	135,438	135,438	56.26%	76,197	11,332,290	439	1.73	19,604,861	47
48	2005	7,689,873	1,401,549	9,091,421	233,850	233,850	56.26%	131,563	9,222,984	517	1.47	13,557,787	48
49	2006	9,336,521	1,701,483	11,038,003	177,529	177,529	56.26%	99,877	11,137,880	529	1.44	16,038,548	49
50	2007	11,096,070	2,022,142	13,118,212	86,398	86,398	56.26%	48,607	13,166,819	518	1.47	19,355,224	50
51	2008	11,644,381	1,968,028	13,612,408	141,747	141,747	56.26%	79,746	13,692,154	578	1.31	17,936,722	51
52	2009	9,866,344	1,636,472	11,502,816	93,702	93,702	56.26%	52,717	11,555,533	581	1.31	15,137,748	52
53	2010	12,325,972	1,922,525	14,248,497	67,028	67,028	56.26%	37,710	14,286,207	603	1.26	18,000,621	53
54	2011	22,297,291	2,188,872	24,486,163	990,251	990,251	56.26%	557,110	25,043,273	670	1.14	28,549,332	54
55	2012	18,193,770	2,388,982	20,582,752	281,557	281,557	56.26%	158,403	20,741,155	722	1.05	21,778,213	55
56	2013	13,936,298	1,591,888	15,528,186	361,540	361,540	56.26%	203,401	15,731,587	714	1.07	16,832,798	56
57	2014	19,551,745	2,040,194	21,591,938	1,300,315	1,300,315	56.26%	731,551	22,323,489	716	1.06	23,662,898	57
58	2015	26,587,715	2,645,315	29,233,030	569,827	569,827	56.26%	320,582	29,553,612	699	1.09	32,213,437	58
59	2016	19,984,976	2,033,731	22,018,707	1,413,959	1,413,959	56.26%	795,486	22,814,193	693	1.10	25,095,613	59
60	2017	36,634,169	3,137,248	39,771,417	1,240,707	1,240,707	56.26%	698,016	40,469,433	728	1.05	42,492,905	60
61	2018	19,717,101	3,374,148	23,091,248	2,337,208	2,337,208	56.26%	1,314,902	24,406,150	761	1.00	24,406,150	61
62	2019	21,894,177	3,306,439	25,200,616	2,746,616	2,746,616	56.26%	1,545,233	26,745,849	761	1.00	26,745,849	62
63	2020	10,600,941	1,931,910	12,532,850	3,228,694	3,228,694	56.26%	1,816,448	14,349,298	761	1.00	14,349,298	
64	2021	4,575,361	833,811	5,409,172	(9,961,756)	(9,961,756)	56.26%	(5,604,436)	(195,264)	761	1.00	(195,264)	
65													65
66	Total	$ 333,719,551	$ 46,458,288	$ 380,177,839	$ 6,083,083	$ 6,083,083		$ 3,422,316	$ 383,600,155			$ 512,367,805	66
										Excess Deferred Taxes		185,280,462	
										Deferred Tax Adjustments		1,261,540	
										Total RCND Deferred Taxes		$ 698,909,807	
												Sch B-1, Sh 1, Ln 13(d)	

SCHEDULE B-5

SOUTHWEST GAS CORPORATION
ARIZONA
WORKING CAPITAL ALLOWANCE COMPUTATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Cash Working Capital	Sch B-5, Sh 2, Ln 15(c)	$	(16,619,324)	1
2	Materials and Supplies	Sch B-5, Sh 3, Ln 16(f)		30,847,268	2
3	Prepayments	Sch B-5, Sh 4, Ln 19(h)		14,121,283	3
4	Total Working Capital Allowance	Sum Lns 1-3	$	28,349,227	4
				Sch B-1, Sh 2, Lns 8-10	

SOUTHWEST GAS CORPORATION
ARIZONA
CASH WORKING CAPITAL
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Cost	Lag Days	Dollar Days	Line No.
	(a)	(b)	(c)	(d)	(e) (c) * (d)	
1	Cost of Gas	[1]	$ 209,542,135	41.75	$ 8,748,355,696	1
2	Labor and Benefits Expense	WP B-5, Sh 14	136,658,072	11.97	1,636,142,843	2
3	Prepayments Amortized to O&M	WP B-5, Sh 29	17,873,684	0.00	0	3
4	Uncollectibles Expense	WP B-5, Sh 28	1,692,711	90.83	153,754,603	4
5	Other O&M Expense	WP B-5, Sh 28	81,891,353	23.50	1,924,415,960	5
6	Total O&M Expense	Sum Lns 1-5	$ 447,657,955	27.84	$ 12,462,669,102	6
7	Interest	Sch C-1, Sh 16, Ln 21(e)	53,723,986	91.14	4,896,437,122	7
8	Taxes Other than Income Taxes	Sch A-1, Sh 2, Ln 15(g)	69,307,596	173.60	12,032,083,329	8
9	Income Taxes - Current	Sch C-1, Sh 16, Ln 18(e)	34,462,457	36.50	1,257,879,669	9
10	Total	Sum Lns 6-9	$ 605,151,993	50.65	$ 30,649,069,222	10
11	Number of Days in Test Period		365			11
12	Average Daily Operating Expenses	Ln 10 / Ln 11	$ 1,657,951			12
13	Lag in Receipt of Revenue	WP B-5, Sh 93, Ln 4(c)		40.62		13
14	Net Revenue Lag (Expense Lead)	Ln 13(d) - Ln 10(d)	(10.02)			14
15	Cash Working Capital	Ln 12 * Ln 14	$ (16,619,324)			15
			Sch B-5, Sh 1, Ln 1(c)			

[1] Gas Costs adjusted for present volumes and rates.

SOUTHWEST GAS CORPORATION
ARIZONA
MATERIALS AND SUPPLIES (M&S) [1]
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account Number 154	163	164.2	System Allocable	Total	Line No.
	(a)	(b)	(c)	(d)		(e)	(f)	
			Company Records	Company Records	Company Records	WP B-5, Sh 1	Sum (c)-(e)	
1	August 2020		$ 31,122,296	$ 1,490,281	$ 2,094,887	$ (13,338)	$ 34,694,126	1
2	September 2020		30,344,828	1,558,286	2,041,325	(13,354)	33,931,084	2
3	October 2020		29,919,590	1,337,801	2,070,725	(13,502)	33,314,614	3
4	November 2020		28,700,876	1,345,285	2,058,631	(13,502)	32,091,289	4
5	December 2020		27,817,017	1,194,321	2,192,993	(13,502)	31,190,829	5
6	January 2021		27,377,397	1,243,740	2,273,980	(13,502)	30,881,614	6
7	February 2021		26,899,317	1,119,411	2,225,215	(14,908)	30,229,035	7
8	March 2021		26,197,552	929,750	2,055,982	(13,544)	29,169,741	8
9	April 2021		25,807,425	832,225	1,980,383	(13,540)	28,606,493	9
10	May 2021		26,239,386	312,360	1,904,733	(11,878)	28,444,601	10
11	June 2021		26,887,804	411,890	1,837,567	(42,789)	29,094,471	11
12	July 2021		26,629,993	782,210	1,754,664	(42,789)	29,124,077	12
13	August 2021		26,978,499	1,052,400	2,254,397	(42,789)	30,242,506	13
14	Thirteen Month Total	Sum Lns 1-13	$ 360,921,979	$ 13,609,960	$ 26,745,483	$ (262,941)	$ 401,014,481	14
15	Thirteen Month Average	Ln 14 / 13	$ 27,763,229	$ 1,046,920	$ 2,057,345	$ (20,226)	$ 30,847,268	15
16	Test Year M&S	Ln 15					$ 30,847,268	16
							Sch B-5, Sh 1, Ln 2	

[1] $2.8M of LNG inventory is added to test year M&S in Adjustment No. 18.

SOUTHWEST GAS CORPORATION
ARIZONA
PREPAYMENTS
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Postage 165000000	Insurance and Other 165001129	Prepaid Supplies-General Office 165001132	Commercial Paper Facility 165001353	Total	Line No.
	(a)	(b)	(c)	(d)	(f)	(g)	(h)	
			Company Records	Company Records	Company Records	Company Records	Sum (c)-(g)	
1	August 2020		$ 293,773	$ 32,223,094	$ 40,755	$ 0	$ 32,557,622	1
2	September 2020		50,027	30,259,863	40,173	4,958	30,355,021	2
3	October 2020		54,142	28,230,542	37,089	6,514	28,328,287	3
4	November 2020		43,554	25,960,105	45,001	5,417	26,054,077	4
5	December 2020		30,737	28,506,157	52,796	4,533	28,594,223	5
6	January 2021		25,052	25,795,607	53,349	2,667	25,876,674	6
7	February 2021		31,982	23,213,201	52,107	2,633	23,299,924	7
8	March 2021		49,819	22,641,633	57,544	9,300	22,758,296	8
9	April 2021		40,572	21,368,606	50,736	8,300	21,468,214	9
10	May 2021		32,116	18,896,816	46,460	6,244	18,981,636	10
11	June 2021		43,284	18,875,111	45,429	7,300	18,971,123	11
12	July 2021		37,573	18,379,429	41,944	3,117	18,462,063	12
13	August 2021		25,736	30,719,496	39,529	0	30,784,761	13
14	Thirteen Month Total	Sum Lns 1-13	$ 758,366	$ 325,069,661	$ 602,910	$ 60,983	$ 326,491,921	14
15	Thirteen Month Average	Ln 14 / 13	$ 58,336	$ 25,005,359	$ 46,378	$ 4,691	$ 25,114,763	15
16	Deferred Taxes	Ln 15 * Sch C-3, Sh 2, Ln 4(c)	14,509	0	0	0	14,509	16
17	Balance Net of Deferred Taxes	Ln 15 - Ln 16	$ 43,827	$ 25,005,359	$ 46,378	$ 4,691	$ 25,100,254	17
18	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)					56.26%	18
19	Prepayments Allocated to AZ	Ln 17 * Ln 18					$ 14,121,283	19
							Sch B-5, Sh 1, Ln 3	

SCHEDULE B-5
SHEET 4 OF 4

SCHEDULE B-6

SOUTHWEST GAS CORPORATION
ARIZONA
CUSTOMER DEPOSITS
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account 235 Balance	Line No.
	(a)	(b)	(c)	
			Company Records	
1	August 2020		$ 36,587,519	1
2	September 2020		36,293,867	2
3	October 2020		35,939,360	3
4	November 2020		35,839,762	4
5	December 2020		35,572,817	5
6	January 2021		35,452,953	6
7	February 2021		35,246,751	7
8	March 2021		35,155,364	8
9	April 2021		35,282,220	9
10	May 2021		35,605,959	10
11	June 2021		21,668,700	11
12	July 2021		30,868,246	12
13	August 2021		29,237,043	13
14	Thirteen Month Total	Sum Lns 1-13	$ 438,750,560	14
15	Thirteen Month Average	Ln 14 / 13	$ 33,750,043	15
16	Test Year Customer Deposits	Ln 15	$ 33,750,043	16
			Sch B-1, Sh 2, Ln 11(c)	

SOUTHWEST GAS CORPORATION
ARIZONA
CUSTOMER ADVANCES
FOR THE THIRTEEN MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Account 252 Balance	Line No.
	(a)	(b)	(c)	
			Company Records	
1	August 2020		$ 55,451,699	1
2	September 2020		54,890,607	2
3	October 2020		54,673,059	3
4	November 2020		54,535,734	4
5	December 2020		58,901,460	5
6	January 2021		59,891,523	6
7	February 2021		60,276,253	7
8	March 2021		61,878,720	8
9	April 2021		59,534,907	9
10	May 2021		61,935,033	10
11	June 2021		62,877,255	11
12	July 2021		63,213,613	12
13	August 2021		64,730,332	13
14	Thirteen Month Total	Sum Lns 1-13	$ 772,790,196	14
15	Thirteen Month Average	Ln 14 / 13	$ 59,445,400	15
16	Test Year Customer Advances	Ln 15	$ 59,445,400	16
			Sch B-1, Sh 2, Ln 12(c)	

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES AS RECORDED
AT AUGUST 31, 2021

Line No.	Description	Reference	AZ Direct	System Allocable	After 4-Factor Allocation	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
			Company Records	Company Records	Col (d) * Ln 6(e)	(c) + (e)	
1	Deferred Tax Liability - State	Account 282	$ 44,235,443	$ 3,951,056	$ 2,222,845	$ 46,458,288	1
2	Deferred Tax Liability - Federal	Account 282	333,719,551	6,083,083	3,422,313	337,141,864	2
3	Excess Deferred Income Taxes	Account 254				185,280,462	3
4							4
5	Total	Sum Lns 1 - 4	$ 377,954,994	$ 10,034,139	$ 5,645,158	$ 568,880,614	5
						Sch B-1, Sh 2, Ln 13(c)	
6	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)			56.26%		6

SOUTHWEST GAS CORPORATION
ARIZONA
DEFERRED TAXES AS ADJUSTED
AT AUGUST 31, 2021

Line No.	Description	Reference	AZ Direct	System Allocable	After 4-Factor Allocation	Total	Line No.
	(a)	(b)	(c)	(d)	(e) Col (d) * Ln 16(e)	(f) (c) + (e)	
	As Recorded						
1	Deferred Tax Liability - State	Sch B-6, Sh 3, Ln 1	$ 44,235,443	$ 3,951,056	$ 2,222,845	$ 46,458,288	1
2	Deferred Tax Liability - Federal	Sch B-6, Sh 3, Ln 2	333,719,551	6,083,083	3,422,313	337,141,864	2
3	Excess Deferred Income Taxes	Sch B-6, Sh 3, Ln 3	0	0	0	185,280,462	3
4							4
5	Total	Sum Lns 1 - 4	$ 377,954,994	$ 10,034,139	$ 5,645,158	$ 568,880,614	5
	Adjustments						
6	Deferred Tax Liability - State	B-2, Adj. 24, Sh 1	$ 321,899	$ (58,982)	$ (33,183)	$ 288,716	6
7	Deferred Tax Liability - Federal	B-2, Adj. 24, Sh 1	1,746,287	(319,975)	(180,016)	1,566,271	7
8	Excess Deferred Income Taxes	B-2, Adj. 24, Sh 1	0	(1,054,837)	(593,446)	(593,446)	8
9							9
10	Total	Sum Lns 6 - 9	$ 2,068,186	$ (1,433,793)	$ (806,645)	$ 1,261,540	10
						Sch C-2, Sh 2, Col (e)	
	As Adjusted						
11	Deferred Tax Liability - State	Ln 1 + Ln 6	$ 44,557,342	$ 3,892,074	$ 2,189,662	$ 46,747,004	11
12	Deferred Tax Liability - Federal	Ln 2 + Ln 7	335,465,838	5,763,108	3,242,297	338,708,135	12
13	Excess Deferred Income Taxes	Ln 3 + Ln 8	0	(1,054,837)	(593,446)	184,687,015	13
14							14
15	Total	Sum Lns 11 - 14	$ 380,023,180	$ 8,600,345	$ 4,838,513	$ 570,142,154	15
16	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)			56.26%		16

SOUTHWEST GAS CORPORATION
ARIZONA
EXCESS ACCUMULATED DEFERRED INCOME TAXES
REGULATORY LIABILITY

Line No.	Description	Reference	Plant Amount	Non-Plant Amount	Total	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
1	Original Arizona EADIT	Prior Rate Case	$ 155,586,766	34,863,739	190,450,505	1
2	EADIT Amortized Through August 31, 2021	Company Records	(2,721,567)	(2,448,477)	(5,170,043)	
3	Arizona EADIT Balance at August 31, 2021 [1]	Ln 1 + Ln 2	$ 152,865,199	$ 32,415,262	$ 185,280,462	2
3	Gross-up [2]	Company Records	46,397,361	9,838,620	56,235,982	3
4	Total Arizona Regulatory Liability	Ln 3 + Ln 3	$ 199,262,561	$ 42,253,883	$ 241,516,443	4
5			Sch B-6, Sh 6,	Sch B-6, Sh 6,		5
6			Ln 1(c)	Ln 1(d)		6
7						7
8						8

[1] Rate Base adjustment associated with plant-related excess deferred income tax
[2] Excess deferred taxes are grossed-up to reflect the future tax savings of reduced future revenue

SOUTHWEST GAS CORPORATION
ARIZONA
AMORTIZATION OF EXCESS ACCUMULATED DEFERRED INCOME TAXES (EADIT)

Line No.	Description	Reference	Protected	Unprotected	Total	Line No.
	(a)	(b)	(c)	(d)	(e) (c) + (d)	
1	EADIT Balance at 8/31/21	Sch B-6, Sh 5	$ 152,865,199	$ 32,415,262	$ 185,280,462	1
2	Additonal EADIT Amortized Through December 31, 2022	Company Records		(4,524,271)		2
3	EADIT Balance at 12/31/22		$	27,890,991		3
4	Amortization Period (Remaining Months)			96		4
5	Annual Amortization of EADIT	Company Records	3,110,789 [3]	3,486,374		5
6	Arizona Share of System Allocable EADIT and NOL		687,434			6
7	Total Arizona Annual Amortization of EADIT [1]	Ln 1 + Ln 5	$ 3,798,223	$ 3,486,374	7,284,597	7
					Sch C-1, Sh 16, Ln 15(d)	
	SYSTEM ALLOCABLE					
8	Annual Amortization of EADIT	Company Records	$ 1,829,192			8
9	4-Factor at 12/31/17	[2]	55.47%			9
10	Arizona Share of Annual Amortization of EADIT	Ln * Ln	$ 1,014,653			10
11	EADIT Amort. Related to Net Operating Loss		(327,219)			11
12	Total Allocated to Arizona	Ln 10 + Ln 11	687,434			12

SCHEDULE C-1

SOUTHWEST GAS CORPORATION
ARIZONA
ADJUSTED TEST YEAR INCOME STATEMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
				Sch C-2, Sh 2, Col (p)	(c) + (d)	
1	Operating Revenue	Sch C-2, Adj 1, Sh 1	$ 722,593,622	$ (143,408,188)	$ 579,185,433	1
2	Gas Cost	Sch C-1, Sh 3, Lns 6 and 9	157,575,309	(157,575,309)	0	2
3	Operating Margin	Ln 1 - Ln 2	$ 565,018,312	$ 14,167,121	$ 579,185,433	3
	Operating Expenses					
4	Other Gas Costs	Sch C-1, Sh 3, Ln 7(c)	$ 1,306,683	$ 28,691	$ 1,335,375	4
5	Storage	Sch C-1, Sh 3, Ln 8(c)	1,973,882	27,219	2,001,101	5
6	Distribution	Sch C-1, Sh 3, Ln 25(c)	109,198,435	2,126,260	111,324,695	6
7	Customer Accounts	Sch C-1, Sh 3, Ln 31(c)	28,049,178	(1,077,005)	26,972,173	7
8	Customer Service & Info.	Sch C-1, Sh 4, Ln 4(c)	188,705	(20,780)	167,925	8
9	Sales	Sch C-1, Sh 4, Ln 8(c)	3,425	(3,628)	(203)	9
	Administrative & General					
10	Direct	Sch C-1, Sh 9, Ln 25(d)	4,455,155	810,190	5,265,344	10
11	System Allocable	Sch C-1, Sh 9, Ln 25(k)	93,755,791	(2,895,888)	90,859,903	11
	Depreciation & Amortization					
12	Direct	Sch C-1, Sh 14, Ln 3(d)	112,464,317	7,427,002	119,891,319	12
13	System Allocable	Sch C-1, Sh 14, Ln 12(d)	13,602,014	3,051,686	16,653,700	13
14	Regulatory Amortizations	Sch C-1, Sh 14, Ln 6(d)	2,620,521	1,695,436	4,315,957	14
15	Taxes Other Than Income	Sch C-1, Sh 15, Ln 3(c)	51,219,448	18,088,148	69,307,596	15
16	Interest on Customer Deposits	Sch C-2, Adj. 22, Sh 1, Ln 4(c)	803,794	(766,669)	37,125	16
17	Income Taxes	Sch C-1, Sh 16, Ln 18(c)	23,660,630	(11,713,236)	11,947,394	17
18	Total Operating Expenses	Sum Lns 4-17	$ 443,301,978	$ 16,777,427	$ 460,079,404	18
19	Net Operating Income	Ln 3 - Ln 18	$ 121,716,335	$ (2,610,306)	$ 119,106,029	19
			Sch A-1, Sh 2, Col (c)	Sch A-1, Sh 2, Col (d)	Sch A-1, Sh 2, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
ADJUSTED SALES VOLUMES AND REVENUES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded At 8/31/2021	Adjustment No. 1	Test Period Balance As Adjusted	Line No.
	(a)	(b)	(c)	(d)	
1	Sales Quantity (Therms) [1]	571,813,620	(20,499,366)	551,314,254	1
2	Revenue [1]	$ 722,593,622	$ (143,408,188)	$ 579,185,433	2
3	Total Revenue Adjustment		$ (143,408,188)		3

[1] Schedule C-2, Adjustment No. 1, Sheet 1.

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Account No./ Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c) Sch C-1, Sh 5-8, Col (c)	(d) (e) - (c)	(e) Sch C-1, Sh 5-8, Col (k)	
	Purchased Gas Costs					
1	Natural Gas Transmission Line Purchases	803	$ 312,371,683	$ (312,371,683)	$ 0	1
2	Purchased Gas Cost Adjustments	805	(208,439,764)	208,439,764	0	2
3	Gas Withdrawn From Storage	808	1,045,270	(1,045,270)	0	3
4	Gas Delivered To Storage	808	(1,204,779)	1,204,779	0	4
5	Gas Used for Compressor Station Fuel	810	0	0	0	5
6	Total Purchased Gas Costs	Sum Lns 1-5	$ 103,772,410	$ (103,772,410)	$ 0	6
	Other Gas Costs					
7	Other Gas Supply	813	$ 1,306,683	$ 28,691	$ 1,335,375	7
	Storage					
8	LNG Storage Facility	Various	$ 1,973,882	$ 27,219	$ 2,001,101	8
	Transmission					
9	Transmission and Compression of Gas by Others	858	$ 53,802,899	$ (53,802,899)	$ 0	9
	Distribution					
10	Operation Supervision and Engineering	870	$ 10,720,564	$ 273,180	$ 10,993,743	10
11	Operation Distribution Load Dispatching	871	1,288,310	28,831	1,317,141	11
12	Operation Mains and Services	874	19,947,408	245,786	20,193,195	12
13	Operation Measuring and Regulation Station	875	2,840,731	40,391	2,881,122	13
14	Operation Meter and House Regulator	878	10,512,121	243,254	10,755,375	14
15	Customer Installation	879	12,732,567	224,214	12,956,782	15
16	Other	880	10,393,020	111,247	10,504,267	16
17	Rents	881	(838,690)	0	(838,690)	17
18	Maintenance Supervision and Engineering	885	2,569,382	57,971	2,627,353	18
19	Maintenance of Structures and Improvements	886	7,647	14	7,662	19
20	Maintenance of Mains	887	21,627,796	476,615	22,104,411	20
21	Maintenance of Measuring and Reg. Station Eq.	889	2,125,448	29,734	2,155,182	21
22	Maintenance of Services	892	10,155,399	319,319	10,474,717	22
23	Maintenance of Meters and House Regulators	893	4,815,518	71,654	4,887,172	23
24	Maintenance of Other Equipment	894	301,214	4,051	305,265	24
25	Total Distribution	Sum Lns 10-24	$ 109,198,435	$ 2,126,260	$ 111,324,695	25
	Customer Accounts					
26	Supervision	901	$ 2,405,414	$ 49,797	$ 2,455,211	26
27	Meter Reading	902	1,583,622	41,075	1,624,697	27
28	Customer Records and Collection	903	21,439,138	(317,714)	21,121,424	28
29	Uncollectible Accounts	904	2,544,346	(851,635)	1,692,711	29
30	Miscellaneous	905	76,658	1,472	78,129	30
31	Total Customer Accounts	Sum Lns 26-30	$ 28,049,178	$ (1,077,005)	$ 26,972,173	31

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Account No./ Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Sch C-1, Sh 5-8, Col (c)	(e) - (c)	Sch C-1, Sh 5-8, Col (k)	
	Customer Service and Information					
1	Customer Assistance	908	$ 0	$ 0	$ 0	1
2	Informational and Instructional Advertising	909	0	0	0	2
3	Miscellaneous	910	188,705	(20,780)	167,925	3
4	Total Customer Service and Information	Sum Lns 1-3	$ 188,705	$ (20,780)	$ 167,925	4
	Sales					
5	Supervision	911	$ 0	$ 0	$ 0	5
6	Demonstration and Selling	912	0	0	0	6
7	Advertising	913	3,425	(3,628)	(203)	7
8	Total Sales	Sum Lns 5-7	$ 3,425	$ (3,628)	$ (203)	8
9	Total O&M		$ 298,295,618	$ (156,494,550)	$ 141,801,067	9
	Administrative and General (A&G)		Sch C-1, Sh 9, Col (l)		Sch C-1, Sh 13, Col (l)	
10	A&G Salaries	920	$ 54,417,660	$ (2,041,714)	$ 52,375,946	10
11	Office Supplies and Expenses	921	6,547,718	(88,735)	6,458,984	11
12	A&G Expenses Transferred (Credit)	922	(8,060,224)	214,238	(7,845,986)	12
13	Outside Services	923	17,531,416	(107,358)	17,424,059	13
14	Property Insurance	924	497,489	105,698	603,187	14
15	Injuries and Damages	925	8,151,365	1,878,523	10,029,888	15
16	Employee Pension and Benefits	926	8,622,854	(276,161)	8,346,693	16
17	Regulatory Commission Expenses	928	110,725	86,609	197,333	17
18	Safety Advertising	930.1	829,341	0	829,341	18
19	Miscellaneous General	930.2	4,172,049	(423,904)	3,748,145	19
20	Rents	931	1,029,368	(18,177)	1,011,191	20
21	Maintenance of General Plant	935	4,361,183	(1,414,717)	2,946,466	21
22	Total A&G	Sum Lns 10-21	$ 98,210,946	$ (2,085,699)	$ 96,125,247	22
23	Total O&M and A&G	Ln 9 + Ln 22	$ 396,506,563	$ (158,580,249)	$ 237,926,314	23

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
	Purchased Gas Costs													
1	Natural Gas Transmission Line Purchases	803	$ 312,371,683	$ (312,371,683)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	1
2	Purchased Gas Cost Adjustments	805	(208,439,764)	208,439,764	0	0	0	0	0	0	0		0	2
3	Gas Withdrawn From Storage	808	1,045,270	(1,045,270)	0	0	0	0	0	0	0		0	3
4	Gas Delivered To Storage	808	(1,204,779)	1,204,779	0	0	0	0	0	0	0		0	4
5	Gas Used for Compressor Station Fuel	810	0	0	0	0	0	0	0	0	0		0	5
6	Total Purchased Gas Costs	Sum Lns 1-5	$ 103,772,410	$ (103,772,410)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	6
7														7
8	Other Gas Costs													8
9	Other Gas Supply	813												9
10	Labor		$ 764,177	$ 0	$ 51,022	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 815,199	10
11	Labor Loadings		473,645	0	(22,331)	0	0	0	0	0	0		451,314	11
12	Materials and Expenses		68,861	0	0	0	0	0	0	0	0		68,861	12
13	Total Other Gas Supply	Sum Lns 10-12	$ 1,306,683	$ 0	$ 28,691	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,335,375	13
14														14
15	Storage	840 - 843.9												15
16	Labor		872,189		33,200								905,389	16
17	Labor Loadings		536,219		(5,981)								530,238	17
18	Materials and Expenses		565,475										565,475	18
19	Total LNG Storage Facility		$ 1,973,882	$ 0	$ 27,219	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,001,101	19
20														20
21	Transmission													21
22	Transmission and Compression of Gas by Others	858	$ 53,802,899	$ (53,802,899)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	22
23														23
24	Distribution													24
25	Operation Supervision and Engineering	870												25
26	Labor		$ 5,899,398	$ 0	$ 227,556	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 6,126,955	26
27	Labor Loadings		3,638,177	0	(42,784)	0	0	0	0	0	0		3,595,392	27
28	Materials and Expenses		1,182,988	0	0	0	(10,642)	(175)	0	0	99,225		1,271,396	28
29	Total Operation Supervision and Engineering	Sum Lns 26-28	$ 10,720,564	$ 0	$ 184,772	$ 0	$ (10,642)	$ (175)	$ 0	$ 0	$ 99,225	$ 0	$ 10,993,743	29
30														30
31	Operation Distribution Load Dispatching	871												31
32	Labor		$ 764,831	$ 0	$ 51,066	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 815,897	32
33	Labor Loadings		471,611	0	(22,235)	0	0	0	0	0	0		449,376	33
34	Materials and Expenses		51,869	0	0	0	0	0	0	0	0		51,869	34
35	Total Operation Distribution Load Dispatching	Sum Lns 32-34	$ 1,288,310	$ 0	$ 28,831	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,317,141	35
36														36
37	Operation Mains and Services	874												37
38	Labor		$ 3,391,433	$ 0	$ 129,104	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,520,537	38
39	Labor Loadings		2,101,220	0	(23,443)	0	0	0	0	0	0		2,077,778	39
40	Materials and Expenses		14,454,755	0	0	0	(375)	0	0	0	140,500		14,594,880	40
41	Total Operation Mains and Services	Sum Lns 38-40	$ 19,947,408	$ 0	$ 105,661	$ 0	$ (375)	$ 0	$ 0	$ 0	$ 140,500	$ 0	$ 20,193,195	41
42														42
43	Operation Measuring and Regulation Station	875												43
44	Labor		$ 1,301,669	$ 0	$ 49,549	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,351,217	44
45	Labor Loadings		806,809	0	(8,999)	0	0	0	0	0	0		797,810	45
46	Materials and Expenses		732,253	0	0	0	(158)	0	0	0	0		732,095	46
47	Total Operation Measuring and Regulation Station	Sum Lns 44-46	$ 2,840,731	$ 0	$ 40,549	$ 0	$ (158)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,881,122	47
48														48
49	Operation Meter and House Regulator	878												49
50	Labor		$ 4,371,056	$ 0	$ 166,386	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 4,537,442	50
51	Labor Loadings		2,691,176	0	(30,018)	0	0	0	0	0	0		2,661,158	51
52	Materials and Expenses		3,449,889	0	0	0	0	0	0	0	106,885		3,556,774	52
53	Total Operation Meter and House Regulator	Sum Lns 50-52	$ 10,512,121	$ 0	$ 136,369	$ 0	$ 0	$ 0	$ 0	$ 0	$ 106,885	$ 0	$ 10,755,375	53

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
54														54
55	Customer Installation	879												55
56	Labor		$ 6,811,243	$ 0	$ 296,981	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 7,108,224	56
57	Labor Loadings		4,171,738	0	(75,766)	0	0	0	0	0	0		4,095,971	57
58	Materials and Expenses		1,749,586	0	0	0	0	0	0	0	3,000		1,752,586	58
59	Total Customer Installation	Sum Lns 56-58	$ 12,732,567	$ 0	$ 221,214	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,000	$ 0	$ 12,956,782	59
60														60
61	Other	880												61
62	Labor		$ 3,611,004	$ 0	$ 156,744	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,767,748	62
63	Labor Loadings		2,250,262	0	(40,204)	0	0	0	0	0	0		2,210,058	63
64	Materials and Expenses		4,531,754	0	0	0	(43,293)	0	0	0	38,000		4,526,461	64
65	Total Other	Sum Lns 62-64	$ 10,393,020	$ 0	$ 116,540	$ 0	$ (43,293)	$ 0	$ 0	$ 0	$ 38,000	$ 0	$ 10,504,267	65
66														66
67	Rents	881	$ (838,690)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ (838,690)	67
68														68
69	Maintenance Supervision and Engineering	885												69
70	Labor		$ 1,441,744	$ 0	$ 56,479	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,498,223	70
71	Labor Loadings		890,452	0	(11,108)	0	0	0	0	0	0		879,344	71
72	Materials and Expenses		237,186	0	0	0	(2,665)	0	0	0	15,265		249,786	72
73	Total Maintenance Supervision and Engineering	Sum Lns 70-72	$ 2,569,382	$ 0	$ 45,371	$ 0	$ (2,665)	$ 0	$ 0	$ 0	$ 15,265	$ 0	$ 2,627,353	73
74														74
75	Maintenance of Structures and Improvements	886												75
76	Labor		$ 474	$ 0	$ 18	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 492	76
77	Labor Loadings		328	0	(4)	0	0	0	0	0	0		324	77
78	Materials and Expenses		6,846	0	0	0	0	0	0	0	0		6,846	78
79	Total Maintenance of Structures and Improvements	Sum Lns 76-78	$ 7,647	$ 0	$ 14	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,662	79
80														80
81	Maintenance of Mains	887												81
82	Labor		$ 6,944,295	$ 0	$ 264,338	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 7,208,633	82
83	Labor Loadings		4,278,647	0	(47,724)	0	0	0	0	0	0		4,230,923	83
84	Materials and Expenses		10,404,854	0	0	0	(6,435)	0	0	0	266,436		10,664,855	84
85	Total Maintenance of Mains	Sum Lns 82-84	$ 21,627,796	$ 0	$ 216,614	$ 0	$ (6,435)	$ 0	$ 0	$ 0	$ 266,436	$ 0	$ 22,104,411	85
86														86
87	Maintenance of Measuring and Reg. Station Eq.	889												87
88	Labor		$ 887,610	$ 0	$ 33,787	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 921,397	88
89	Labor Loadings		542,652	0	(6,053)	0	0	0	0	0	0		536,599	89
90	Materials and Expenses		695,186	0	0	0	(0)	0	0	0	2,000		697,186	90
91	Total Maintenance of Measuring and Reg. Station Eq.	Sum Lns 88-90	$ 2,125,448	$ 0	$ 27,735	$ 0	$ (0)	$ 0	$ 0	$ 0	$ 2,000	$ 0	$ 2,155,182	91
92														92
93	Maintenance of Services	892												93
94	Labor		$ 3,105,780	$ 0	$ 118,223	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 3,224,003	94
95	Labor Loadings		1,905,005	0	(21,249)	0	0	0	0	0	0		1,883,756	95
96	Materials and Expenses		5,144,614	0	0	0	0	0	0	0	222,344		5,366,958	96
97	Total Maintenance of Services	Sum Lns 94-96	$ 10,155,399	$ 0	$ 96,975	$ 0	$ 0	$ 0	$ 0	$ 0	$ 222,344	$ 0	$ 10,474,717	97

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
98														98
99	Maintenance of Meters and House Regulators	893												99
100	Labor		$ 2,224,370	$ 0	$ 84,672	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 2,309,042	100
101	Labor Loadings		1,346,406	0	(15,018)	0	0	0	0	0	0		1,331,388	101
102	Materials and Expenses		1,244,741	0	0	0	0	0	0	0	2,000		1,246,741	102
103	Total Maintenance of Meters and House Regulators	Sum Lns 100-102	$ 4,815,518	$ 0	$ 69,654	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,000	$ 0	$ 4,887,172	103
104														104
105	Maintenance of Other Equipment	894												105
106	Labor		$ 129,397	$ 0	$ 4,926	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 134,322	106
107	Labor Loadings		78,418	0	(875)	0	0	0	0	0	0		77,543	107
108	Materials and Expenses		93,400	0	0	0	0	0	0	0	0		93,400	108
109	Total Maintenance of Other Equipment	Sum Lns 106-108	$ 301,214	$ 0	$ 4,051	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 305,265	109
110														110
111	Total Distribution													111
112	Labor		$ 40,884,304	$ 0	$ 1,639,828	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 42,524,132	112
113	Labor Loadings		25,172,900	0	(345,479)	0	0	0	0	0	0	0	24,827,420	113
114	Materials and Expenses		43,141,231	0	0	0	(63,568)	(175)	0	0	895,655	0	43,973,143	114
115	Total Distribution	Sum Lns 112-114	$ 109,198,435	$ 0	$ 1,294,349	$ 0	$ (63,568)	$ (175)	$ 0	$ 0	$ 895,655	$ 0	$ 111,324,695	115
116														116
117	Customer Accounts													117
118	Supervision	901												118
119	Labor		$ 1,450,298	$ 0	$ 88,814	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 1,539,112	119
120	Labor Loadings		898,127	0	(36,131)	0	0	0	0	0	0		861,996	120
121	Materials and Expenses		56,989	0	0	0	(2,886)	0	0	0	0		54,104	121
122	Total Supervision	Sum Lns 119-121	$ 2,405,414	$ 0	$ 52,683	$ 0	$ (2,886)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,455,211	122
123														123
124	Meter Reading	902												124
125	Labor		$ 739,497	$ 0	$ 28,149	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 767,647	125
126	Labor Loadings		454,902	0	(5,074)	0	0	0	0	0	0		449,828	126
127	Materials and Expenses		389,223	0	0	0	0	0	0	0	18,000		407,223	127
128	Total Meter Reading	Sum Lns 125-127	$ 1,583,622	$ 0	$ 23,075	$ 0	$ 0	$ 0	$ 0	$ 0	$ 18,000	$ 0	$ 1,624,697	128
129														129
130	Customer Records and Collection	903												130
131	Labor		$ 5,337,412	$ 0	$ 353,586	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 5,690,998	131
132	Labor Loadings		3,316,016	0	(154,147)	0	0	0	0	0	0	0	3,161,869	132
133	Materials and Expenses		12,785,710	0	0	(131,769)	(8,677)	0	0	(662,858)	0	286,150	12,268,558	133
134	Total Customer Records and Collection	Sum Lns 131-133	$ 21,439,138	$ 0	$ 199,439	$ (131,769)	$ (8,677)	$ 0	$ 0	$ (662,858)	$ 0	$ 286,150	$ 21,121,424	134
135														135
136	Uncollectible Accounts	904	$ 2,544,346	$ 0	$ 0	$ 0	$ 0	$ 0	$ (851,635)	$ 0	$ 0	$	$ 1,692,711	136
137														137
138	Miscellaneous	905												138
139	Labor		$ 47,217	$ 0	$ 1,797	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 49,014	139
140	Labor Loadings		29,204	0	(326)	0	0	0	0	0	0		28,878	140
141	Materials and Expenses		237	0	0	0	0	0	0	0	0		237	141
142	Total Miscellaneous	Sum Lns 139-141	$ 76,658	$ 0	$ 1,472	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 78,129	142
143														143
144	Total Customer Accounts													144
145	Labor		$ 7,574,424	$ 0	$ 472,347	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,046,770	145
146	Labor Loadings		4,698,248	0	(195,678)	0	0	0	0	0	0	0	4,502,571	146
147	Materials and Expenses		15,776,506	0	0	(131,769)	(11,562)	0	(851,635)	(662,858)	18,000	286,150	14,422,832	147
148	Total Customer Accounts	Sum Lns 145-147	$ 28,049,178	$ 0	$ 276,669	$ (131,769)	$ (11,562)	$ 0	$ (851,635)	$ (662,858)	$ 18,000	$ 286,150	$ 26,972,173	148

SOUTHWEST GAS CORPORATION
ARIZONA
OPERATIONS AND MAINTENANCE EXPENSE AS ADJUSTED
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No.	Recorded 8/31/2021	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	SAP & CSS Adj Adj. No. 18	Graham County (GCU) Adj. No. 20	Remittance Processing and Print to Mail Assets Adj. No. 23	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(k)	
					Sch C-2, Adj. 3, Sh 1, Cols (b)-(c)	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 18, Sh 1	0		Sum (c)-(j)	
149														149
150	Customer Service and Information													150
151	Customer Assistance	908												151
152	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	152
153	Labor Loadings		0	0	0	0	0	0	0	0	0		0	153
154	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	154
155	Total Customer Assistance	Sum Lns 152-154	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	155
156														156
157	Informational and Instructional Advertising	909												157
158	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	158
159	Labor Loadings		0	0	0	0	0	0	0	0	0		0	159
160	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	160
161	Total Informational and Instructional Advertising	Sum Lns 158-160	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	161
162														162
163	Miscellaneous	910												163
164	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	164
165	Labor Loadings		0	0	0	0	0	0	0	0	0		0	165
166	Materials and Expenses		188,705	0	0	0	(20,780)	0	0	0	0		167,925	166
167	Total Miscellaneous	Sum Lns 164-166	$ 188,705	$ 0	$ 0	$ 0	$ (20,780)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	167
168														168
169	Total Customer Service and Information													169
170	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	170
171	Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	171
172	Materials and Expenses		188,705	0	0	0	(20,780)	0	0	0	0	0	167,925	172
173	Total Customer Service and Information	Sum Lns 170-172	$ 188,705	$ 0	$ 0	$ 0	$ (20,780)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	173
174														174
175	Sales													175
176	Supervision	911												176
177	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	177
178	Labor Loadings		0	0	0	0	0	0	0	0	0		0	178
179	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	179
180	Total Supervision	Sum Lns 177-179	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	180
181														181
182	Demonstration and Selling	912												182
183	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	183
184	Labor Loadings		0	0	0	0	0	0	0	0	0		0	184
185	Materials and Expenses		0	0	0	0	0	0	0	0	0		0	185
186	Total Demonstration and Selling	Sum Lns 183-185	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	186
187														187
188	Advertising	913												188
189	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	189
190	Labor Loadings		0	0	0	0	0	0	0	0	0		0	190
191	Materials and Expenses		3,425	0	0	0	(3,628)	0	0	0	0		(203)	191
192	Total Advertising	Sum Lns 189-191	$ 3,425	$ 0	$ 0	$ 0	$ (3,628)	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	192
193														193
194	Total Sales													194
195	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	195
196	Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	196
197	Materials and Expenses		3,425	0	0	0	(3,628)	0	0	0	0	0	(203)	197
198	Total Sales	Sum Lns 195-197	$ 3,425	$ 0	$ 0	$ 0	$ (3,628)	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	198
199														199
200	Total O&M													200
201	Labor		$ 49,222,905	$ 0	$ 2,196,397	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 51,419,302	201
202	Labor Loadings		30,344,793	0	(569,469)	0	0	0	0	0	0	0	29,775,324	202
203	Materials and Expenses		218,727,920	(157,575,309)	0	(131,769)	(99,538)	(175)	(851,635)	(662,858)	913,655	286,150	60,606,441	203
204	Total O&M	Sum Lns 201-203	$ 298,295,618	$ (157,575,309)	$ 1,626,928	$ (131,769)	$ (99,538)	$ (175)	$ (851,635)	$ (662,858)	$ 913,655	$ 286,150	$ 141,801,067	204
			Sch C-1, Sh 3, Col (c)										Sch C-1, Sh 3, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA
RECORDED ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			Company Records	Company Records	(c) - (d) - (f)	Company Records	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ 68,261,172	$ 0	$ 0	$ 68,261,172	$ 38,403,408	$ 0	$ 0	$ 0	$ 38,403,408	$ 38,403,408	1
2	Labor Loadings		32,463,286	0	0	32,463,286	18,263,689	0	0	0	18,263,689	18,263,689	2
3	Materials and Expenses		(3,998,323)	0	0	(3,998,323)	(2,249,437)	0	0	0	(2,249,437)	(2,249,437)	3
4	Total A&G Salaries	Sum Lns 1-3	$ 96,726,136	$ 0	$ 0	$ 96,726,136	$ 54,417,660	$ 0	$ 0	$ 0	$ 54,417,660	$ 54,417,660	4
5	Office Supplies and Expenses	921	$ 11,638,418	$ 0	$ 0	$ 11,638,418	$ 6,547,718	$ 0	$ 0	$ 0	$ 6,547,718	$ 6,547,718	5
6	A&G Expenses Transferred (Credit)	922	$ (15,577,244)	$ 0	$ 0	$ (15,577,244)	$ 0	$ 0	$ 0	$ (8,060,224)	$ (8,060,224)	$ (8,060,224)	6
7	Outside Services	923	$ 31,320,687	$ 44,953	$ 193,949	$ 31,081,785	$ 17,486,463	$ 0	$ 0	$ 0	$ 17,486,463	$ 17,531,416	7
8	Property Insurance	924	$ 872,486	$ 0	$ 0	$ 872,486	$ 0	$ 497,489	$ 0	$ 0	$ 497,489	$ 497,489	8
9	Injuries and Damages	925	$ 14,763,535	$ 633,392	$ 767,119	$ 13,363,024	$ 7,517,973	$ 0	$ 0	$ 0	$ 7,517,973	$ 8,151,365	9
10	Employee Pension and Benefits	926	$ 15,333,080	$ 157	$ 6,279	$ 15,326,644	$ 8,622,697	$ 0	$ 0	$ 0	$ 8,622,697	$ 8,622,854	10
11	Regulatory Commission Expenses	928	$ 273,129	$ 110,725	$ 162,405	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 110,725	11
12	Safety Advertising	930.1	$ 1,557,339	$ 569,965	$ 526,340	$ 461,034	$ 259,375	$ 0	$ 0	$ 0	$ 259,375	$ 829,341	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		7,656,995	660,011	754,418	6,242,566	3,512,038	0	0	0	3,512,038	4,172,049	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 7,656,995	$ 660,011	$ 754,418	$ 6,242,566	$ 3,512,038	$ 0	$ 0	$ 0	$ 3,512,038	$ 4,172,049	16
17	Rents	931	$ 2,030,396	$ 91,584	$ 271,922	$ 1,666,890	$ 937,784	$ 0	$ 0	$ 0	$ 937,784	$ 1,029,368	17
	Maintenance of General Plant	935											
18	Labor		$ 860,921	$ 285	$ 15,274	$ 845,362	$ 475,597	$ 0	$ 0	$ 0	$ 475,597	$ 475,882	18
19	Labor Loadings		531,643	183	9,231	522,229	293,803	0	0	0	293,803	293,986	19
20	Materials and Expenses		6,892,299	2,343,899	2,331,147	2,217,254	1,247,416	0	0	0	1,247,416	3,591,315	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 8,284,863	$ 2,344,367	$ 2,355,651	$ 3,584,845	$ 2,016,817	$ 0	$ 0	$ 0	$ 2,016,817	$ 4,361,183	21
	Total A&G Expenses												
22	Labor		$ 69,122,093	$ 285	$ 15,274	$ 69,106,534	$ 38,879,005	$ 0	$ 0	$ 0	$ 38,879,005	$ 38,879,290	22
23	Labor Loadings		32,994,929	183	9,231	32,985,515	18,557,493	0	0	0	18,557,493	18,557,675	23
24	Materials and Expenses		72,762,798	4,454,686	5,013,578	63,294,534	43,882,028	497,489	0	(8,060,224)	36,319,293	40,773,980	24
25	Total A&G Expenses	Sum Lns 22-24	$ 174,879,821	$ 4,455,155	$ 5,038,082	$ 165,386,584	$ 101,318,526	$ 497,489	$ 0	$ (8,060,224)	$ 93,755,791	$ 98,210,946	25
			Sch C-1, Sh 13, Col (c)	Sch C-1, Sh 13, Col (d)	Sch C-1, Sh 13, Col (e)							Sch C-1, Sh 4, Col (c)	

SOUTHWEST GAS CORPORATION
ARIZONA
ADJUSTMENTS TO DIRECT ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Labor/Loading Annualization Adj. No. 3	Cost of Service Analysis Adj. No. 5	Self-Insured Retention Adj. No. 9	Rate Case Expense Adj. No. 12	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			Sch C-2, Adj. 3, Sh 1, Ln 36	Sch C-2, Adj. 5, Sh 1 Lns 12-13	Sch C-2, Adj. 9, Sh 1, Ln 1(d)	Sch C-2, Adj. 12, Sh 1, Ln 10(c)	Sum (c)-(f)	
	Administrative and General (A&G)							
	A&G Salaries	920						
1	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Labor Loadings		0	0	0	0	0	2
3	Materials and Expenses		0	0	0	0	0	3
4	Total A&G Salaries	Sum Lns 1-3	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Office Supplies and Expenses	921	$ 0	$ 16,994	$ 0	$ 0	$ 16,994	5
6	A&G Expenses Transferred (Credit)	922	$ 0	$ 0	$ 0	$ 0	$ 0	6
7	Outside Services	923	$ 0	$ 0	$ 0	$ 0	$ 0	7
8	Property Insurance	924	$ 0	$ 0	$ 0	$ 0	$ 0	8
9	Injuries and Damages	925	$ 0	$ (30)	$ 682,347	$ 0	$ 682,317	9
10	Employee Pension and Benefits	926	$ 0	$ 0	$ 0	$ 0	$ 0	10
11	Regulatory Commission Expenses	928	$ 0	$ 0	$ 0	$ 86,609	$ 86,609	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2						
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	14
15	Materials and Expenses		0	24,261	0	0	24,261	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 0	$ 24,261	$ 0	$ 0	$ 24,261	16
17	Rents	931	$ 0	$ 0	$ 0	$ 0	$ 0	17
	Maintenance of General Plant	935						
18	Labor		$ 11	$ 0	$ 0	$ 0	$ 11	18
19	Labor Loadings		(2)	0	0	0	(2)	19
20	Materials and Expenses		0	0	0	0	0	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 9	$ 0	$ 0	$ 0	$ 9	21
	Total A&G Expenses							
22	Labor		$ 11	$ 0	$ 0	$ 0	$ 11	22
23	Labor Loadings		(2)	0	0	0	(2)	23
24	Materials and Expenses		0	41,225	682,347	86,609	810,181	24
25	Total A&G Expenses	Sum Lns 22-24	$ 9	$ 41,225	$ 682,347	$ 86,609	$ 810,190	25
							Sch C-1, Sh 12, Col (d)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
ADJUSTMENTS TO ADMINISTRATIVE AND GENERAL (A&G) EXPENSES BEFORE ALLOCATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Labor/Loading Annualization Adj. No. 3	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Self-Insured Retention Adj. No. 9	Membership Dues Adj. No. 10	Great Basin Alloc. Annualization Adj. No. 11	Insurance Annualization Adj. No. 15	Corporate Aircraft Adj. No. 8	Corp HQ Adj. No. 17	Variable Pay Adj. Adj. No. 18	Total System Alloc.	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)	(i)	
			Sch C-2, Adj. 3, Sh 1 Sch C-2, Adj. 3, Sh 2	Sch C-2, Adj. 5, Sh 2, Col (o)	Sch C-2, Adj. 6, Sh 2, Ln 4(e)	Sch C-2, Adj. 9, Sh 1, Ln 4(d)	Sch C-2, Adj. 10, Sh 1, Ln 5(d)	Sch C-2, Adj. 11, Sh 1, Col (h)	Sch C-2, Adj. 15, Sh 1	Sch C-2, Adj. 8, Sh 1 Col (j)	Sch C-2, Adj. 17, Sh 1 Col	Sch C-2, Adj. 18, Sh 1 Col	Sum (c)-(h)	
	Administrative and General (A&G)													
	A&G Salaries	920												
1	Labor		$ (498,925)	$ 0	$ (2,985)	$ 0	$ 0	$ 0	$	$	$	$ (695,814)	$ (1,197,724)	1
2	Labor Loadings		(2,383,780)	0	0	0	0	0					(2,383,780)	2
3	Materials and Expenses		0	0	0	0	0	(47,596)					(47,596)	3
4	Total A&G Salaries	Sum Lns 1-3	$ (2,882,705)	$ 0	$ (2,985)	$ 0	$ 0	$ (47,596)	$ 0	$ 0	$ 0	$ (695,814)	$ (3,629,100)	4
5	Office Supplies and Expenses	921	$ 0	$ (195,903)	$ 0	$ 0	$ 0	$ 7,973	$	$ 0	$ 0	$ 0	$ (187,930)	5
6	A&G Expenses Transferred (Credit)	922	$ 423,758	$ 0	$ 0	$ 0	$ 0	$ (9,721)	$	$ 0	$ 0	$ 0	$ 414,037	6
7	Outside Services	923	$ 0	$ (225,649)	$ 0	$ 0	$ 0	$ 34,823	$	$ 0	$ 0	$ 0	$ (190,826)	7
8	Property Insurance	924	$ 0	$ 0	$ 0	$ 0	$ 0	$ 50,338	$ 135,033	$ 0	$ 0	$ 0	$ 185,371	8
9	Injuries and Damages	925	$ 0	$ 0	$ 0	$ 111,028	$ 0	$ 15,350	$ 1,999,850	$ 0	$ 0	$ 0	$ 2,126,228	9
10	Employee Pension and Benefits	926	$ (490,869)	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ (490,869)	10
11	Regulatory Commission Expenses	928	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ 0	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2												
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$	$	$	$	$ 0	13
14	Labor Loadings		0	0	0	0	0	0					0	14
15	Materials and Expenses		0	0	0	0	(35,693)	(2,623)	0	(758,286)			(796,603)	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 0	$ 0	$ 0	$ 0	$ (35,693)	$ (2,623)	$ 0	$ (758,286)	$ 0	$ 0	$ (796,603)	16
17	Rents	931	$ 0	$ (1,168)	$ 0	$ 0	$ 0	$ (31,141)	$	$	$	$	$ (32,310)	17
	Maintenance of General Plant	935												
18	Labor		$ (8,051)	$ 0	$ 0	$ 0	$ 0	$ 0	$	$	$	$	$ (8,051)	18
19	Labor Loadings		(38,347)	0	0	0	0	0					(38,347)	19
20	Materials and Expenses		0	5,098	0	0	0	4,717			(2,478,060)		(2,468,245)	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ (46,398)	$ 5,098	$ 0	$ 0	$ 0	$ 4,717	$ 0	$ 0	$ (2,478,060)	$ 0	$ (2,514,643)	21
	Total A&G Expenses													
22	Labor		$ (506,976)	$ 0	$ (2,985)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (695,814)	$ (1,205,775)	22
23	Labor Loadings		(2,422,127)	0	0	0	0	0	0	0	0	0	(2,422,127)	23
24	Materials and Expenses		(67,111)	(417,623)	0	111,028	(35,693)	22,120	2,134,882	(758,286)	(2,478,060)	0	(1,488,743)	24
25	Total A&G Expenses	Sum Lns 22-24	$ (2,996,214)	$ (417,623)	$ (2,985)	$ 111,028	$ (35,693)	$ 22,120	$ 2,134,882	$ (758,286)	$ (2,478,060)	$ (695,814)	$ (5,116,645)	25
													Sch C-1, Sh 12, Col (f)	

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF ADMINISTRATIVE AND GENERAL (A&G) EXPENSE ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			(d) + (e) + (f)	Sch C-1, Sh 10, Col (g)	N/A	Sch C-1, Sh 11, Col (i)	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ (1,197,724)	$ 0	$ 0	$ (1,197,724)	$ (673,834)	$ 0	$ 0	$ 0	$ (673,834)	$ (673,834)	1
2	Labor Loadings		(2,383,780)	0	0	(2,383,780)	(1,341,103)	0	0	0	(1,341,103)	(1,341,103)	2
3	Materials and Expenses		(47,596)	0	0	(47,596)	(26,777)	0	0	0	(26,777)	(26,777)	3
4	Total A&G Salaries	Sum Lns 1-3	$ (3,629,100)	$ 0	$ 0	$ (3,629,100)	$ (2,041,714)	$ 0	$ 0	$ 0	$ (2,041,714)	$ (2,041,714)	4
5	Office Supplies and Expenses	921	$ (170,936)	$ 16,994	$ 0	$ (187,930)	$ (105,729)	$ 0	$ 0	$ 0	$ (105,729)	$ (88,735)	5
6	A&G Expenses Transferred (Credit)	922	$ 414,037	$ 0	$ 0	$ 414,037	$ 0	$ 0	$ 0	$ 214,238	$ 214,238	$ 214,238	6
7	Outside Services	923	$ (190,826)	$ 0	$ 0	$ (190,826)	$ (107,358)	$ 0	$ 0	$ 0	$ (107,358)	$ (107,358)	7
8	Property Insurance	924	$ 185,371	$ 0	$ 0	$ 185,371	$ 0	$ 105,698	$ 0	$ 0	$ 105,698	$ 105,698	8
9	Injuries and Damages	925	$ 2,808,545	$ 682,317	$ 0	$ 2,126,228	$ 1,196,206	$ 0	$ 0	$ 0	$ 1,196,206	$ 1,878,523	9
10	Employee Pension and Benefits	926	$ (490,869)	$ 0	$ 0	$ (490,869)	$ (276,161)	$ 0	$ 0	$ 0	$ (276,161)	$ (276,161)	10
11	Regulatory Commission Expenses	928	$ 86,609	$ 86,609	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 86,609	11
12	Safety Advertising	930.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		(772,342)	24,261	0	(796,603)	(448,165)	0	0	0	(448,165)	(423,904)	15
16	Total Miscellaneous General	Sum Lns 13-15	$ (772,342)	$ 24,261	$ 0	$ (796,603)	$ (448,165)	$ 0	$ 0	$ 0	$ (448,165)	$ (423,904)	16
17	Rents	931	$ (32,310)	$ 0	$ 0	$ (32,310)	$ (18,177)	$ 0	$ 0	$ 0	$ (18,177)	$ (18,177)	17
	Maintenance of General Plant	935											
18	Labor		$ (8,040)	$ 11	$ 0	$ (8,051)	$ (4,529)	$ 0	$ 0	$ 0	$ (4,529)	$ (4,518)	18
19	Labor Loadings		(38,349)	(2)	0	(38,347)	(21,574)	0	0	0	(21,574)	(21,576)	19
20	Materials and Expenses		(2,468,245)	0	0	(2,468,245)	(1,388,623)	0	0	0	(1,388,623)	(1,388,623)	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ (2,514,634)	$ 9	$ 0	$ (2,514,643)	$ (1,414,726)	$ 0	$ 0	$ 0	$ (1,414,726)	$ (1,414,717)	21
	Total A&G Expenses												
22	Labor		$ (1,205,764)	$ 11	$ 0	$ (1,205,775)	$ (678,363)	$ 0	$ 0	$ 0	$ (678,363)	$ (678,352)	22
23	Labor Loadings		(2,422,129)	(2)	0	(2,422,127)	(1,362,677)	0	0	0	(1,362,677)	(1,362,679)	23
24	Materials and Expenses		(678,562)	810,181	0	(1,488,743)	(1,174,784)	105,698	0	214,238	(854,848)	(44,667)	24
25	Total A&G Expenses	Sum Lns 22-24	$ (4,306,455)	$ 810,190	$ 0	$ (5,116,645)	$ (3,215,824)	$ 105,698	$ 0	$ 214,238	$ (2,895,888)	$ (2,085,699)	25
			Sch C-1, Sh 13, Col (c)	Sch C-1, Sh 13, Col (d)	Sch C-1, Sh 13, Col (e)							Sch C-1, Sh 4 Col (d)	

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF ADJUSTED ADMINISTRATIVE AND GENERAL (A&G) EXPENSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Account No./ Reference	Total Company	Direct Charges: Total AZ	Direct Charges: Other Jurisdictions	To Be Allocated to AZ	AZ Allocation Factors: 4-Factor	AZ Allocation Factors: Factor II	AZ Allocation Factors: Factor III	AZ Allocation Factors: A&G Factor	Total Allocation to AZ	Total AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
			Sch C-1, Sh 9, Col (c) Sch C-1, Sh 12, Col (c)	Sch C-1, Sh 9, Col (d) Sch C-1, Sh 12, Col (d)	Sch C-1, Sh 9, Col (e) Sch C-1, Sh 12, Col (e)	(c) - (d) - (e)	56.26% Sch C-1, Sh 17, Ln 9(c)	57.02% Sch C-1, Sh 17, Ln 4(c)	56.88% Sch C-1, Sh 17, Ln 6(c)	51.74% Sch C-1, Sh 17, Ln 10(c)	Sum (g)-(j)	(d) + (k)	
	Administrative and General (A&G)												
	A&G Salaries	920											
1	Labor		$ 67,063,448	$ 0	$ 0	$ 67,063,448	$ 37,729,574	$ 0	$ 0	$ 0	$ 37,729,574	$ 37,729,574	1
2	Labor Loadings		30,079,507	0	0	30,079,507	16,922,586	0	0	0	16,922,586	16,922,586	2
3	Materials and Expenses		(4,045,919)	0	0	(4,045,919)	(2,276,215)	0	0	0	(2,276,215)	(2,276,215)	3
4	Total A&G Salaries	Sum Lns 1-3	$ 93,097,036	$ 0	$ 0	$ 93,097,036	$ 52,375,946	$ 0	$ 0	$ 0	$ 52,375,946	$ 52,375,946	4
5	Office Supplies and Expenses	921	$ 11,467,482	$ 16,994	$ 0	$ 11,450,488	$ 6,441,990	$ 0	$ 0	$ 0	$ 6,441,990	$ 6,458,984	5
6	A&G Expenses Transferred (Credit)	922	$ (15,163,207)	$ 0	$ 0	$ (15,163,207)	$ 0	$ 0	$ 0	$ (7,845,986)	$ (7,845,986)	$ (7,845,986)	6
7	Outside Services	923	$ 31,129,861	$ 44,953	$ 193,949	$ 30,890,959	$ 17,379,106	$ 0	$ 0	$ 0	$ 17,379,106	$ 17,424,059	7
8	Property Insurance	924	$ 1,057,857	$ 0	$ 0	$ 1,057,857	$ 0	$ 603,187	$ 0	$ 0	$ 603,187	$ 603,187	8
9	Injuries and Damages	925	$ 17,572,080	$ 1,315,709	$ 767,119	$ 15,489,252	$ 8,714,179	$ 0	$ 0	$ 0	$ 8,714,179	$ 10,029,888	9
10	Employee Pension and Benefits	926	$ 14,842,211	$ 157	$ 6,279	$ 14,835,775	$ 8,346,536	$ 0	$ 0	$ 0	$ 8,346,536	$ 8,346,693	10
11	Regulatory Commission Expenses	928	$ 359,738	$ 197,333	$ 162,405	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 197,333	11
12	Safety Advertising	930.1	$ 1,557,339	$ 569,965	$ 526,340	$ 461,034	$ 259,375	$ 0	$ 0	$ 0	$ 259,375	$ 829,341	12
	Miscellaneous General	930.2											
13	Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	13
14	Labor Loadings		0	0	0	0	0	0	0	0	0	0	14
15	Materials and Expenses		6,884,653	684,272	754,418	5,445,963	3,063,873	0	0	0	3,063,873	3,748,145	15
16	Total Miscellaneous General	Sum Lns 13-15	$ 6,884,653	$ 684,272	$ 754,418	$ 5,445,963	$ 3,063,873	$ 0	$ 0	$ 0	$ 3,063,873	$ 3,748,145	16
17	Rents	931	$ 1,998,087	$ 91,584	$ 271,922	$ 1,634,581	$ 919,607	$ 0	$ 0	$ 0	$ 919,607	$ 1,011,191	17
	Maintenance of General Plant	935											
18	Labor		$ 852,882	$ 296	$ 15,274	$ 837,312	$ 471,067	$ 0	$ 0	$ 0	$ 471,067	$ 471,364	18
19	Labor Loadings		493,293	181	9,231	483,881	272,229	0	0	0	272,229	272,410	19
20	Materials and Expenses		4,424,054	2,343,899	2,331,147	(250,991)	(141,206)	0	0	0	(141,206)	2,202,692	20
21	Total Maint. of General Plant	Sum Lns 18-20	$ 5,770,229	$ 2,344,376	$ 2,355,651	$ 1,070,202	$ 602,090	$ 0	$ 0	$ 0	$ 602,090	$ 2,946,466	21
	Total A&G Expenses												
22	Labor		$ 67,916,329	$ 296	$ 15,274	$ 67,900,760	$ 38,200,642	$ 0	$ 0	$ 0	$ 38,200,642	$ 38,200,938	22
23	Labor Loadings		30,572,800	181	9,231	30,563,388	17,194,816	0	0	0	17,194,816	17,194,997	23
24	Materials and Expenses		72,084,236	5,264,867	5,013,578	61,805,791	42,707,244	603,187	0	(7,845,986)	35,464,445	40,729,312	24
25	Total A&G Expenses	Sum Lns 22-24	$ 170,573,366	$ 5,265,344	$ 5,038,082	$ 160,269,939	$ 98,102,702	$ 603,187	$ 0	$ (7,845,986)	$ 90,859,903	$ 96,125,247	25
												Sch C-1, Sh 4, Col (e)	

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND AMORTIZATION EXPENSE SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Acct. No.	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e) (f) - (d)	(f)	
	AZ Direct Depreciation & Amort.			Sch C-2, Adj. 13, Sh 1		Sch C-2, Adj. 13, Sh 1	
1	Depreciation		403	$ 112,374,221	$ 7,425,469	$ 119,799,690	1
2	Amortization		404	90,096	1,534	91,629	2
3	Total AZ Direct Deprec. & Amort.	Ln 1 + Ln 2		$ 112,464,317	$ 7,427,002	$ 119,891,319	3
	AZ Regulatory Amortizations						
4	Amort. Of Gas Plant Acq.	Sch C-2, Adj. 16, Sh 1	406	$ (52,943)	$ 0	$ (52,943)	4
5	Regulatory Amortizations	Sch C-2, Adj. 16, Sh 1	407.3	2,673,464	1,376,684	4,050,147	5
6	Total AZ Regulatory Amortizations	Ln 4 + Ln 5		$ 2,620,521	$ 1,376,684	$ 3,997,205	6
7	Total AZ Depreciation & Amorts.	Ln 3 + Ln 6		$ 115,084,838	$ 8,803,686	$ 123,888,524	7
	System Allocable			Sch C-2, Adj. 13, Sh 2		Sch C-2, Adj. 13, Sh 2	
8	Depreciation			$ 8,585,542	$ (1,068,825)	$ 7,516,717	8
9	Amortization			15,591,724	6,493,126	22,084,850	9
10	Total System Allocable	Ln 8 + Ln 9		$ 24,177,266	$ 5,424,301	$ 29,601,567	10
11	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	56.26%	56.26%	11
12	Allocation to AZ	Ln 10 * Ln 11		$ 13,602,014	$ 3,051,686	$ 16,653,700	12
13	Total Depreciation and Amortization	Ln 7 + Ln 12		$ 128,686,852	$ 11,855,371	$ 140,542,223	13

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES OTHER THAN INCOME TAXES SUMMARY
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded 8/31/2021	Adjustments	Adjusted 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	(e)	
			Company Records	Sch C-2, Adj. 14, Sh 1	(c) + (d)	
1	Property Taxes	408.1	$ 50,798,652	$ 18,093,781	$ 68,892,433	1
2	Miscellaneous Taxes [1]	408.1	420,796	(5,633)	415,163	2
3	Total Taxes Other than Income	Ln 1 + Ln 2	$ 51,219,448	$ 18,088,148	$ 69,307,596	3
			Sch C-1, Sh 1, Ln 15(c)		Sch C-1, Sh 1, Ln 15(e)	

[1] Allocation of System Allocable Miscellaneous Taxes

Modified Business Tax	Company Records	$ 545,226
AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%
Adjustment Allocated to AZ		$ 306,742
		added to Ln 2(c)

SOUTHWEST GAS CORPORATION
ARIZONA
INCOME TAXES ON OPERATIONS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
AS ADJUSTED FOR THE TEST YEAR

Line No.	Description	Reference	Recorded 8/31/2021	Adjusted 8/31/2021	After Rate Relief	Line No.
	(a)	(b)	(c)	(d)	(e)	
	State Income Tax					
1	Margin	Sch A-1, Sh 2, Ln 3	$ 565,018,312	$ 579,185,433	$ 669,915,616	1
2	Expenses	Sch A-1, Sh 2, Lns 4-16	419,641,348	448,132,011	448,326,671	2
3	Taxable Income Before Interest	Ln 1 - Ln 2	$ 145,376,964	$ 131,053,423	$ 221,588,945	3
4	Interest Expense	Ln 21	50,243,557	53,726,452	53,726,452	4
5	State Taxable Income	Ln 3 - Ln 4	$ 95,133,407	$ 77,326,971	$ 167,862,494	5
6	Effective State Income Tax Rate	Sch C-3, Sh 2, Ln 1	4.900%	4.900%	4.900%	6
7	State Income Tax Expense	Ln 5 * Ln 6	$ 4,661,537	$ 3,789,022	$ 8,225,262	7
	Federal Income Tax					
8	Margin	Ln 1	$ 565,018,312	$ 579,185,433	$ 669,915,616	8
9	Expenses	Ln 2	419,641,348	448,132,011	448,326,671	9
10	Taxable Income Before Interest	Ln 8 - Ln 9	$ 145,376,964	$ 131,053,423	$ 221,588,945	10
11	Interest Expense	Ln 21	50,243,557	53,726,452	53,726,452	11
12	Federal Taxable Income	Ln 10 - Ln 11	$ 95,133,407	$ 77,326,971	$ 167,862,494	12
13	Federal Income Tax Rate	Sch C-3, Sh 2, Ln 3	19.971%	19.971%	19.971%	13
14	Federal Income Tax Expense	Ln 12 * Ln 13	$ 18,999,093	$ 15,442,969	$ 33,523,819	14
15	ARAM Amortization	Sch B-6, Sh 6	0	(7,284,597)	(7,284,597)	15
16	Investment Tax Credit	Company Records	0	0	0	16
17	Federal Income Tax Expense	Sum Lns 14-16	$ 18,999,093	$ 8,158,372	$ 26,239,221	17
18	Total Federal and State Income Tax	Ln 7 + Ln 17	$ 23,660,630	$ 11,947,394	$ 34,464,483	18
			Sch A-1, Sh 2 Ln 17(c)	Sch A-1, Sh 2 Ln 17(e)	Sch A-1, Sh 2 Ln 17(g)	
	Interest Calculation					
19	Rate Base	Sch A-1, Sh 2, Ln 34	$ 2,470,792,097	$ 2,642,067,938	$ 3,414,416,189	19
20	Weighted Cost of Debt	Sch D-1, Sh 1	2.03%	2.03%	1.57%	20
21	Interest Expense	Ln 19 * Ln 20	$ 50,243,557	$ 53,726,452	$ 53,726,452	21
			Lns 4 and 11	Lns 4 and 11	Lns 4 and 11	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF 4-FACTOR AND A&G ALLOCATION RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	AZ	SCA	NCA	SLT	SNV	NNV	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i) Sum (c)-(h)	
	Factor I									
1	Direct Operating Expenses	Company Records	$ 142,631,117	$ 15,018,665	$ 2,870,081	$ 3,367,060	$ 68,238,379	$ 14,540,923	$ 246,666,225	1
2	Percent of Total	Ln 1 / Ln 1(i)	57.82%	6.09%	1.16%	1.37%	27.66%	5.89%	100.00%	2
	Factor II									
3	Avg Direct Gross Plant in Service	Company Records	$ 4,410,931,669	$ 546,507,322	$ 162,988,086	$ 91,710,334	$ 2,211,237,244	$ 312,427,809	$ 7,735,802,464	3
4	Percent of Total	Ln 3 / Ln 3(i)	57.02%	7.06%	2.11%	1.19%	28.58%	4.04%	100.00%	4
	Factor III									
5	Direct Labor	Company Records	$ 50,095,380	$ 8,242,958	$ 1,336,231	$ 1,615,701	$ 20,946,435	$ 5,830,062	$ 88,066,767	5
6	Percent of Total	Ln 5 / Ln 5(i)	56.88%	9.36%	1.52%	1.83%	23.78%	6.62%	100.00%	6
	Factor IV									
7	Average Number of Customers	Company Records	$ 1,129,365	$ 152,603	$ 27,770	$ 20,360	$ 688,359	$ 99,972	$ 2,118,429	7
8	Percent of Total	Ln 7 / Ln 7(i)	53.31%	7.20%	1.31%	0.96%	32.49%	4.72%	100.00%	8
9	4-Factor	(Ln 2+ Ln 4+ Ln 6 + Ln 8) / 4	**56.26%**	7.43%	1.52%	1.34%	28.13%	5.32%	100.00%	9
	A&G Transfer Rate									
10	SWG A&G Overheads	Company Records	51.74%	8.51%	1.14%	2.08%	31.78%	4.75%	100.00%	10

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF THE MODIFIED MASSACHUSETTS FORMULA (MMF)
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Reference	AZ	NCA	SCA	SLT	NNV	SNV	Great Basin	SGTC	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k) Sum (c)-(j)	
1	Total Direct Labor	Sch C-1, Sh 17, Ln 5	$ 50,095,380	$ 1,336,231	$ 8,242,958	$ 1,615,701	$ 5,830,062	$ 20,946,435	$ 4,337,103	$ 14,183	$ 92,418,053	1
2	Percent of Total	Ln 1 / Ln 1(k)	54.21%	1.45%	8.92%	1.75%	6.31%	22.66%	4.69%	0.02%	100.00%	2
3	Margin	Company Records	$ 565,018,315	$ 23,152,863	$ 86,069,822	$ 14,981,810	$ 44,541,434	$ 284,080,031	$ 45,062,708	$ 425,945	$ 1,063,332,928	3
4	Percent of Total	Ln 3 / Ln 3(k)	53.14%	2.18%	8.09%	1.41%	4.19%	26.72%	4.24%	0.04%	100.00%	4
5	Gross Plant	Company Records	$ 4,491,251,647	$ 163,855,532	$ 567,389,184	$ 96,482,523	$ 319,593,638	$ 2,273,834,193	$ 292,049,198	$ 2,426,992	$ 8,206,882,907	5
6	Percent of Total	Ln 5 / Ln 5(k)	54.73%	2.00%	6.91%	1.18%	3.89%	27.71%	3.56%	0.03%	100.00%	6
7	MMF	(Ln 2+ Ln 4 + Ln 6) / 3	54.02%	1.87%	7.98%	1.44%	4.80%	25.70%	**4.16%**	**0.03%**	100.00%	7

SCHEDULE C-2

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Revenues & Volumes Adj. No. 1	Purchased Gas Cost Adj. No. 2	Labor/Loading Annualization Adj. No. 3	Call Center & Customer Supp. Adj. No. 4	Cost of Service Analysis Adj. No. 5	Company-Owned Vehicles Adj. No. 6	Uncollectibles Annualization Adj. No. 7	Corporate Aircraft Adj. No. 8	Self-Insured Retention Adj. No. 9	Membership Dues Adj. No. 10	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
		Sch C-2, Adj. 1, Sh 1	Sch C-2, Adj. 2, Sh 1	Sch C-2, Adj. 3, Sh 1 Sch C-2, Adj. 3, Sh 2	Sch C-2, Adj. 4, Sh 1	Sch C-2, Adj. 5, Sh 1 Sch C-2, Adj. 5, Sh 2	Sch B-2, Adj. 6, Sh 1 Sch C-2, Adj. 6, Sh 2	Sch C-2, Adj. 7, Sh 1	Sch C-2, Adj. 8, Sh B-2, Adj. 8, Sh 1	Sch C-2, Adj. 9, Sh 1	Sch C-2, Adj. 10, Sh 1	
1	Operating Revenue	$ (143,408,188)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Gas Cost	0	(157,575,309)	0	0	0	0	0	0	0	0	2
3	Operating Margin	$ (143,408,188)	$ 157,575,309	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	3
	Operating Expenses											
4	Other Gas Costs	$ 0	$ 0	$ 28,691	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Storage	0	0	27,219	0	0	0	0	0	0	0	5
6	Distribution	0	0	1,294,349	0	(63,568)	(175)	0		0	0	6
7	Customer Accounts	0	0	276,669	(131,769)	(11,562)	0	(851,635)	0	0	0	7
8	Customer Service & Info.	0	0	0	0	(20,780)	0	0	0	0	0	8
9	Sales	0	0	0	0	(3,628)	0	0	0	0	0	9
	Administrative & General											
10	Direct	0	0	9	0	41,225	0	0	0	682,347	0	10
11	System Allocable	0	0	(1,704,792)	0	(234,953)	(1,679)	0	(426,608)	62,464	(20,081)	11
	Depreciation & Amortization											
12	Direct	0	0	0	0	0	0	0	0	0	0	12
13	System Allocable	0	0	0	0	0	0	0	0	0	0	13
14	Regulatory Amortizations	0	0	0	0	0	0	0	0	0	0	14
15	Taxes Other Than Income	0	0	0	0	0	0	0	0	0	0	15
16	Interest on Customer Deposits	0	0	0	0	0	0	0	0	0	0	16
17	Total Operating Expenses	$ 0	$ 0	$ (77,856)	$ (131,769)	$ (293,266)	$ (1,854)	$ (851,635)	$ (426,608)	$ 744,811	$ (20,081)	17
18	Net Operating Income	$ (143,408,188)	$ 157,575,309	$ 77,856	$ 131,769	$ 293,266	$ 1,854	$ 851,635	$ 426,608	$ (744,811)	$ 20,081	18
	Rate Base											
	Gas Plant in Service											
19	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ (229,604)	$ 0	$ 0	$ 0	$ 0	19
20	System Allocable	0	0	0	0	0	(911,293)	0	(4,940,407)	0	0	20
21	Total Gas Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ (1,140,897)	$ 0	$ (4,940,407)	$ 0	$ 0	21
	Accumulated Provision for Depr and Amorts											
22	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ (150,114)	$ 0	$ 0	$ 0	$ 0	22
23	System Allocable	0	0	0	0	0	(531,037)	0	(2,096,750)	0	0	23
24	Total Accumulated Provision	$ 0	$ 0	$ 0	$ 0	$ 0	$ (681,151)	$ 0	$ (2,096,750)	$ 0	$ 0	24
25	Net Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ (459,746)	$ 0	$ (2,843,656)	$ 0	$ 0	25
	Other Rate Base											
	Allowance for Working Capital											
26	Cash Working Capital	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	0	0	0	0	0	0	0	31
32	Total Other Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	32
33	Total Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ (459,746)	$ 0	$ (2,843,656)	$ 0	$ 0	33

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Great Basin Alloc. Annualization Adj. No. 11	Rate Case Expense Adj. No. 12	Dep/Amort Expense Adj. No. 13	Taxes Other Than Income Adj. No. 14	Insurance Annualization Adj. No. 15	Regulatory Amortizations Adj. No. 16	Corp HQ Adj. No. 17	SAP & CSS Adj Adj. No. 18	Post-Test Year Plant Adj. No. 19	Graham County (GCU) Adj. No. 20	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
		Sch C-2, Adj. 11, Sh 1	Sch C-2, Adj. 12, Sh 1	Sch C-2, Adj. 13, Sh 1-4	Sch C-2, Adj. 14, Sh 1	Sch C-2, Adj. 15, Sh 1	Sch C-2, Adj. 16, Sh 1	Sch C-2, Adj. 17, Sh 1 Sch B-2, Adj. 17, Sh 1	Sch C-2, Adj. 18, Sh 1	Sch B-2, Adj. 19, Sh 1 Sch B-2, Adj. 19, Sh 2	Sch B-2, Adj. 20, Sh 1 Sch C-2, Adj. 20, Sh 1	
1	Operating Revenue	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	Gas Cost	0	0	0	0	0	0	0	0	0	0	2
3	Operating Margin	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	3
	Operating Expenses											
4	Other Gas Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5	Storage	0	0	0	0	0	0	0	0	0	0	5
6	Distribution	0	0	0	0	0	0	0	0	0	895,655	6
7	Customer Accounts	0	0	0	0	0	0	0	(662,858)	0	18,000	7
8	Customer Service & Info.	0	0	0	0	0	0	0	0	0	0	8
9	Sales	0	0	0	0	0	0	0	0	0	0	9
	Administrative & General											
10	Direct	0	86,609	0	0	0	0	0	0	0	0	10
11	System Allocable	13,266	0	0	0	1,202,101	0	(1,394,145)	0	0	0	11
	Depreciation & Amortization											
12	Direct	0	0	7,427,002	0	0	0	0	0	0	0	12
13	System Allocable	0	0	3,051,686	0	0	0	0	0	0	0	13
14	Regulatory Amortizations	0	0	0	0	0	1,695,436	0	0	0	0	14
15	Taxes Other Than Income	0	0	0	18,088,148	0	0	0	0	0	0	15
16	Interest on Customer Deposits	0	0	0	0	0	0	0	0	0	0	16
17	Total Operating Expenses	$ 13,266	$ 86,609	$ 10,478,688	$ 18,088,148	1,202,101	$ 1,695,436	$ (1,394,145)	$ (662,858)	$ 0	$ 913,655	17
18	Net Operating Income	$ (13,266)	$ (86,609)	$ (10,478,688)	$ (18,088,148)	(1,202,101)	$ (1,695,436)	$ 1,394,145	$ 662,858	$ 0	$ (913,655)	18
	Rate Base											
	Gas Plant in Service											
19	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 177,333,445	$ 6,269,535	19
20	System Allocable	0	0	0	0	0	0	(25,596,217)	0	19,766,467	0	20
21	Total Gas Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (25,596,217)	$ 0	$ 197,099,912	$ 6,269,535	21
	Accumulated Provision for Depr and Amorts											
22	Direct	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,615,674	$ 3,725,791	22
23	System Allocable	0	0	0	0	0	0	(5,386,295)	0	719,280	0	23
24	Total Accumulated Provisio	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (5,386,295)	$ 0	$ 3,334,953	$ 3,725,791	24
25	Net Plant in Service	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (20,209,922)	$ 0	$ 193,764,959	$ 2,543,744	25
	Other Rate Base											
	Allowance for Working Capital											
26	Cash Working Capital	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	0	0	0	0	0	0	0	31
32	Total Other Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	32
33	Total Rate Base	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (20,209,922)	$ 0	$ 193,764,959	$ 2,543,744	33

SOUTHWEST GAS CORPORATION
ARIZONA
ITEMIZATION OF PRO FORMA ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Variable Pay Adjustment Adj. No. 21	Interest on Customer Deposit Adj. No. 22	Remittance Processing and Print to Mail Assets Adj. No. 23	Deferred Taxes Adj. No. 24	Total of Adjustments	Line No.
	(a)	(l)	(m)	(n)	(o)	(p)	
		Sch C-2, Adj. 21, Sh 1	Sch C-2, Adj. 22, Sh 1	B-2, Adj. 23, Sh 1	B-2, Adj. 24, Sh 1		
1	Operating Revenue	$ 0	$ 0	0	$ 0	$ (143,408,188)	1
2	Gas Cost	0	0	0	0	(157,575,309)	2
3	Operating Margin	$ 0	$ 0	0	$ 0	$ 14,167,121	3
	Operating Expenses						
4	Other Gas Costs	$ 0	$ 0	0	$ 0	$ 28,691	4
5	Storage	0	0	0	0	27,219	5
6	Distribution	0	0	0	0	2,126,260	6
7	Customer Accounts	0	0	286,150	0	(1,077,005)	7
8	Customer Service & Info.	0	0	0	0	(20,780)	8
9	Sales	0	0	0	0	(3,628)	9
	Administrative & General					0	
10	Direct	0	0	0	0	810,190	10
11	System Allocable	(391,462)	0	0	0	(2,895,888)	11
	Depreciation & Amortization					0	
12	Direct	0	0	0	0	7,427,002	12
13	System Allocable	0	0	0	0	3,051,686	13
14	Regulatory Amortizations	0	0	0	0	1,695,436	14
15	Taxes Other Than Income	0	0	0	0	18,088,148	15
16	Interest on Customer Deposits	0	(766,669)	0	0	(766,669)	16
17	Total Operating Expenses	$ (391,462)	$ (766,669)	286,150	$ 0	$ 28,490,663	17
18	Net Operating Income	$ 391,462	$ 766,669	(286,150)	$ 0	$ (14,323,542)	18
						Sch C-1, Sh 1, Col (d)	
	Rate Base						
	Gas Plant in Service						
19	Direct	$ 0	$ 0	0	$ 0	$ 183,373,376	19
20	System Allocable	0	0	(2,262,982)	0	(13,944,432)	20
21	Total Gas Plant in Service	$ 0	$ 0	(2,262,982)	$ 0	$ 169,428,943	21
	Accumulated Provision for Depr and Amorts						
22	Direct	$ 0	$ 0	0	$ 0	$ 6,191,351	22
23	System Allocable	0	0	(2,004,985)	0	(9,299,788)	23
24	Total Accumulated Provision	$ 0	$ 0	(2,004,985)	$ 0	$ (3,108,437)	24
25	Net Plant in Service	$ 0	$ 0	(257,998)	$ 0	$ 172,537,381	25
	Other Rate Base						
	Allowance for Working Capital						
26	Cash Working Capital	$ 0	$ 0	0	$ 0	$ 0	26
27	Materials and Supplies	0	0	0	0	0	27
28	Prepayments	0	0	0	0	0	28
29	Customer Deposits	0	0	0	0	0	29
30	Customer Advances	0	0	0	0	0	30
31	Deferred Taxes	0	0	0	(1,261,540)	(1,261,540)	31
32	Total Other Rate Base	$ 0	$ 0	0	$ (1,261,540)	$ (1,261,540)	32
33	Total Rate Base	$ 0	$ 0	(257,998)	$ (1,261,540)	$ 171,275,840	33

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SALES, TRANSPORTATION QUANTITY AND REVENUES - ADJUSTMENT NO. 1
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded At 8/31/2021	Adjustment No. 1	Test Period Balance As Adjusted	Line No.
	(a)	(b)	(c)	(d)	
1	Sales Quantity (Therms)	571,813,620	(20,499,366)	551,314,254	1
2	Transportation Quantity (Therms)	168,733,241	6,330,050	175,063,291	2
3	Total Quantity	740,546,861	(14,169,316)	726,377,545	3
4	Revenue	$ 722,593,622	$ (143,408,188)	$ 579,185,433	4
5	Total Revenue Adjustment		$ (143,408,188)		5

Explanation:
To adjust for changes in number of bills and sales volumes, to adjust revenues to authorized levels, to reverse unbilled revenues, and to remove gas cost from the cost of service.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
PURCHASED GAS COST - ADJUSTMENT NO. 2
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	FERC Account Number	Amount	Line No.
	(a)	(b)	(c)	
1	Natural Gas Transmission Line Purchases	803.00	$ 312,371,683	1
2	Purchased Gas Cost Adjustments	805.10	(208,439,764)	2
3	Gas Withdrawn from Storage	808.10	1,045,270	3
4	Gas Delivered to Storage	808.20	(1,204,779)	4
5	Gas Used for Compressor Station Fuel	810.00	0	5
6	Transmission and Compression of Gas	858.00	53,802,899	6
7	Total Adjustment No. 2 - Recorded Cost of Purchased Gas		$ 157,575,309	7
8	Present Volume Adjustment		(5,649,033)	8
9	Present Rate Adjustment		57,615,859	9
10	Subtotal of Adjustments		51,966,826	10
11	Total Cost of Purchased Gas Adjusted at Present Rates		$ 209,542,135	11

Explanation:
To adjust for changes in sales volumes and to adjust the average cost of purchased gas to match the average cost of purchased gas included in currently effective base tariff sales rates.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
COST OF PURCHASED GAS - ADJUSTED AT PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Recorded Total	Volume Adjustment Sales	Volume Adjustment Gas Engines	Volume Adjustment Optional	Rate Adjustment Sales	Rate Adjustment Gas Engines	Rate Adjustment Optional	Adjusted Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	
1	Sales Volumes (Therms)	571,813,620	(20,776,801)	32,491	244,944	521,410,643	17,322,965	12,580,646	551,314,254	1
2	Recorded Average Cost of Purchased Gas	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557	$ 0.27557		2
3	Cost of Purchased Gas [1]					$ 0.37836	$ 0.43302	$ 0.37836		3
4	Change in Average Cost of Purchased Gas					$ 0.10279	$ 0.15745	$ 0.10279		4
5	Cost of Purchased Gas	$ 157,575,309	$ (5,725,486)	$ 8,954	$ 67,499	$ 53,595,226	$ 2,727,482	$ 1,293,151	$ 209,542,135	5

[1] Cost of gas effective on January 31, 2019 excluding surcharges. Optional cost of purchased gas is average cost during test year.

SCHEDULE C-2
ADJUSTMENT NO. 2
SHEET 6 OF 31

SOUTHWEST GAS CORPORATION
ARIZONA
LABOR AND LABOR LOADING ANNUALIZATION
ADJUSTMENT NO. 3

Line No.	Description	Labor	Labor Loading	Total	Line No.
	(a)	(b)	(c)	(d)	
		WP C-2 Adj 3, Sh 1 thru 3, Col (h)	WP C-2 Adj 3, Sh 1 thru 3, Col (i)	(b) + (c)	
	Operations				
1	Account 813	$ 51,022	$ (22,331)	$ 28,691	1
2	Account 840	11,192	(2,018)	9,173	2
3	Account 841	22,009	(3,963)	18,046	3
4	Account 850	0	0	0	4
5	Account 851	0	0	0	5
6	Account 852	0	0	0	6
7	Account 853	0	0	0	7
8	Account 856	0	0	0	8
9	Account 857	0	0	0	9
10	Account 859	0	0	0	10
11	Account 870	227,556	(42,784)	184,772	11
12	Account 871	51,066	(22,235)	28,831	12
13	Account 874	129,104	(23,443)	105,661	13
14	Account 875	49,549	(8,999)	40,549	14
15	Account 878	166,386	(30,018)	136,369	15
16	Account 879	296,981	(75,766)	221,214	16
17	Account 880	156,744	(40,204)	116,540	17
18	Account 901	88,814	(36,131)	52,683	18
19	Account 902	28,149	(5,074)	23,075	19
20	Account 903	353,586	(154,147)	199,439	20
21	Account 905	1,797	(326)	1,472	21
22	Account 908	0	0	0	22
23	Account 910	0	0	0	23
24	Account 920	(280,693)	(1,341,103)	(1,621,796)	24
25	Account 922	37,950	181,318	219,267	25
26	Account 930.2	0	0	0	26
27	Total Operations	$ 1,391,211	$ (1,627,224)	$ (236,013)	27
	Maintenance				
28	Account 863	$ 0	$ 0	$ 0	28
29	Account 885	56,479	(11,108)	45,371	29
30	Account 886	18	(4)	14	30
31	Account 887	264,338	(47,724)	216,614	31
32	Account 889	33,787	(6,053)	27,735	32
33	Account 892	118,223	(21,249)	96,975	33
34	Account 893	84,672	(15,018)	69,654	34
35	Account 894	4,926	(875)	4,051	35
36	Account 935 - Direct	11	(2)	9	36
37	Account 935 - System Alloc.	(4,529)	(21,574)	(26,103)	37
38	Total Maintenance	$ 557,924	$ (123,606)	$ 434,318	38
39	Total O&M	$ 1,949,135	$ (1,750,830)	$ 198,305	39
				Sch C-2, Sh 1, Col (d)	
	Functionalization				
40	Other Gas Supply	$ 51,022	$ (22,331)	$ 28,691	40
41	Storage	33,200	(5,981)	27,219	41
42	Transmission	0	0	0	42
43	Distribution	1,639,828	(345,479)	1,294,349	43
44	Customer Accounts	472,347	(195,678)	276,669	44
45	Customer Service & Info.	0	0	0	45
46	Sales	0	0	0	46
47	A&G - Direct	11	(2)	9	47
48	A&G - Sys. Alloc.	(247,272)	(1,181,359)	(1,428,632)	48
49	Total	$ 1,949,135	$ (1,750,830)	$ 198,305	49

To annualize labor and labor-related loadings as of August 31, 2021 to reflect a 3% general wage increase effective June 2022.

SOUTHWEST GAS CORPORATION
ARIZONA
ALLOCATION OF NON-SERVICE RETIREMENT BENEFITS COSTS
LABOR AND BENEFITS ANNUALIZATION
ADJUSTMENT NO. 3

Line No.	Description	Reference	Pension	PBOP	SERP	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f) (c)+(d)+(e)	
1	Normalized Total Retirement Benefits Cost	Actuarial Studies	$ 46,252,926	$ 1,983,402	$ 2,629,678		1
2	Normalized Current Service Cost	WP C-2 Adj 3, Sh 43	33,773,799	1,516,004	67,500		2
3	Normalized Non-Service Cost	Ln 1 - Ln 2	$ 12,479,128	$ 467,397	$ 2,562,178	$ 15,508,703	3
4	Recorded Non-Service Cost	Company Records				16,021,047	4
5	Adjustment	Ln 3 - Ln 4				$ (512,344)	5
6	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)				4.19%	6
7	Adjustment after MMF Allocation	Ln 5 * (1 - Ln 6)				$ (490,869)	7
8	Allocation to Arizona	Sch C-1, Sh 17, Ln 9(c)				56.26%	8
9	Amount After Allocation	Ln 7 * Ln 8				$ (276,161)	9
						Sch C-2, Sh 1, Col (d)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
CALL CENTER AND SUPPORT FUNCTION ALLOCATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 4

Line No.	Description	Reference	AZ	SCA	NCA	SLT	SNV	NNV	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i) Sum (c)-(h)	
	Account 903									
1	903001777 - Call Center	Company Records	$ 3,494,733	$ 448,856	$ 82,794	$ 65,777	$ 1,878,415	$ 298,672	$ 6,269,247	1
2	903001778 - Support Function	Company Records	1,318,864	181,642	33,414	25,938	777,539	175,389	2,512,785	2
3	Total as Recorded	Ln 1 + Ln 2	$ 4,813,597	$ 630,498	$ 116,208	$ 91,715	$ 2,655,953	$ 474,061	$ 8,782,033	3
4	Factor IV	Sch C-1, Sh 17, Ln 8	53.31%	7.20%	1.31%	0.96%	32.49%	4.72%	100.00%	4
5	Total as Allocated	Ln 4 * Ln 3(i)	$ 4,681,828	$ 632,622	$ 115,122	$ 84,403	$ 2,853,620	$ 414,438	$ 8,782,033	5
6	Adjustment	Ln 5 - Ln 3	$ (131,769)	$ 2,124	$ (1,086)	$ (7,312)	$ 197,666	$ (59,623)	$ 0	6
			Sch C-2, Sh 1 Col (e)							

SOUTHWEST GAS CORPORATION
ARIZONA
COST OF SERVICE ANALYSIS
ADJUSTMENT NO. 5

Line No.	Account Number	Reference	Expenses Removed: Donation/ Civic Activity	Employee Events	Employee Recognition	Other Emp. Welfare	Sponsorships, Ads, Promo.	Retirement Gift/Meals	Non-Utility Expense	Non-Recurring Expense	Out of Period Expenses	Expense Annualization	Accounting Corrections	Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)		(m) Sum (c)-(l)	
1	870	WP C-2, Adj. 5, Sh 1	$ (98)	$ (1,257)	$ (50)	$ (7,955)	$ (150)	$ (479)	$ (653)	$ 0	$ 0	$ 0		$ (10,642)	1
2	874	WP C-2, Adj. 5, Sh 12	0	0	0	(375)	0	0	0	0	0	0		(375)	2
3	875	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	(158)	0	0	0	0		(158)	3
4	880	WP C-2, Adj. 5, Sh 2	(4,153)	(3,751)	(213)	(12,276)	(4,500)	(15,688)	(2,788)	0	1,029	0		(42,340)	4
5	881	WP C-2, Adj. 5, Sh 13	0	0	0	0	0	0	0	0	0	0		0	5
6	885	WP C-2, Adj. 5, Sh 12	(25)	0	0	(2,335)	0	(39)	(266)	0	0	0		(2,665)	6
7	887	WP C-2, Adj. 5, Sh 12	0	0	0	(12)	0	0	(6,423)	0	0	0		(6,435)	7
8	889	WP C-2, Adj. 5, Sh 12	0	0	0	(103)	0	0	0	0	103	0	(0)	(0)	8
9	901	WP C-2, Adj. 5, Sh 12	0	0	0	(322)	0	0	0	0	0	0		(322)	9
10	903	WP C-2, Adj. 5, Sh 3	(447)	0	0	(56)	0	0	(1,585)	(18,257)	0	0	(7,535)	(27,879)	10
11	908	WP C-2, Adj. 5, Sh 6	0	0	0	0	0	0	0	0	0	0		0	11
12	910	WP C-2, Adj. 5, Sh 4	(220)	0	0	0	0	0	(4,167)	0	0	0		(4,387)	12
13	913	WP C-2, Adj. 5, Sh 5	0	0	0	0	(1,942)	(85)	(1,399)	0	0	0		(3,425)	13
14	925	WP C-2, Adj. 5, Sh 12	0	0	0	(30)	0	0	0	0	0	0		(30)	14
15	930.1	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	(617)	0	0	24,879		24,261	15
16	921	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	0	0	16,994	0		16,994	16
	Total	Sum Lns 1-13	$ (4,943)	$ (5,008)	$ (263)	$ (23,463)	$ (6,592)	$ (16,448)	$ (17,898)	$ (18,257)	$ 18,125	$ 24,879	(7,535)	$ (57,403)	
														Sch C-2, Sh 1, Col (f)	

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
COST OF SERVICE ANALYSIS
ADJUSTMENT NO. 5

Line No.	Account Number	Reference	Expenses Removed: Donation/ Civic Activity	Employee Events	Employee Recognition	Other Emp. Welfare	Sponsorships, Ads, Promo.	Retirement Gift/Meals	Non-Utility Expense	Non-Recurring Expense	Out of Period Expenses	Expense Annualization	Accounting Adjustments	Total	MMF	Amount Before Alloc. to AZ	AZ Alloc. Factor	Amount After Alloc. to AZ
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)		(m)	(n)	(o)	(p)	(q)
															Sch C-1, Sh 18	(m) * [1- (n)]	Sch C-1, Sh 17	(o) * (p)
1	870	WP C-2, Adj. 5, Sh 12	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	0	$ 0	n/a	$ 0	53.31%	$ 0
2	880	WP C-2, Adj. 5, Sh 6	0	0	0	(1,567)	0	0	(220)	0	0	0	0	(1,787)	n/a	(1,787)	53.31%	(953)
3	901	WP C-2, Adj. 5, Sh 12	0	0	0	(2,344)	0	(1,905)	(560)	0	0	0	0	(4,809)	n/a	(4,809)	53.31%	(2,564)
4	903	WP C-2, Adj. 5, Sh 7	(2,715)	0	(1,667)	(2,071)	(1,790)	0	(9,288)	0	0	53,550	0	36,019	n/a	36,019	53.31%	19,202
5	908	WP C-2, Adj. 5, Sh 12	0	0	0	0	0	0	0	0	0	0	0	0	n/a	0	53.31%	0
6	910	WP C-2, Adj. 5, Sh 8	0	0	0	(124)	0	0	(5,625)	0	(25,000)	0	0	(30,749)	n/a	(30,749)	53.31%	(16,393)
7	921	WP C-2, Adj. 5, Sh 13	0	0	0	0	0	0	0	0	0	129,000	0	129,000	n/a	129,000	56.26%	72,575
7	921	WP C-2, Adj 5, Sh 1	(16,051)	(1,602)	(919)	(24,741)	(25,781)	(27,029)	(137,400)	(4,810)	(57,795)	0	(42,990)	(339,117)	4.19%	(324,903)	56.26%	(182,789)
8	923	WP C-2, Adj. 5, Sh 10	0	0	0	0	0	0	0	(167,776)	(67,745)	0	0	(235,521)	4.19%	(225,649)	56.26%	(126,949)
9	930.2	WP C-2, Adj. 5, Sh 16	0	0	0	0	0	0	0	0	0	0	0	0	4.19%	0	56.26%	0
10	931	WP C-2, Adj. 5, Sh 11	0	0	0	0	0	0	(1,219)	0	0	0	0	(1,219)	4.19%	(1,168)	56.26%	(657)
11	913	WP C-2, Adj. 5, Sh 12	0	0	0	0	(376)	0	0	0	0	0	0	(376)	4.19%	(360)	56.26%	(203)
12	935	WP C-2, Adj. 5, Sh 12	0	0	0	(88)	0	(128)	(1,500)	0	0	7,037	0	5,321	4.19%	5,098	56.26%	2,868
13	Total	Sum Lns 1-10	$ (18,766)	$ (1,602)	$ (2,586)	$ (30,935)	$ (27,946)	$ (29,062)	$ (155,814)	$ (172,586)	$ (150,540)	$ 189,587	(42,990)	$ (443,239)		$ (419,310)		$ (235,862)
																		Sch C-2, Sh 1,

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY-OWNED VEHICLES
OPERATING EXPENSES
ADJUSTMENT NO. 6

Line No.	Description	Reference	Remove Vehicle O&M	Total Adjustment	Line No.
	(a)	(b)	(c)	(e)	
1	Arizona	Company Records	$ (175)	$ (175)	1
2	System Allocable	Company Records	$ (3,115)	$ (3,115)	2
3	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)	4.19%	4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * Ln 3	$ (2,985)	$ (2,985)	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)	56.26%	56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5	$ (1,679)	$ (1,679)	6
7	Total Adjustment	Ln 1 + Ln 6	$ (1,854)	$ (1,854)	7
				Sch C-2, Sh 1, Col (g)	

Explanation:
To remove expenses related to company-owned vehicles used by Directors and above.

SOUTHWEST GAS CORPORATION
ARIZONA
UNCOLLECTIBLES EXPENSE ANNUALIZATION
ADJUSTMENT NO. 7

Line No.	Description	Reference	Account Number		Amount	Line No.
	(a)	(b)	(c)		(d)	
1	Revenue at Present Rates	Sch H-2, Sh 4		$	788,963,649	1
2	Write-Off Percent of Revenue	WP Sch C-2, Adj. 7, Sh 1			0.2145%	2
3	Annualized Uncollectible Expense	Ln 1 * Ln 2		$	1,692,711	3
4	Less: Recorded Uncollectible Expense	Sch C-1, Sh 3, Ln 29(c)	904		2,544,346	4
5	Adjustment	Ln 3 - Ln 4	904	$	(851,635)	5
					Sch C-2, Sh 1, Col (h)	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPANY OWNED AIRCRAFT
ADJUSTMENT NO. 8

Line No.	Description	Reference	Airplane	Airplane Hangar	Total
	(a)	(b)	(c)	(d)	(e)
					(c) + (d)
	Test Year Aircraft Costs				
1	Labor	Company Records	$ 274,448	$ -	$ 274,448
2	Labor-Related Loadings	Company Records	153,515	-	153,515
3	Fuel and Oil	Company Records	60,281	-	60,281
4	Repairs and Maintenance	Company Records	192,057	-	192,057
5	Licenses and Fees	Company Records	2,764	38,749	41,513
6	Other Business Expenses	Company Records	87,403	-	87,403
7	Insurance	Company Records	25,681	-	25,681
8	Total Costs [1]	Sum Lns 1 - 7	$ 796,148	$ 38,749	$ 834,897
9	Aircraft Expenses Cleared to Centuri	Company Records			(19,200)
10	Aircraft Expenses Cleared to HoldCo.	Company Records			(52,400)
11	HoldCo. Aircraft Expenses Allocated to Centuri	Ln 10 * 11%			$ (5,764)
12	Total Aircraft Expenses to SWG	Ln 8 + Ln 9 + Ln 11			$ 809,933
13	**Total SWG Aircraft Costs to be Removed [2]**	**- Ln 12**			(809,933)
14	Allowable Comparable Commercial Airfare	Company Records			18,473
15	Net Adjustment Before Allocation	Ln 13 + Ln 14			$ (791,460)
16	Less: MMF Allocation	Stmt N, Sh 10, Ln 7(i)+(j)			4.19%

SOUTHWEST GAS CORPORATION
ARIZONA
SELF-INSURED RETENTION NORMALIZATION
ADJUSTMENT NO. 9

Line No.	Description (a)	Reference (b)	Account Number (c)	Amount (d)	Line No.
1	Arizona	Sch C-2, Adj. 9, Sh 2, Ln 7(c)	925	$ 682,347	1
2	System Allocable	Sch C-2, Adj. 9, Sh 2, Ln 7(d)	925	$ 115,885	2
3	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)		4.19%	3
4	Adjustment after MMF Allocation	Ln 2 * (1 - Ln 3)		$ 111,028	4
5	AZ 4-Factor	Sch C-1, Sh 17, Ln 9(c)		56.26%	5
6	Adjustment Allocated to AZ	Ln 4 * Ln 5		$ 62,464	6
7	Total Adjustment	Ln 1 + Ln 6		$ 744,811	7
				Sch C-2, Sh 1, Col (j)	

SOUTHWEST GAS CORPORATION
ARIZONA
SELF-INSURED RETENTION NORMALIZATION
ADJUSTMENT NO. 9

Line No.	Description	Reference	AZ Direct	System Allocable	Line No.
	(a)	(b)	(c)	(d)	
	Claims Paid				
1	< $1,000,000	WP C-2, Adj. 9, Sh 1, Ln 14	$ 1,823,470	$ 1,658,854	1
2	at $1,000,000	WP C-2, Adj. 9, Sh 1, Ln 28	1,000,000	0	2
3	$4,000,000 Aggregate	WP C-2, Adj. 9, Sh 1, Ln 39	4,000,000	0	3
4	Total Claims Paid	Sum Ln 1 - Ln 3	$ 6,823,470	$ 1,658,854	4
5	10-Year Average	Ln 4 /10	$ 682,347	$ 165,885	5
6	Recorded During Test Year	Company Records	0	50,000	6
7	Adjustment	Ln 5 - Ln 6	$ 682,347	$ 115,885	7
			Sch C-2, Adj. 9, Sh 1, Ln 1(d)	Sch C-2, Adj. 9, Sh 1, Ln 2(d)	

SOUTHWEST GAS CORPORATION
ARIZONA
INDUSTRY DUES
REMOVE PERCENTAGE OF DUES IDENTIFIED AS LOBBYING IN NATURE
ADJUSTMENT NO. 10

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
1	2021 AGA Dues	Company Records	930.2	$ 664,594	1
2	Lobbying Percentage	AGA Records		-3.80%	2
3	Lobbying Portion of AGA Dues	Ln 1 * Ln 2		$ (25,255)	3
4	2021 Coalition for Renewable Natural Gas Dues	Company Records	930.2	$ 30,000	4
5	Lobbying Percentage	Company Records		-40.00%	5
6	Lobbying Portion of Renewable Natural Gas Dues	Ln 4 * Ln 5		$ (12,000)	6
7	Total Lobbying Costs to Remove	Ln 3 + Ln 6		$ (37,255)	7
8	Less: MMF Allocation	Sch C-1, Sh 18, Ln 7(i)+(j)		4.19%	8
9	Adjustment after MMF Allocation	Ln 7 * 1-Ln 8		$ (35,693)	9

SOUTHWEST GAS CORPORATION
ARIZONA
GREAT BASIN ALLOCATION ANNUALIZATION
ADJUSTMENT NO. 11

Line No.	Description	Ref/ Account Number	For The Twelve Months Ended August 31, 2021 Net Recorded	Charged to Great Basin	Gross Recorded	Great Basin MMF Allocation [1]	Great Basin Annualized	Change to Alloc. of Great Basin's A&G Expenses	AZ Allocation Factor [2]	Amount Allocated to AZ	Line No.
	(a)	(b)	(c) Sch C-1, Sh 9, Col (f)	(d) Company Records	(e) (c) + (d)	(f) Sch C-1, Sh 18, Ln 7(i)	(g) (e) * (f)	(h) (d) - (g)	(i) Sch C-1, Sh 17, Col (c)	(j) (h) * (i)	
1	A&G Salaries	920	$ 96,726,136	$ 4,152,092	$ 100,878,228	4.16%	$ 4,199,688	$ (47,596)	56.26%	$ (26,777)	1
2	Office Supplies and Expenses	921	11,638,418	513,889	12,152,307	4.16%	505,916	7,973	56.26%	4,486	2
3	A&G Expenses Transferred (Credit)	922	(15,577,244)	(686,814)	(16,264,058)	4.16%	(677,093)	(9,721)	51.74%	(5,030)	3
4	Outside Services	923	31,081,785	1,386,520	32,468,305	4.16%	1,351,697	34,823	56.26%	19,591	4
5	Property Insurance	924	872,486	165,005	1,037,491	11.05%	114,667	50,338	57.02%	28,702	5
6	Injuries and Damages	925	13,363,024	596,503	13,959,527	4.16%	581,153	15,350	56.26%	8,636	6
7	Misc. General Expenses	930.2	6,242,566	268,438	6,511,004	4.16%	271,061	(2,623)	56.26%	(1,476)	7
8	Rents	931	1,666,890	39,915	1,706,805	4.16%	71,056	(31,141)	56.26%	(17,520)	8
9	Maint. Of General Plant	935	3,584,845	160,647	3,745,492	4.16%	155,930	4,717	56.26%	2,654	9
10	Total	Sum Lns 1-9	$ 149,598,906	$ 6,596,195	$ 156,195,101		$ 6,574,075	$ 22,120		$ 13,266	10
										Sch C-2, Sh 2, Col (b)	

[1] Account 924 is allocated using the insurable property factor calculated on WP C-2, Adj. 11, Sh 3.

[2] All accounts are allocated using the 4-Factor except Account 924, which is allocated using Factor II.

Note: Account 493, Rent from Gas Property, changed by $317,271 due to annualizing the Great Basin rental charge at 8/31/2021 as calculated on WP C-2, Adj. 11, Sh 1.

SOUTHWEST GAS CORPORATION
ARIZONA
INCREMENTAL RATE CASE EXPENSE
ADJUSTMENT NO. 12

Line No.	Description	Ref/ Account Number		Amount	Line No.
	(a)	(b)		(c)	
1	Printing/Copying/Postage/Freight	Estimate	$	50,000	1
2	Professional Services	Estimate		360,000	2
3	Notice/Publication	Estimate		45,000	3
4	Court Reporting	Estimate		12,000	4
5	Travel/Transportation/Misc.	Estimate		125,000	5
6	Total Rate Case Expense	Sum Lns 1-5	$	592,000	6
7	Amortization Period (Years)	[1]		3	7
8	Annual Rate Case Expense	928	$	197,333	8
9	Test Year Recorded Rate Case Expense	Sch C-1, Sh 9, Ln 11(d)		110,725	9
10	Adjustment	Ln 8 - Ln 9	$	86,609	10
				Sch C-2, Sh 2, Col (c)	

[1] The Company proposes to amortize rate case expense over a typical rate case cycle.

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND AMORTIZATION EXPENSE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization Rate	Annualized Depreciation/ Amortization	Recorded Depreciation/ Amortization	Adjustment	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, Col (e)	Company Records	(c) * (d)	Company Records	(e) - (f)	
	Intangible Plant							
1	Organization	301	$ 85,175	Amortized	$ 0	$ 0	$ 0	1
2	Franchise and Consents	302	2,607,704	Amortized	84,750	[1] 83,217	1,534	2
3	Miscellaneous Intangible	303	1,968,623	Amortized	0	0	0	3
4	Total Intangible Plant		$ 4,661,502		$ 84,750	$ 83,217	$ 1,534	4
	Storage Plant							
5	Land and Land Rights	360	$ 1,772,673	N/A	$ 0	$ 0	$ 0	5
6	Structures and Improvements	361	14,907,302	4.75%	708,097	700,172	7,924	6
7	Liquifaction Equipment	362.0	32,984,650	4.75%	1,566,771	1,549,237	17,534	7
8	Vaporizing Equipment	363.2	9,108,497	4.75%	432,654	427,812	4,842	8
9	Compressor Maintenance	363.3	7,785,900	4.75%	369,830	365,691	4,139	9
10	Other Equipment	363.5	10,395,454	4.75%	493,784	389,068	104,716	10
11	Total Storage Plant		$ 76,954,475		$ 3,571,136	$ 3,431,981	$ 139,155	11
	Distribution Plant							
12	Land and Land Rights	374.1	$ 732,082	N/A	$ 0	$ 0	$ 0	12
13	Rights of Way	374.2	3,700,699	1.37%	50,700	48,716	1,983	13
14	Structures and Improvements	375	110,557	3.35%	3,704	3,704	(0)	14
15	Mains	376	2,637,793,932	1.81%	47,744,070	45,003,937	2,740,133	15
16	Measuring and Reg. Stations	378	100,018,050	3.87%	3,870,699	3,603,713	266,985	16
17	Services	380	1,272,833,677	2.82%	35,893,910	33,550,201	2,343,709	17
18	Meters	381	339,693,332	4.15%	14,097,273	13,710,410	386,864	18
19	Industrial Measuring and Reg. Sta.	385	13,902,414	1.78%	247,463	242,355	5,108	19
20	Miscellaneous Equipment	387	432,098	0.00%	0	0	0	20
21	Total Distribution Plant		$ 4,369,216,840		$ 101,907,818	$ 96,163,036	$ 5,744,781	21
	General Plant							
22	Land and Land Rights	389	$ 17,385,788	N/A	$ 0	$ 0	$ 0	22
23	Structures and Improv - Co. Owned	390.1	81,972,010	2.79%	2,287,019	2,002,021	284,998	23
24	Structures and Improv - Leasehold	390.2	125,749	Amortized	6,879	6,879	0	24
25	Office Furniture and Fixtures	391	6,111,146	7.29%	445,503	388,478	57,025	25
26	Computer Software and Hardware	391.1	11,080,676	21.94%	2,431,100	2,960,180	(529,080)	26
27	Transportation Equipment - Light	392.11	37,010,331	14.37%	5,318,385	4,026,190	1,292,195	27
28	Transportation Equipment - Heavy	392.12	22,098,330	4.07%	899,402	883,715	15,687	28
29	Stores Equipment	393	4,143,820	3.73%	154,564	43,728	110,837	29
30	Tool, Shop, and Garage Equip.	394	20,957,816	10.39%	2,177,517	1,904,580	272,937	30
31	Laboratory Equipment	395	542,420	5.48%	29,725	29,815	(90)	31
32	Power-Operated Equipment	396	10,108,170	3.46%	349,743	352,513	(2,770)	32
33	Communication Equipment	397	7,417,906	-1.11%	(82,339)	(63,520)	(18,819)	33
34	Telemetry Equipment	397.2	9,312	21.96%	2,045	7,728	(5,684)	34
35	Miscellaneous Equipment	398	4,828,732	6.38%	308,073	243,776	64,297	35
36	Total General Plant		$ 223,792,206		$ 14,327,615	$ 12,786,083	$ 1,541,533	36
37	Total Depreciation		$ 4,669,837,772		$ 119,799,690	$ 112,374,221	$ 7,425,469	37
38	Total Amortization		4,787,250		91,629	90,096	1,534	38
39	Total Depreciation and Amortization		$ 4,674,625,023		$ 119,891,319	$ 112,464,317	$ 7,427,002	39
							Sch C-2, Sh 2, Col (d)	

[1] Annualized amortization expense in Acct 302 based on January 2019 amortization * 12.

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
DEPRECIATION AND ANNUALIZATION EXPENSE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization Rate	Annualized Depreciation/ Amortization	Recorded Depreciation/ Amortization	Adjustment before Alloc. to AZ	Adjustment after Alloc. to AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
			WP B-2, Sh 5, Col (e)	Company Records	(c) * (d)	Company Records	(e) - (f)	(g) * Ln 23(c)	
	Intangible Plant								
1	Organization	301	$ 61,816	Amortized	$ 0	$ 0	$ 0	$ 0	1
2	Miscellaneous Intangible	303	393,597,857	Amortized	22,006,414	15,368,237	6,638,176 [1]	3,734,606	2
3	Total Intangible Plant		$ 393,659,673		$ 22,006,414	$ 15,368,237	$ 6,638,176	$ 3,734,606	3
	General Plant								
4	Land and Land Rights	389	$ 3,585,401	N/A	$ 0	$ 0	$ 0	$ 0	4
5	Structures and Improv - Co. Owned	390.1	46,986,710	2.30%	1,080,694	1,340,702	(260,008)	(146,279)	5
6	Structures and Improv - Leasehold	390.2	637,178	12.31%	78,437	223,486	(145,050)	(81,604)	6
7	Office Furniture and Fixtures	391	8,770,515	6.67%	584,993	759,939	(174,946)	(98,424)	7
8	Computer Software and Hardware	391.1	23,455,353	19.80%	4,644,160	4,828,518	(184,359)	(103,719)	8
9	Transportation Equipment - Light	392.11	516,464	10.13%	52,318	318,842	(266,524)	(149,945)	9
10	Transportation Equipment - Heavy	392.12	0	6.00%	0	1,673	(1,673)	(941)	10
11	Transportation Equipment - Aircraft	392.21	344,594	4.00%	13,784	328,854	(315,071)	(177,257)	11
12	Stores Equipment	393	34,168	6.67%	2,279	4,205	(1,926)	(1,083)	12
13	Tool, Shop, and Garage Equip.	394	1,317,387	6.67%	87,870	86,904	966	543	13
14	Laboratory Equipment	395	1,540,478	5.00%	77,024	71,884	5,140	2,892	14
15	Power-Operated Equipment	396	259,442	5.67%	14,710	14,710	(0)	(0)	15
16	Communication Equipment	397	7,817,989	6.67%	521,460	519,088	2,372	1,334	16
17	Telemetry Equipment	397.2	488,624	16.67%	81,454	93	81,360	45,773	17
18	Miscellaneous Equipment	398	5,336,899	6.67%	355,971	310,127	45,844	25,791	18
19	Total General Plant		$ 101,091,203		$ 7,595,153	$ 8,809,029	$ (1,213,875)	$ (682,920)	19
20	Total Depreciation		$ 100,454,025		$ 7,516,717	$ 8,585,542	$ (1,068,825)	$ (601,316)	20
21	Total Amortization		394,296,851		22,084,850	15,591,724	6,493,126	3,653,002	21
22	Total Depreciation and Amortization		$ 494,750,876		$ 29,601,567	$ 24,177,266	$ 5,424,301	$ 3,051,686	22
23	AZ 4-Factor		56.26%					Sch C-2, Sh 2, Col (d)	23

[1] WP B-2, Adj. 13, Sh 7, Ln 560(n) + WP B-2, Adj. 19, Sh 5, Ln (f)

SOUTHWEST GAS CORPORATION
ARIZONA
DEPRECIATION AND ANNUALIZATION EXPENSE AT NEW RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 13

Line No.	Description	Account Number	Gas Plant as Adjusted at 8/31/2021	Depreciation/ Amortization New Rates	Adjusted Depreciation/ Amortization	Annualized Depreciation/ Amortization	Adjustment	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			WP B-2, Sh 1, Col (e)	No study filed	(c) * (d)	Sch C-2, Adj. 13, Sh 1 Col(e)	(e) - (f)	
	Intangible Plant							
1	Organization	301	$ 85,175	Amortized	$ 0	$ 0	$ 0	1
2	Franchise and Consents	302	2,607,704	Amortized	84,750	84,750	0	2
3	Miscellaneous Intangible	303	1,968,623	Amortized	0	0	0	3
4	Total Intangible Plant		$ 4,661,502		$ 84,750	$ 84,750	$ 0	4
	Storage Plant							
5	Land and Land Rights	360	$ 1,772,673	N/A	$ 0	$ 0	$ 0	5
6	Structures and Improvements	361	14,907,302	4.75%	708,097	708,097	0	6
7	Gas Holders	362.0	32,984,650	4.75%	1,566,771	1,566,771	0	7
8	Vaporizing Equipment	363.2	9,108,497	4.75%	432,654	432,654	0	8
9	Compressor Maintenance	363.3	7,785,900	4.75%	369,830	369,830	0	9
10	Other Equipment	363.5	10,395,454	4.75%	493,784	493,784	0	10
11	Total Storage Plant		$ 76,954,475		$ 3,571,136	$ 3,571,136	$ 0	11
	Distribution Plant							
12	Land and Land Rights	374.1	$ 732,082	N/A	$ 0	$ 0	$ 0	12
13	Rights of Way	374.2	3,700,699	1.37%	50,700	50,700	0	13
14	Structures and Improvements	375	110,557	3.35%	3,704	3,704	0	14
15	Mains	376	2,637,793,932	1.81%	47,744,070	47,744,070	0	15
16	Measuring and Reg. Stations	378	100,018,050	3.87%	3,870,699	3,870,699	0	16
17	Services	380	1,272,833,677	2.82%	35,893,910	35,893,910	0	17
18	Meters	381	339,693,332	4.15%	14,097,273	14,097,273	0	18
19	Industrial Measuring and Reg. Sta.	385	13,902,414	1.78%	247,463	247,463	0	19
20	Miscellaneous Equipment	387	432,098	0.00%	0	0	0	20
21	Total Distribution Plant		$ 4,369,216,840		$ 101,907,818	$ 101,907,818	$ 0	21
	General Plant							
22	Land and Land Rights	389	$ 17,385,788	N/A	$ 0	$ 0	$ 0	22
23	Structures and Improv - Co. Owned	390.1	81,972,010	2.79%	2,287,019	2,287,019	0	23
24	Structures and Improv - Leasehold	390.2	125,749	Amortized	6,879	6,879	0	24
25	Office Furniture and Fixtures	391	6,111,146	7.29%	445,503	445,503	0	25
26	Computer Software and Hardware	391.1	11,080,676	21.94%	2,431,100	2,431,100	0	26
27	Transportation Equipment - Light	392.11	37,010,331	14.37%	5,318,385	5,318,385	0	27
28	Transportation Equipment - Heavy	392.12	22,098,330	4.07%	899,402	899,402	0	28
29	Stores Equipment	393	4,143,820	3.73%	154,564	154,564	0	29
30	Tool, Shop, and Garage Equip.	394	20,957,816	10.39%	2,177,517	2,177,517	0	30
31	Laboratory Equipment	395	542,420	5.48%	29,725	29,725	0	31
32	Power-Operated Equipment	396	10,108,170	3.46%	349,743	349,743	0	32
33	Communication Equipment	397	7,417,906	-1.11%	(82,339)	(82,339)	0	33
34	Telemetry Equipment	397.2	9,312	21.96%	2,045	2,045	0	34
35	Miscellaneous Equipment	398	4,828,732	6.38%	308,073	308,073	0	35
36	Total General Plant		$ 223,792,206		$ 14,327,615	$ 14,327,615	$ 0	36
37	Total Depreciation		$ 4,669,837,772		$ 119,799,690	$ 119,799,690	$ 0	37
38	Total Amortization		4,787,250		91,629	91,629	0	38
39	Total Depreciation and Amortization		$ 4,674,625,023		$ 119,891,319	$ 119,891,319	$ 0	39
							Sch C-2, Sh 2, Col (d)	

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES OTHER THAN INCOME ADJUSTMENT
ADJUSTMENT NO. 14

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Adjusted Net Plant in Service	Sch B-2, Sh 1, Ln 11(e)	$	3,139,900,728	1
2	Add: Materials and Supplies	Sch B-5, Sh 3, Ln 16(f)		30,847,268	2
3	Less: Transportation Equipment	[1]		(39,799,404)	3
4	Less: Land Rights	[2]		(18,117,870)	4
5	Estimated Full Cash Value	Sum Lns 1-4	$	3,112,830,723	5
6	2022 Assessment Ratio	Company Records		17.50%	6
7	Assessed Value	Ln 5 * Ln 6	$	544,745,376	7
8	Composite Property Tax Rate	Company Records		12.66%	8
9	Annualized Property Taxes	Ln 7 * Ln 8	$	68,964,765	9
10	Capitalized Property Taxes	Company Records		(2,399,031)	10
11	Annualized Property Tax Expense after Cap.	Ln 9 + Ln 10	$	66,565,734	11
12	Add: Salt River Tribe Assessment	Company Records		30,813	12
13	Adjusted Annualized Property Tax Expense	Ln 11 + Ln 12	$	66,596,547	13
14	Recorded Property Tax Expense	Sch C-1, Sh 15, Ln 1(c)		50,798,652	14
15	Adjustment	Ln 13 - Ln 14	$	15,797,895	15
16	Recorded Miscellaneous Taxes	Company Records	$	114,054	16
17	Adjusted Miscellaneous Taxes	Company Records		108,421	17
18	Adjustment	Ln 17 - Ln 16	$	(5,633)	18
19	Adjusted Property Tax Deferral			2,295,887	
20	Total Taxes Other Than Income Adjustment	Ln 15 + Ln 18	$	18,088,148	20
				Sch C-2, Sh 2, Col (e)	

Explanation:
To annualize Property Tax Expense to reflect adjusted investment requested in this GRC and to adjust misc. taxes to remove items expensed during the test year that should not be collected through base rates.

[1] Adjusted balance of Accounts 392.11 and 392.12 net of accumulated depreciation.
[2] Adjusted balance of Accounts 374.1 and 389.

SOUTHWEST GAS CORPORATION
ARIZONA
ANNUALIZE INSURANCE EXPENSE
ADJUSTMENT NO. 15

Line No.	Description	Account Number	Recorded	Current Monthly Premium	Annualized	Adjustment	MMF Allocatin	Adjustment After MMF Allocation	Arizona Allocation Factor	Allocated to AZ	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)					
			Company Records	Company Records	(d) * 12	(e) - (c)					
1	Property	924	$ 1,036,581	$ 99,033	$ 1,188,393	$ 151,812	11.05%	135,033	57.02%	$ 76,995	1
2	Commercial General Liability	925	$ 11,043,364	$ 1,101,354	$ 13,216,249	$ 2,172,885	4.19%	2,081,810	56.26%	$ 1,171,216	2
3	D & O Liability	925	787,573	58,502	702,027	(85,546)	4.19%	(81,960)	56.26%	(46,110)	3
4	Total		$ 12,867,518	$	$ 15,106,669	$ 2,239,151		2,134,882		$ 1,202,101	4
										Sch C-2, Sh 2, Col (k)	

SOUTHWEST GAS CORPORATION
ARIZONA
REGULATORY AMORTIZATIONS AND ACQUISITION ADJUSTMENT
ADJUSTMENT NO. 16

Line No.	Description	Reference	Account Number	Amount	Line No.
	(a)	(b)	(c)	(d)	
1	Recorded Regulatory Amortization	Company Records	407.3	$ 2,673,464	1
	Add Items To Be Amortized				
2	COVID-19 Late Fees Waived and Suppressed	WP C-2, Adj. 16, Sh 1		847,717	2
3	LNG Deferral Amortizaton	WP C-2, Adj. 16, Sh 1		3,983,884	3
4	COYL Regulatory Amortization Balance	WP C-2, Adj. 16, Sh 1		348,902	4
5	VSP Regulatory Amortization Balance	WP C-2, Adj. 16, Sh 1		1,044,601	5
6	Subtotal New Amortizations	Sum Lns 2-6		$ 6,225,105	6
7					7
8	Remove Test Year Expense Collected Through a Surcharge				8
9	TRIMP/DOT	Company Records		$ (1,146,342)	9
10	DSM	Company Records		(3,702,079)	10
11	Subtotal Items to be Removed	Ln 8 + Ln 9	407.3	$ (4,848,421)	11
12					12
13	Adjustment	Ln 5 + Ln 10	407.3	$ 1,376,684	13
14				Sch C-2, Sh 2,	14
15				Col (g)	15
16					16
17	Adjusted Regulatory Amortizations	Ln 1 + Ln 12	407.3	$ 4,050,147	17
18					18
19	GCU Acquisition Adjustment	WP C-2, Adj. 16, Sh 1	406.0	$ 318,752	

Explanation:
To adjust regulatory amortizations by removing the portion of expense related to surcharges since the offsetting revenues are not included in revenue at present rates, add new regulatory amortizations.

SOUTHWEST GAS CORPORATION
ARIZONA
CORPORATE HEADQUARTERS ADJUSTMENTS - EXPENSES
ADJUSTMENT NO. 17

Line No.	Description	Reference	Account Number	Amount
	(a)	(b)	(c)	(d)
1	Test Year Durango Maintenance Expense	Company Records	935	$ 676,188
2	Remove: Durango Maintenance Expense allocated to Centuri [1]	Ln 1 * (-11%)		$ (74,381)
3	Remove: Spring Mountain Maintenance Expense [2]	Company Records	935	(2,795,458)
4	Add: Ongoing Durange Maintence Expense [3]	Company Records	935	283,368
5	Adjustment	Ln 2 + Ln 3 + Ln 4		$ (2,586,471)
6	Less: MMF Allocation	Sch C-1, Sh 18		4.19%
7	Adjustment after MMF Allocation	Ln 4 * (1 - Ln 5)		$ (2,478,060)
8	Arizona 4-Factor	Sch C-1, Sh 17		56.26%
	Adjustment Allocated to Arizona	Ln 6 * Ln 7		$ (1,394,145)
				Sch C-2, Col (h)

[1] To remove 11% of Test Year Durango campus maintenance expenses for allocation to Centuri.
[2] To remove Test Year Spring Mountain campus maintenance expenses.
[3] To Add in additional ongoing Durango maintenance expense

SOUTHWEST GAS CORPORATION
ARIZONA
SAP AND CSS O&M ADJUSMENT
ADJUSTMENT NO. 18

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Test Year SAP O&M	Company Records	$	9,679,064	1
2	Test Year CSS O&M	Company Records		3,520,387	2
3	Total Recorded	Ln 1 + Ln 2	$	13,199,451	3
4	Arizona Factor IV Allocation			53.31%	4
5	Recorded SAP and CSS O&M Allocated to AZ	Ln 3 * Ln 4	$	7,036,818	5
6	Ongoing SAP O&M	Company Records	$	5,583,733	6
7	Ongoing CSS O&M	Company Records		2,059,495	7
8	Total Ongoing	Ln 6 + Ln 7	$	7,643,228	8
9	Arizona Factor IV Allocation			53.31%	9
10	Ongoing SAP and CSS O&M Allocated to AZ	Ln 8 * Ln 9	$	4,074,715	10
11	Adjustment to Test Year Expenses	Ln 10 - Ln 5	$	(2,962,103)	11
12	Plus: AZ Allocation of Incremental SAP O&M	Company Records	$	6,897,735	12

SOUTHWEST GAS CORPORATION
ARIZONA
GRAHAM COUNTY UTILITIES (GCU) EXPENSES
ADJUSTMENT NO. 20

Line No.	Description	Account Number	Estimated Amount	Line No.
	(a)	(b)	(c)	
1	Distribution		Company Records	1
2	Operation Supervision and Engineering	870	99,225	2
3	Operation Mains and Services	874	140,500	3
4	Operation Meter and House Regulator	878	106,885	4
5	Customer Installation	879	3,000	5
6	Other	880	38,000	6
7	Maintenance Supervision and Engineering	885	15,265	7
8	Maintenance of Mains	887	266,436	8
9	Maintenance of Measuring and Reg. Station Eq.	889	2,000	9
10	Maintenance of Services	892	222,344	
11	Maintenance of Meters and House Regulators	893	2,000	
12	Total Distribution		$ 895,655	
13	Customer Accounts			
14	Meter Reading	902	18,000	
15	Customer Records and Collection	903.0	0	
16	Total Customer Accounts		18,000	
17	Total GCU O&M Adjustment		**$** 913,655	17
			Sch C-2, Sh 2, Col (k)	

Explanation: Adjustment to include the O&M costs related to the Graham County Utility acquistion in Docket No. G-0155
Depreciation expense is calculated in C-2 Depreciation & Amortization

SOUTHWEST GAS CORPORATION
ARIZONA
VARIABLE PAY NORMALIZATION
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
ADJUSTMENT NO. 21

Line No.	Description		Reference	Account Number		Amount	Line No.
	(a)		(b)	(c)		(d)	
1	2019 Performance Share Plan Expense	[2]	Company Records	920		2,759,491	1
2	2020 Performance Share Plan Expense	[3]	Company Records	920		2,319,020	2
3	2021 Performance Share Plan Expense	[4]	Company Records	920		3,167,031	3
4	3-Year Average		Average Ln 1 - Ln 3		$	2,748,514	4
5	2019 Restricted Stock Plan Expense	[2]	Company Records	920	$	2,573,195	5
6	2020 Restricted Stock Plan Expense	[3]	Company Records	920	$	2,537,090	6
7	2021 Restricted Stock Plan Expense	[4]	Company Records	920		2,973,781	7
8	3-Year Average		Average Ln 5 - Ln 7		$	2,694,689	8
9	Management Incentive Plan [1]		Company Records		$	10,336,200	9
10	Less: Non-Utility Measure - PS		Company Records	920	$	(251,049)	10
11	Less: Non-Utility Measure - RSU		Company Records	920		(142,605)	11
12	Less: Non-Utility Measure - MIP		Company Records	920	$	(240,228)	12
13	Less: Non-Utility Measure Total		Ln 10 + Ln 11 + Ln 12		$	(633,882)	13
14	Total Employee Variable Pay		Ln 4 + Ln 8 +Ln 9 +Ln 13		$	15,145,520	14
15	Recorded Employee Variable Pay		Company Records	920		15,871,775	15
16	Adjustment		Ln 14 - Ln 15		$	(726,255)	16
17	Less: MMF Allocation		Stmt N, Sh 10, Ln 7(i)+(j)			4.19%	17
18	Adjustment after MMF Allocation		Ln 16 * (1 - Ln 17)		$	(695,814)	18
19	AZ 4-Factor		Stmt N, Sh 8, Ln 9(g)			56.26%	19
20	Adjustment Allocated to AZ		Ln 18 * Ln 19	920	$	(391,462)	20
						Sch C-2, Sh 1 Col (b)	

Purpose: to normalize employee variable pay based on current plans.

[1] Based on three year average of awarded percent of target of 120.3 percent on test year salaries of eligible participants.

[2] For the 12 months ended August 31, 2019.

[3] For the 12 months ended August 31, 2020.

[4] For the 12 months ended August 31, 2021.

SOUTHWEST GAS CORPORATION
ARIZONA
INTEREST ON CUSTOMER DEPOSITS
ADJUSTMENT NO. 22

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Customer Deposits in Rate Base	Sch B-6, Sh 1, Ln 16(c)	$	33,750,043	1
2	Customer Deposits Interest Rate	US Treasury 1Y CMT at 11/10/2021		0.11%	2
3	Adjusted Interest on Customer Deposits	Ln 1 * Ln 2	$	37,125	3
4	Recorded Interest on Customer Deposits	Company Records		803,794	4
5	Adjustment	Ln 3 - Ln 4	$	(766,669)	5
				Sch C-2, Sh 2 Col (m)	

Explanation:
This adjustment also synchronizes interest on customer deposits expense with the balance of customer deposits included as a rate base reduction.

SOUTHWEST GAS CORPORATION
ARIZONA
BILL PROCESSING EXPENSE ADJUSTMENT
ADJUSTMENT NO. 23

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Annualized Outsourced Bill Processing Cost	Company Estimates	$	9,500,000	1
2	Recorded Bill Processing Cost	Company Records		8,963,248	2
3	Adjustment	Ln 1 - Ln 2	$	536,753	3
	AZ Factor IV			53.31%	
4	Adjustment	Ln 3 - Ln 4	$	286,150	4
				Sch C-2, Sh 2	
5				Col (n)	5

Explanation:

Explanation: Adjustment to include costs associated with the outsourcing of the bill processing function not included in the test year. See Rate Base Adjustment No. 23, which removes the associated assets no longer in use.

SCHEDULE C-3

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF GROSS REVENUE CONVERSION FACTOR

Line No.	Description	Reference		Amount	Line No.
	(a)	(b)		(c)	
1	Gross Operating Revenues		$	1,000.00	1
2	Less: Uncollectibles	Sch C-2, Adj. 7, Sh 1		0.2145%	2
3	Subtotal	Ln 1 * (1 - Ln 2)	$	997.85	3
4	Less: State Income Tax	Sch C-3, Sh 2, Ln 1(c)		4.9000%	4
5	Subtotal	Ln 3 * (1 - Ln 4)	$	948.96	5
6	Less: Federal Income Tax	Sch C-3, Sh 2, Ln 3(c)		19.9710%	6
7	Total	Ln 5 - (Ln 3 * Ln 6)	$	749.68	7
8	Gross Revenue Conversion Factor	Ln 1 / Ln 7		1.3339	8
				Sch A-1, Sh 1, Ln 7(e)	

SOUTHWEST GAS CORPORATION
ARIZONA
COMPUTATION OF STATE AND FEDERAL INCOME TAX RATES

Line No.	Description	Reference	Amount	Line No.
	(a)	(b)	(c)	
1	State Income Tax Rate	Current Statutory Rate	4.9000% Sch C-1, Sh 16, Ln 6	1
2	Federal Income Tax Rate	Current Statutory Rate	21.0000%	2
3	Effective Federal Income Tax Rate	Ln 2 * (1 - Ln 1)	19.9710% Sch C-1, Sh 16, Ln 13	3
4	Total Effective Income Tax Rate	Ln 1 + Ln 3	24.8710%	4

SCHEDULE D

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF CAPITAL AT AUGUST 31, 2021

ORIGINAL COST RATE BASE (OCRB) COST OF CAPITAL

Line No.	Description	Capital Ratio[1]	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	49.00%	4.15%	[2]	2.03%	1
2	Common Equity	51.00%	9.90%	[1]	5.05%	2
3	Total	100.00%			7.08%	3

[1] Reference Schedule D-4, Sheet 1 of 1
[2] Reference Schedule D-2, Sheet 1 of 6

FAIR VALUE RATE OF RETURN [3]

Line No.	Description	Capital Ratio	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	37.92%	4.15%	[2]	1.57%	1
2	Common Equity	39.46%	9.90%	[1]	3.91%	2
3	FVRB Increment Above OCRB	22.62%	0.00%	[3]	0.00%	3
4	Total	100.00%			5.48%	4

[1] Reference Schedule D-4, Sheet 1 of 1
[2] Reference Schedule D-2, Sheet 1 of 6
[3] FVROR is based on FVRB/OCRB = 1.29 - FVRB Increment Return = 0% - See the Prepared Direct Testimony of Company witness Ann E. Bulkley.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
NET CAPITAL AT AUGUST 31, 2021

Line No.	Description	Net System Balance at 8/31/2021	Adjustments	Pro Forma Net Capital Amounts	Capital Ratio	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Debt					
	Long-Term Debt:					
1	Debentures & Medium Term Notes	$ 2,379,482,958	$ -	$ 2,379,482,958	46.83%	1
2	Term Facilities	(411,464)	-	(411,464)	-0.01%	2
3	Clark County IDRB's	147,373,769		147,373,769	2.90%	3
4	Big Bear IDRB's	49,789,602		49,789,602	0.98%	4
5	Total Long-Term Debt	$ 2,576,234,865	$ -	$ 2,576,234,865	50.71%	5
	Equity					
6	Preferred Equity	$ -	-	$ -	0.00%	6
7	Common Equity	2,504,476,216	-	2,504,476,216	49.29%	7
8	Total Equity	$ 2,504,476,216	$ -	$ 2,504,476,216	49.29%	8
9	Total Capital	$ 5,080,711,081	$ -	$ 5,080,711,081	100.00%	9

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF CAPITAL AT AUGUST 31, 2022

ORIGINAL COST RATE BASE (OCRB) COST OF CAPITAL

Line No.	Description	Capital Ratio	Capital Cost		Weighted Cost of Capital	Line No.
	(a)	(b)	(c)		(d)	
1	Long-Term Debt	50.58%	3.70%	[1]	1.87%	1
2	Common Equity	49.42%	9.90%	[2]	4.89%	2
3	Total	100.00%			6.76%	3

[1] Reference Schedule D-2, Sheet 4 of 6
[2] Reference Schedule D-4, Sheet 1 of 1

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED NET CAPITAL AT AUGUST 31, 2022

Line No.	Description	Net System Balance at 8/31/2022	Adjustments	Pro Forma Net Capital Amounts	Capital Ratio	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Debt					
	Long-Term Debt:					
1	Debentures & Medium Term Notes	$ 2,702,680,323	$ -	$ 2,702,680,323	46.12%	1
2	Term Facilities	64,701,837	-	64,701,837	1.10%	2
3	Clark County IDRB's	147,219,947		147,219,947	2.51%	3
4	Big Bear IDRB's	49,643,501		49,643,501	0.85%	4
5	Total Long-Term Debt	$ 2,964,245,608	$ -	$ 2,964,245,608	50.58%	5
	Equity					
6	Preferred Equity	$ -	-	$ -	0.00%	6
7	Common Equity	2,896,476,216	-	2,896,476,216	49.42%	7
8	Total Equity	$ 2,896,476,216	$ -	$ 2,896,476,216	49.42%	8
9	Total Capital	$ 5,860,721,824	$ -	$ 5,860,721,824	100.00%	9

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF DEBT AT AUGUST 31, 2021

Line No.	Description	Net Principal Amount Outstanding	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	
1	Fixed Rate Debt [1]	$ 2,379,482,958	4.14%	$ 98,446,885	1
2	Variable Rate Debt [2]	(411,464)	-67.03%	275,801	2
3	Total Long-Term Debt	$ 2,379,071,494	4.15%	$ 98,722,686	3

[1] Reference Schedule D-2, Sheet 2 of 6
[2] Reference Schedule D-2, Sheet 3 of 6

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF LONG-TERM FIXED RATE DEBT
AT AUGUST 31, 2021

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Effective Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Debentures						
1	3.875% Notes, Due 2022	250,000,000	1,422,117	248,577,882.93	4.88%	12,119,794	1
2	8.0% Debenture, Due 2026	75,000,000	2,606,894	72,393,106.46	8.89%	6,434,455	2
3	3.70% Notes, Due 2028	300,000,000	2,339,423	297,660,576.67	3.84%	11,415,795	3
4	6.1% Notes, Due 2041	125,000,000	138,028	124,861,971.97	6.11%	7,628,804	4
5	4.875% Notes, Due 2043	250,000,000	2,399,283	247,600,717	4.95%	12,248,616	5
6	3.80% Notes, Due 2046	300,000,000	3,893,014	296,106,986	3.88%	11,493,114	6
7	4.15% Notes, Due 2049	300,000,000	3,412,606	296,587,394	4.22%	12,515,875	7
8	2.2% Notes, Due 2030	450,000,000	4,119,499	445,880,501	2.32%	10,328,911	8
9	3.18% Notes, Due 2051	300,000,000	3,788,868	296,211,133	3.25%	9,615,892	9
10	Total Debentures	$ 2,350,000,000	$ 24,119,731	$ 2,325,880,269	4.03%	$ 93,801,256	10
	Medium Term Notes						
11	7.78% MTN, Due 2022	$ 25,000,000	$ 8,375	$ 24,991,625	7.86%	$ 1,964,664	11
12	7.92% MTN, Due 2027	25,000,000	93,654	24,906,346	8.00%	1,993,131	12
13	6.76% MTN, Due 2027	7,500,000	-	7,500,000	6.88%	515,972	13
14	Total Medium Term Notes	$ 57,500,000	$ 102,029	$ 57,397,971	7.79%	$ 4,473,767	14
15	Unamortized Loss on Reacquired Debt[1]	$ -	$ 3,795,281	$ (3,795,281)	-4.53%	$ 171,862	15
16	Total Debentures and MTNs	$ 2,407,500,000	$ 28,017,042	$ 2,379,482,958	4.14%	$ 98,446,885	16
					Sch D-2, Sheet 1		
	Tax Exempt Clark County Amortization of Loss/(Gain) from:						
17	1999 Clark County, Series A	$ -	$ 322,894	$ (322,894)	-5.80%	$ 18,718	17
18	1999 Clark County, Series C	-	440,140	(440,140)	-5.80%	25,515	18
19	1999 Clark County, Series D	-	254,760	(254,760)	-5.80%	14,769	19
20	2003 Clark County, Series C	-	812,296	(812,296)	-6.06%	49,230	20
21	2003 Clark County, Series D	-	969,652	(969,652)	-6.06%	58,767	21
22	2003 Clark County, Series E	-	128,079	(128,079)	-6.06%	7,762	22
23	2004 Clark County, Series A	-	769,390	(769,390)	-7.79%	59,952	23
24	2004 Clark County, Series B	-	(2,753,010)	2,753,010	-8.16%	(224,736)	24
25	2005 Series A, Due 2034		840,027	(840,027)	-7.10%	59,647	25
26	2006 Clark County, Series A	-	(3,669,810)	3,669,810	-6.67%	(244,654)	26
27	Total Amortization of Loss/ (Gain) from retirement of Industrial Revenue Bonds	$ -	$ (1,885,582)	$ 1,885,582	-9.28%	$ (175,030)	27
28	Total Fixed-Rate Debt	$ 2,407,500,000	$ 26,131,460	$ 2,381,368,540	4.13%	$ 98,271,855	28

[1] In March 2010, the Company redeemed the $100 million, 7.70% Subordinated Debentures (Trust Originated Preferred Securities), due 9/15/2043, at par. The unamortized debt expenses were recorded as a reacquisition loss and will be amortized over the remaining life of the retired securities.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
VARIABLE RATE DEBT COST OF DEBT
AT AUGUST 31, 2021

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
1	Term Facility[1]	$ -	$ 411,464	$ (411,464)	-67.03%	$ 275,801	1
					Sch D-2, Sheet 1		
2	Big Bear 1993 Series A IDRB	$ 50,000,000	$ 210,398	$ 49,789,602	0.97%	$ 484,297	2
3	Clark Co.2003 Series A IDRB	$ 50,000,000	$ 1,326,151	$ 48,673,849	1.01%	493,284	3
4	Clark Co.2008 Series A IDRB	50,000,000	2,764,640	47,235,360	1.14%	540,818	4
5	Clark Co.2009 Series A IDRB	50,000,000	421,022	49,578,978	0.79%	392,671	5
6	Total Clark Co. Tax Exempt	$ 150,000,000	$ 4,511,813	$ 145,488,187	0.98%	$ 1,426,772	6

[1] Based on $150 million designated long-term of the $400 million Bank Facility

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF DEBT AT AUGUST 31, 2022

Line No.	Description	Net Principal Amount Outstanding	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	
1	Fixed Rate Debt [1]	$ 2,702,680,323	3.75%	$ 101,369,807	1
2	Variable Rate Debt [2]	64,701,837	1.53%	987,100	2
3	Total Long-Term Debt	$ 2,767,382,160	3.70%	$ 102,356,907	3

[1] Reference Schedule D-2, Sheet 5 of 6
[2] Reference Schedule D-2, Sheet 6 of 6

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF LONG-TERM FIXED RATE DEBT
AT AUGUST 31, 2022

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Effective Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Debentures						
1	8.0% Debenture, Due 2026	75,000,000	2,162,784	72,837,215.67	8.89%	6,473,929	1
2	3.70% Notes, Due 2028	300,000,000	2,020,601	297,979,399	3.84%	11,428,022	2
3	6.1% Notes, Due 2041	125,000,000	134,166	124,865,834	6.11%	7,629,040	3
4	4.875% Notes, Due 2043	250,000,000	2,337,411	247,662,589	4.95%	12,251,676	4
5	3.80% Notes, Due 2046	300,000,000	3,798,996	296,201,004	3.88%	11,496,763	5
6	4.15% Notes, Due 2049	300,000,000	3,346,035	296,653,965	4.22%	12,518,684	6
7	2.2% Notes, Due 2030	450,000,000	3,687,924	446,312,076	2.32%	10,338,908	7
8	3.18% Notes, Due 2051	300,000,000	3,713,250	296,286,750	3.25%	9,618,346	8
9	*2.75% Notes, Due 2032*[1]	600,000,000	4,914,829	595,085,171	2.85%	16,932,402	9
10	Total Debentures	$ 2,700,000,000	$ 26,115,998	$ 2,673,884,002	3.69%	$ 98,687,770	10
	Medium Term Notes						
11	7.92% MTN, Due 2027	25,000,000	80,260	24,919,740	8.00%	1,994,203	11
12	6.76% MTN, Due 2027	7,500,000	-	7,500,000	6.88%	515,972	12
13	Total Medium Term Notes	$ 32,500,000	$ 80,260	$ 32,419,740	7.74%	$ 2,510,175	13
14	Unamortized Loss on Reacquired Debt[2]	$ -	$ 3,623,419	$ (3,623,419)	-4.74%	$ 171,862	14
15	Total Debentures and MTNs	$ 2,732,500,000	$ 29,819,677	$ 2,702,680,323	3.75%	$ 101,369,807	15
					Sch D-2, Sheet 4		
	Tax Exempt Clark County Amortization of Loss/(Gain) from:						
16	1999 Clark County, Series A	$ -	$ 304,175	$ (304,175)	-6.15%	$ 18,718	16
17	1999 Clark County, Series C	-	414,625	(414,625)	-6.15%	25,515	17
18	1999 Clark County, Series D	-	239,992	(239,992)	-6.15%	14,769	18
19	2003 Clark County, Series C	-	763,066	(763,066)	-6.45%	49,230	19
20	2003 Clark County, Series D	-	910,885	(910,885)	-6.45%	58,767	20
21	2003 Clark County, Series E	-	120,317	(120,317)	-6.45%	7,762	21
22	2004 Clark County, Series A	-	709,438	(709,438)	-8.45%	59,952	22
23	2004 Clark County, Series B	-	(2,528,274)	2,528,274	-8.89%	(224,736)	23
24	2005 Series A, Due 2034		780,380	(780,380)	-7.64%	59,647	24
25	2006 Clark County, Series A	-	(3,425,156)	3,425,156	-7.14%	(244,654)	25
26	Total Amortization of Loss/ (Gain) from retirement of Industrial Revenue Bonds	$ -	$ (1,710,553)	$ 1,710,553	-10.23%	$ (175,030)	26
27	Total Fixed-Rate Debt	$ 2,732,500,000	$ 28,109,124	$ 2,704,390,876	3.74%	$ 101,194,777	27

[1] Projected issuance on March 15, 2022

[2] In March 2010, the Company redeemed the $100 million, 7.70% Subordinated Debentures (Trust Originated Preferred Securities), due 9/15/2043, at par. The unamortized debt expenses were recorded as a reacquisition loss and will be amortized over the remaining life of the retired securities.

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED VARIABLE RATE DEBT COST OF DEBT
AT AUGUST 31, 2022

Line No.	Description	Principal Amount Outstanding	Unamortized Debt Expense and Discount	Net Proceeds	Interest Rate	Cost of Debt	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
1	Term Facility[1]	$ 65,000,000	$ 298,163	$ 64,701,837	1.53%	$ 987,100	1
2	Big Bear 1993 Series A IDRB	$ 50,000,000	$ 356,499	$ 49,643,501	1.09%	$ 542,147	2
3	Clark Co.2003 Series A IDRB	$ 50,000,000	$ 1,435,410	$ 48,564,590	1.15%	559,293	3
4	Clark Co.2008 Series A IDRB	50,000,000	2,628,959	47,371,041	1.17%	553,503	4
5	Clark Co.2009 Series A IDRB	50,000,000	426,237	49,573,763	0.82%	407,358	5
6	Total Clark Co. Tax Exempt	$ 150,000,000	$ 4,490,606	$ 145,509,394	1.04%	$ 1,520,154	6

[1] Based on $150 million designated long-term of the $400 million Bank Facility

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF PREFERRED SECURITIES[1]
AT AUGUST 31, 2021

Line No.	Description	Net Proceeds Per Security	Number of Securities	Net Proceeds	Effective Cost	Annual Cost	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	

[1] The Company has no outstanding preferred securities

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
PROJECTED COST OF PREFERRED SECURITIES[1]
AT AUGUST 31, 2022

Line No.	Description	Net Proceeds Per Security	Number of Securities	Net Proceeds	Effective Cost	Annual Cost	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	

[1] The Company has no outstanding preferred securities and has no plan to issue preferred securities

SOUTHWEST GAS CORPORATION
TOTAL ARIZONA
COST OF COMMON EQUITY

Line No.	Description	Line No.
	(a)	
1	The cost of common equity requested is 9.90% associated with a target common equity ratio of 51%.	1
	[1] Prepared Direct Testimony of Southwest Gas witness Ann E. Bulkley	

SCHEDULE E

SOUTHWEST GAS CORPORATION
COMPARATIVE BALANCE SHEETS [1]

Line No.	Description	Balance at 08/31/2021 Arizona	Balance at 08/31/2021 Other	Balance at 08/31/2021 Total	Balance at 12/31/2020 Arizona	Balance at 12/31/2020 Other	Balance at 12/31/2020 Total	Balance at 12/31/2019 Arizona	Balance at 12/31/2019 Other	Balance at 12/31/2019 Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
		Company Records	(d) - (b)	Company Records	Company Records	(g) - (e)	Company Records	Company Records	(j) - (h)	Company Records	
	Assets and Other Debits										
	Utility Plant										
1	Utility Plant (101, 105, 114, 118)	$ 4,304,142,583	$ 3,992,516,934	$ 8,296,659,517	$ 4,067,430,894	$ 3,791,595,687	$ 7,859,026,581	$ 3,757,626,478	$ 3,588,423,294	$ 7,346,049,772	1
2	Completed Construction Not Classified (106)	187,109,065	242,738,630	429,847,694	315,366,411	198,216,440	513,582,851	361,959,643	93,820,694	455,780,337	2
3	Construction Work in Progress (107)	72,472,209	70,334,085	142,806,294	56,053,002	157,433,009	213,486,011	75,600,265	109,425,321	185,025,586	3
4	Total Utility Plant	$ 4,563,723,856	$ 4,305,589,648	$ 8,869,313,505	$ 4,438,850,307	$ 4,147,245,136	$ 8,586,095,443	$ 4,195,186,386	$ 3,791,669,309	$ 7,986,855,695	4
5	Less: Accumulated Provision for Depreciation and Amortization (108, 111 119)	1,522,111,122	1,379,613,799	2,901,724,920	1,483,109,478	1,328,848,583	2,811,958,061	1,440,122,801	1,256,536,633	2,696,659,434	5
6	Net Utility Plant	$ 3,041,612,735	$ 2,925,975,850	$ 5,967,588,585	$ 2,955,740,829	$ 2,818,396,553	$ 5,774,137,382	$ 2,755,063,585	$ 2,535,132,675	$ 5,290,196,260	6
	Other Property and Investments										
7	Northern California Surcharge (120)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	7
8	Non-Utility Property (121)	0	1,366,551	1,366,551	0	973,034	973,034	0	201,337	201,337	8
9	Non-Utility Accumulated Depreciation (122)	0	(394,485)	(394,485)	0	0	0	0	0	0	9
10	Investment in Subsidiary and Associated Companies (123, 123.1)	0	150,098,574	150,098,574	0	142,615,990	142,615,990	0	130,579,833	130,579,833	10
11	Other Investments (124)	0	0	0	0	0	0	0	0	0	11
12	Special Funds (125,128)	0	146,794,182	146,794,182	0	140,873,523	140,873,523	0	132,071,926	132,071,926	12
13	Total Other Property and Investments	$ 0	$ 297,864,822	$ 297,864,822	$ 0	$ 284,462,547	$ 284,462,547	$ 0	$ 262,853,097	$ 262,853,097	13
							142,615,990			130,579,833	
	Current and Accrued Assets										
14	Cash (131)	$ 0	$ 96,862,940	$ 96,862,940	$ 0	$ 21,193,470	$ 21,193,470	$ 0	$ (3,313,960)	$ (3,313,960)	14
15	Working Funds (135)	0	5,629	5,629	0	532,304	532,304	0	440,716	440,716	15
16	Temporary Cash Investments (136)	0	40,300	40,300	0	40,300	40,300	0	23,542,776	23,542,776	16
17	Notes and Accounts Receivables Less Accumulated Provision for Uncollectible Accounts (141-144)	6,828,076	67,103,410	73,931,486	6,109,361	140,751,125	146,860,486	11,875,477	139,443,747	151,319,224	17
18	Receivables from Associated Companies (145-146)	0	9,076,261	9,076,261	0	12,887,422	12,887,422	0	18,455,519	18,455,519	18
19	Materials and Supplies (151,154, 155, 163)	28,030,899	23,836,888	51,867,787	29,011,338	21,789,774	50,801,112	34,753,483	21,977,972	56,731,455	19
20	Liquefied Natural Gas Stored (164.1, 164.2)	2,254,397	7,361,434	9,615,831	2,192,993	7,036,397	9,229,391	0	7,687,730	7,687,730	20
21	Prepayments (165)	0	30,784,761	30,784,761	0	28,594,223	28,594,223	0	23,094,221	23,094,221	21
22	Interest and Dividends Receivable (171)	0	0	0	0	0	0	0	0	0	22
23	Accrued Utility Revenue (173)	0	38,000,000	38,000,000	0	82,400,000	82,400,000	0	79,100,000	79,100,000	23
24	Miscellaneous Current and Accrued Assets (174)	0	4,488,711	4,488,711	0	7,513,669	7,513,669	0	8,131,591	8,131,591	24
25	Total Current and Accrued Assets	$ 37,113,371	$ 277,560,335	$ 314,673,705	$ 37,313,693	$ 322,738,684	$ 360,052,377	$ 46,628,960	$ 318,560,312	$ 365,189,272	25
	Deferred Debits										
26	Unamortized Debt Discount and Expenses (181)	$ 0	$ 17,353,597	$ 17,353,597	$ 0	$ 14,216,812	$ 14,216,812	$ 0	$ 11,091,071	$ 11,091,071	26
27	Other Regulatory Assets (182)	23,886,019	428,804,442	452,690,461	30,521,983	478,075,186	508,597,169	45,273,380	442,871,671	488,145,052	27
28	Preliminary Survey and Investigative Charges (183)	0	1,899,865	1,899,865	0	1,830,588	1,830,588	0	2,046,642	2,046,642	28
29	Clearing Accounts (184)	300,359	1,003,010	1,303,368	101,727	996,588	1,098,315	234,154	534,275	768,429	29
30	Miscellaneous Deferred Debits (186)	5,598,015	5,105,233	10,703,248	6,072,385	6,025,052	12,097,438	5,920,991	5,567,662	11,488,654	30
31	Research and Development (188)	0	0	0	0	0	0	0	0	0	31
32	Loss on Reacquired Debt (189)	0	16,216,765	16,216,765	0	17,123,968	17,123,968	0	18,248,700	18,248,700	32
33	Accumulated Deferred Income Taxes (190)	0	0	0	0	0	0	0	22,218,656	22,218,656	33
34	Unrecovered Purchased Gas Costs (191)	192,961,907	47,106,135	240,068,042	(3,900,959)	(48,681,714)	(52,582,673)	(59,259,247)	42,915,909	(16,343,338)	34
35	Total Deferred Debits	$ 222,746,300	$ 517,489,046	$ 740,235,346	$ 32,795,137	$ 469,586,481	$ 502,381,618	$ (7,830,722)	$ 545,494,587	$ 537,663,865	35
36	Total Assets and Other Debits	$ 3,301,472,406	$ 4,018,890,052	$ 7,320,362,458	$ 3,025,849,658	$ 3,895,184,266	$ 6,921,033,924	$ 2,793,861,824	$ 3,662,040,671	$ 6,455,902,495	36

NOTE: The Arizona columns above reflect only those amounts separately identified in the Southwest Gas general ledger as pertaining solely to Arizona. Allocations are not included, thus the debits and credits in the Arizona columns do not balance. The financial statements appearing herein are unaudited, and were prepared solely for the purposes of complying with the filing requirements for this general rate case.

SOUTHWEST GAS CORPORATION
COMPARATIVE BALANCE SHEETS [1]

Line No.	Description	Balance at 08/31/2021 Arizona	Balance at 08/31/2021 Other	Balance at 08/31/2021 Total	Balance at 12/31/2020 Arizona	Balance at 12/31/2020 Other	Balance at 12/31/2020 Total	Balance at 12/31/2019 Arizona	Balance at 12/31/2019 Other	Balance at 12/31/2019 Total	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
		Company Records	(d) - (b)	Company Records	Company Records	(g) - (e)	Company Records	Company Records	(j) - (h)	Company Records	
	Liabilities and Other Credits										
	Proprietary Capital										
1	Common Stock Issued (201)	$ 0	$ 49,111,954	$ 49,111,954	$ 0	$ 49,111,954	$ 49,111,954	$ 0	$ 49,111,954	$ 49,111,954	1
2	Preferred Stock Issued (204)	0	0	0	0	0	0	0	0	0	2
3	Premium on Capital Stock (207)	0	1,589,015,133	1,589,015,133	0	1,421,677,667	1,421,677,667	0	1,240,416,354	1,240,416,354	3
4	Other Paid in Capital (208-211)	0	0	0	0	0	0	0	0	0	4
5	Reacquired Capital Stock (217)	0	0	0	0	0	0	0	0	0	5
6	Capital Stock Expense (214)	0	(11,333,051)	(11,333,051)	0	(11,333,051)	(11,333,051)	0	(11,333,051)	(11,333,051)	6
7	Retained Earnings (216)	0	961,502,611	961,502,611	0	835,145,862	835,145,862	0	819,751,614	819,751,614	7
8	Total Proprietary Capital	$ 0	$ 2,588,296,647	$ 2,588,296,647	$ 0	$ 2,294,602,432	$ 2,294,602,432	$ 0	$ 2,097,946,870	$ 2,097,946,870	8
	Long-Term Debt										
9	Bonds and Swaps (219, 221, 222)	$ 0	$ 2,550,223,583	$ 2,550,223,583	$ 0	$ 2,246,365,392	$ 2,246,365,392	$ 0	$ 1,927,348,615	$ 1,927,348,615	9
10	Other Long-Term Debt (223, 224, 226)	0	4,812,432	4,812,432	0	144,922,256	144,922,256	0	144,924,192	144,924,192	10
11	Other Preferred Securities (224.1)	0	0	0	0	0	0	0	0	0	11
12	Total Long-Term Debt	$ 0	$ 2,555,036,015	$ 2,555,036,015	$ 0	$ 2,391,287,648	$ 2,391,287,648	$ 0	$ 2,072,272,807	$ 2,072,272,807	12
	Current and Accrued Liabilities										
13	Notes Payable (231)	$ 0	$ 250,000,000	$ 250,000,000	$ 0	$ 57,000,000	$ 57,000,000	$ 0	$ 194,000,000	$ 194,000,000	13
14	Accounts Payable (232)	0	53,124,997	53,124,997	0	142,341,904	142,341,904	0	129,548,495	129,548,495	14
15	Payables to Associated Companies (233, 234)	0	8,740,904	8,740,904	0	12,709,449	12,709,449	0	19,076,085	19,076,085	15
16	Customer Deposits (235)	29,237,043	27,303,690	56,540,733	35,572,817	32,347,163	67,919,980	36,947,355	32,217,499	69,164,853	16
17	Taxes Accrued (236)	36,199,026	(7,854,491)	28,344,535	23,455,401	(794,228)	22,661,173	21,265,172	538,060	21,803,232	17
18	Interest Accrued (237)	216,538	26,789,196	27,005,735	1,115,078	19,380,021	20,495,099	1,160,489	20,095,729	21,256,219	18
19	Dividends Declared (238)	0	28,500,000	28,500,000	0	26,000,000	26,000,000	0	25,200,000	25,200,000	19
20	Tax Collections Payable (241)	5,915,986	4,530,083	10,446,069	8,702,508	7,900,736	16,603,244	10,244,942	8,006,091	18,251,033	20
21	Miscellaneous Current and Accrued Liabilities (242)	(6,369,130)	(115,550,506)	(121,919,636)	(6,147,398)	(39,709,087)	(45,856,485)	(6,428,667)	3,328,489	(3,100,177)	21
22	Obligations Under Capital Leases (243)	0	666,241	666,241	0	648,976	648,976	0	723,071	723,071	22
23	Total Current and Accrued Liabilities	$ 65,199,463	$ 275,583,874	$ 341,449,578	$ 62,698,407	$ 257,175,958	$ 320,523,341	$ 63,189,291	$ 432,010,449	$ 495,922,811	23
	Deferred Credits										
24	Customer Advances for Construction (252)	$ 64,730,332	$ 69,174,257	$ 133,904,589	$ 58,901,460	$ 62,936,930	$ 121,838,390	$ 50,486,860	$ 58,863,668	$ 109,350,528	24
25	Other Deferred Credits (253)	0	559,235,035	559,235,035	0	581,794,576	581,794,576	0	554,302,913	554,302,913	25
26	Other Regulatory Liabilities (254)	(5,105,112)	452,111,910	447,006,798	(981,247)	463,083,092	462,101,844	(816,528)	460,430,813	459,614,285	26
27	Accumulated Deferred Investment Tax Credit (255)	0	35,870	35,870	5,371,310	(5,300,899)	70,411	0	122,222	122,222	27
28	Unamortized Gain on Reacquired Debt (257)	0	7,286,906	7,286,906	0	7,644,375	7,644,375	0	8,180,577	8,180,577	28
29	Accumulated Deferred Income Taxes (282, 283)	399,486,367	218,353,893	617,840,260	368,421,376	210,571,846	578,993,222	353,498,996	189,578,658	543,077,654	29
30	Total Deferred Credits	$ 459,111,587	$ 1,306,197,872	$ 1,765,309,459	$ 431,712,899	$ 1,320,729,920	$ 1,752,442,818	$ 403,169,328	$ 1,271,478,852	$ 1,674,648,179	30
	Other Long-Term Liabilities										
31	Obligations Under Leases (227)	$ 0	$ 1,672,525	$ 1,672,525	$ 0	$ 1,586,120	$ 1,586,120	$ 0	$ 729,698	$ 729,698	
32	Injuries and Damages Reserve (228)	0	4,400,000	4,400,000	0	4,650,000	4,650,000	0	5,660,000	5,660,000	32
33	Provision for Rate Refunds (229)	0	0	0	0	0	0	0	662,565	662,565	33
34	Total Other Long-Term Liabilities	$ 0	$ 6,072,525	$ 6,072,525	$ 0	$ 6,236,120	$ 6,236,120	$ 0	$ 7,052,263	$ 7,052,263	34
35	Total Liabilities and Other Credits	$ 524,311,051	$ 6,731,186,933	$ 7,256,164,224	$ 494,411,305	$ 6,270,032,078	$ 6,765,092,360	$ 466,358,619	$ 5,880,761,241	$ 6,347,842,931	35

NOTE: The Arizona columns above reflect only those amounts separately identified in the Southwest Gas general ledger as pertaining solely to Arizona. Allocations are not included, thus the debits and credits in the Arizona columns do not balance. The financial statements appearing herein are unaudited, and were prepared solely for the purposes of complying with the filing requirements for this general rate case.

SOUTHWEST GAS CORPORATION
ARIZONA
COMPARATIVE INCOME STATEMENTS

Line No.	Description	Test Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-6, Sh 1	Sch E-6, Sh 1	Sch E-6, Sh 1	
1	Operating Revenue	$ 722,593,620	$ 603,406,659	$ 635,764,607	1
2	Operating Expenses and Taxes	600,877,287	492,428,775	518,160,685	2
3	Operating Income	$ 121,716,333	$ 110,977,884	$ 117,603,922	3
4	Other Income and Deductions	0	0	0	4
5	Income Before Interest Deductions	$ 121,716,333	$ 110,977,884	$ 117,603,922	5
6	Net Interest Deductions	50,243,557	55,794,384 [1]	52,165,576 [1]	6
7	Net Income	$ 71,472,776	$ 55,183,500	$ 65,438,346	7
		Sch A-2, Sh 1	Sch A-2, Sh 1	Sch A-2, Sh 1	

[1] Source: Company Records

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
STATEMENTS OF INCOME [1]

Line No.	Description	Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
	Utility Operating Income				
1	Operating Revenues (400)	$ 1,426,586,982	$ 1,350,585,255	$ 1,368,939,322	1
	Operating Expenses:				
2	Operating Expenses (401)	$ 721,900,525	$ 688,889,810	$ 736,814,181	2
3	Maintenance Expenses (402)	80,269,106	80,351,745	85,582,883	3
4	Depreciation Expense (403)	209,142,042	201,598,119	183,705,095	4
5	Amortization of Other Limited Term Gas Plant (404.3)	15,747,696	14,047,809	13,705,474	5
6	Amortization of Utility Plant Acquisition Adjustment (406)	0	(9,429)	(52,943)	6
7	Amortization of Property Losses (407.1)	0	0	0	7
8	Amortization of Regulatory Assets (407.3)	22,928,938	19,658,164	18,262,186	8
9	Amortization of Regulatory Liabilities (407.4)	0	0	0	9
10	Taxes Other than Income Taxes (408.1)	74,857,441	63,459,910	62,328,400	10
11	Income Taxes - Federal (409.1)	(3,383,810)	(2,653,675)	7,036,497	11
12	Income Taxes - Other (409.1)	(2,910,569)	74,296	663,136	12
13	Provision for Deferred Income Taxes (410.1)	131,419,339	111,069,227	143,308,288	13
14	Provision for Deferred Income Taxes - Credit (411.1)	(90,156,397)	(73,716,360)	(117,539,413)	14
15	Investment Tax Credit Adjustment - Net (411.4)	(51,811)	(51,811)	(245,634)	15
16	Total Operating Expenses	$ 1,159,762,501	$ 1,102,717,806	$ 1,133,568,149	16
17	Net Utility Operating Income	$ 266,824,481	$ 247,867,450	$ 235,371,174	17
	Other Income and Deductions				
	Other Income:				
18	Non-Utility Operating Income (415-418)	$ 0	$ 0	$ 0	18
19	Equity in Earnings of Subsidiary Companies (418.1)	(132,558)	85,328	7,160	19
20	Interest and Dividend Income (419)	4,026,323	4,274,681	6,975,599	20
21	Allowance for Equity Funds Used During Construction (419.1)	1,793,241	4,724,172	4,160,538	21
22	Amortization of Investment Tax Credits (420)	0	0	0	22
23	Miscellaneous Non-Operating Income (421)	653,530	469,397	336,181	23
24	Gain on Disposition of Property (421.1)	0	0	15,751	24
25	Total Other Income	$ 6,340,536	$ 9,553,578	$ 11,495,230	25
	Other (Income) Deductions				
26	Miscellaneous Amortizations (425)	$ 6,136	$ 0	$ 0	26
27	Miscellaneous (Income) Deductions (426)	(798,415)	(4,176,874)	(13,716,715)	27
28	Total Other (Income) Deductions	$ (792,279)	$ (4,176,874)	$ (13,716,715)	28
	Taxes Applicable to Other Income and Deductions				
29	Taxes Other than Income Taxes (408.2)	$ 62,507	$ 62,507	$ 15,213	29
30	Income Taxes (409.2)	(2,196,979)	(2,321,428)	(3,346,559)	30
31	Provision for Deferred Income Taxes (410.2, 411.2)	2,859,395	3,330,527	5,098,437	31
32	Investment Tax Credit Adjustment - Net (411.5)	0	0	0	32
33	Total Taxes Applicable to Other Income and Deductions	$ 724,923	$ 1,071,606	$ 1,767,091	33
34	Net Other Income and (Deductions)	$ 6,407,893	$ 12,658,846	$ 23,444,854	34
	Interest Charges				
35	Interest on Long-Term Debt (427)	$ 92,266,740	$ 94,279,198	$ 89,149,053	35
36	Amortization of Debt Discount and Expense (428)	3,227,181	3,039,305	2,699,124	36
37	Amortization of Gain on Reacquired Debt (429)	(536,203)	(536,203)	(536,203)	37
38	Other Interest Expense (430-431)	4,091,448	7,828,013	8,891,073	38
39	Total Interest Charges	$ 99,049,167	$ 104,610,314	$ 100,203,047	39
40	Allowance for Borrowed Funds Used During Construction (432)	(1,986,649)	(3,202,278)	(4,557,906)	40
41	Interest and Dividends (438)	0	0		41
42	Net Interest Charges	$ 97,062,517	$ 101,408,036	$ 95,645,141	42
43	Net Income	$ 176,169,857	$ 159,118,260	$ 163,170,886	43

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
COMPARATIVE STATEMENT OF CASH FLOWS
($ THOUSANDS)

Line No.	Description	Test Year Ended 08/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
	CASH FLOWS FROM OPERATING ACTIVITIES:				
1	Net Income	$ 190,401	$ 159,118	$ 163,171	1
2	Adjustments to reconcile net income to net cash				2
3	provided by operating activities:				3
4	Depreciation and amortization	247,819	235,295	215,620	4
5	Other Amortization	6,000	6,545	6,784	5
6	Change in deferred charges	(26,395)	(36,815)	(20,432)	6
7	Change in deferred credits	(61,588)	(63,339)	(13,357)	7
8	Change in deferred taxes	59,253	43,219	33,685	8
9	Change in accrued taxes	(15,478)	(1,526)	8,897	9
10	Undistributed earnings of subsidiaries	133	(85)	(7)	10
11	Allowance for funds used during construction	(1,754)	(4,724)	(4,161)	11
12	Change in deferred purchased gas costs	(316,621)	36,239	(58,491)	12
13	Change in receivable and payables	(28,759)	8,245	(37,872)	13
14	Other	(9,968)	43,731	73,523	14
15	Net cash provided by operating activities	$ 43,043	$ 425,903	$ 367,360	15
	CASH FLOWS FROM INVESTING ACTIVITIES:				
16	Construction expenditures	$ (600,036)	$ (693,961)	$ (778,721)	16
17	Investment in SWGT/UFCO	0	0	340	17
18	Change in customer advances	18,967	14,033	19,001	18
19	Miscellaneous inflows	674	674	0	19
20	Net cash used in investing activities	$ (580,395)	$ (679,254)	$ (759,380)	20
	CASH FLOWS FROM FINANCING ACTIVITIES:				
21	Change in notes payable	$ 250,000	$ (137,000)	$ 42,000	21
22	Dividends paid	(106,900)	(104,500)	(95,900)	22
23	Withholding remittance - share-based compensation	(1,254)	(2,736)	(1,858)	23
24	Issuance of long-term debt, net	297,318	446,508	297,222	24
25	Retirement of long-term debt	(125,000)	(125,000)	0	25
26	Change in credit facility	(5,000)	0	0	26
27	Capital contribution from parent	209,158	177,922	159,936	27
28	Other	(1,012)	(1,262)	(825)	28
29	Net cash provided by (used in) financing activities	$ 517,310	$ 253,932	$ 400,575	29
30	Change in cash and cash equivalents	$ (20,042)	$ 581	$ 8,555	30
31	Cash at beginning of period	133,950	40,489	31,934	31
32	Cash at end of period	$ 113,908	$ 41,070	$ 40,489	32
		Sch A-5, Sh 1	Sch A-5, Sh 1	Sch A-5, Sh 1	

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY AND PREFERRED SECURITIES

Line No.	Description	Preferred Securities		Common		Additional Paid-In Capital	Retained Earnings	Capital Stock Expense/AOCI	Line No.
		Shares/Units	Amount	# Shares	Amount				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
1	Balance December 31, 2018 [1]	0	$ 0	47,482,068	$ 49,111,944	$ 1,076,574,690	$ 717,154,837	$ (60,382,258)	1
2	Net Earnings	0	0				163,170,885		2
3	Equity Adjustment	0	0						3
4	Cash Dividend Declared - Common	0	0				(98,217,317)		4
5	Common Stock Issue	0	0	0	0	163,841,664	0	(6,102,178)	5
6	Balance December 31, 2019	0	$ 0	47,482,068	$ 49,111,944	$ 1,240,416,354	$ 782,108,405	$ (66,484,436)	6
7	Net Earnings	0	0				159,118,259		7
8	Equity Adjustment	0	0						8
9	Cash Dividend Declared - Common	0	0				(106,080,802)		9
10	Common Stock Issue	0	0	0	0	181,261,313	0	(5,983,223)	10
11	Balance December 31, 2020	0	$ 0	47,482,068	$ 49,111,944	$ 1,421,677,667	$ 835,145,862	$ (72,467,659)	11
12	Net Earnings	0	0				114,299,028		12
13	Cash Dividend Declared - Common	0	0				(56,517,076)		13
14	Common Stock Issue	0	0	0	0	152,091,842	0	3,858,191	14
15	Balance August 31, 2021	0	$ 0	47,482,068	$ 49,111,944	$ 1,573,769,509	$ 892,927,814	$ (68,609,468)	15

[1] Beginning in 2017, shares of Common Stock were distributed at the Holding Company level and not the Southwest Gas level. Common Stock shares issued at the Holding Company level for 2017 were 608,402 shares, in 2018 was 4,936,378 shares and for January 31, 2019, 50,425 shares.

SOUTHWEST GAS CORPORATION
ARIZONA
DETAIL OF UTILITY PLANT - NET ADDITIONS
FOR THE YEAR ENDED AUGUST 31, 2021

Line No.	Description	Account Number	Balance at 8/31/2021	Net Plant Additions (Deletions)	Balance at 12/31/2020	Line No.
	(a)	(b)	(c)	(d)	(e)	
			WP B-2, Sh 1, Col Company Records	(c) - (e)	Company Records	
	Intangible Plant					
1	Organization	301	$ 42,653	$ 0	$ 42,653	1
2	Franchise and Consents	302	2,607,704	7,519	2,600,185	2
3	Miscellaneous Intangible	303	1,968,623	0	1,968,623	3
4	Total Intangible Plant		$ 4,618,980	$ 7,519	$ 4,611,461	4
	Storage Plant					
5	Land and Land Rights	360	$ 1,772,673	$ 0	$ 1,772,673	5
6	Structures and Improvements	361	14,907,302	288,810	14,618,492	6
7	Gas Holders	362	32,984,650	639,036	32,345,614	7
8	Vaporizing Equipment	363.2	9,108,497	176,466	8,932,031	8
9	Compressor Equipment	363.2	7,785,900	150,842	7,635,059	9
10	Equipment	363.5	8,466,104	379,106	8,086,998	10
12	Total Storage Plant		$ 75,025,126	$ 1,634,259	$ 73,390,867	12
	Distribution Plant					
13	Land and Land Rights	374.1	$ 730,666	$ 325,000	$ 405,666	13
14	Rights of Way	374.2	3,700,699	233,638	3,467,061	14
15	Structures and Improvements	375	110,557	0	110,557	15
16	Mains	376	2,541,488,489	58,608,979	2,482,879,509	16
17	Measuring and Reg. Stations	378	94,788,559	2,235,510	92,553,049	17
18	Services	380	1,220,381,301	33,327,440	1,187,053,860	18
19	Meters	381	337,697,754	10,510,576	327,187,179	19
20	Industrial Measuring and Reg. Sta.	385	13,871,253	276,641	13,594,611	20
21	Miscellaneous Equipment	387	432,098	0	432,098	21
22	Total Distribution Plant		$ 4,213,201,374	$ 105,517,785	$ 4,107,683,590	22
	General Plant					
23	Land and Land Rights	389	$ 17,385,788	$ 0	$ 17,385,788	23
24	Structures and Improv - Co. Owned	390.1	71,583,751	26,159	71,557,592	24
25	Structures and Improv - Leasehold	390.2	125,749	0	125,749	25
26	Office Furniture and Fixtures	391	5,308,396	(3,153)	5,311,549	26
27	Computer Software and Hardware	391.1	11,080,676	(3,439,150)	14,519,825	27
28	Transportation Equipment - Light	392.11	29,344,254	1,898,490	27,445,764	28
29	Transportation Equipment - Heavy	392.12	22,098,330	915,891	21,182,440	29
30	Stores Equipment	393	1,174,565	0	1,174,565	30
31	Tool, Shop, and Garage Equip.	394	19,375,129	1,142,504	18,232,625	31
32	Laboratory Equipment	395	542,420	(1,803)	544,223	32
33	Power-Operated Equipment	396	9,989,860	(529,407)	10,519,267	33
34	Communication Equipment	397	5,709,206	(6,826)	5,716,031	34
35	Telemetry Equipment	397.2	9,312	(31,057)	40,369	35
36	Miscellaneous Equipment	398	4,678,732	1,323,132	3,355,601	36
37	Total General Plant		$ 198,406,168	$ 1,294,779	$ 197,111,388	37
38	Total Plant in Service		$ 4,491,251,647	$ 108,454,342	$ 4,382,797,305	38
39	Construction Work in Progress		72,472,209	17,448,892	55,023,317	39
40	Less: Accumulated Depreciation/Amort.		1,528,532,944	35,198,869	1,493,334,075	40
41	Total Net Plant		$ 3,035,190,913	$ 90,704,365	$ 2,944,486,547	41

SOUTHWEST GAS CORPORATION
SYSTEM ALLOCABLE
DETAIL OF UTILITY PLANT - NET ADDITIONS
FOR THE YEAR ENDED AUGUST 31, 2021

Line No.	Description	Account Number	Balance at 8/31/2021	Net Plant Additions (Deletions)	Balance at 12/31/2020	Line No.
	(a)	(b)	(c) WP B-2, Sh 5, Col (c)	(d) (c) - (e)	(e) Company Records	
	Intangible Plant					
1	Organization	301	$ 61,816	$ 0	$ 61,816	1
2	Miscellaneous Intangible	303	371,082,250	105,290,392	265,791,858	2
3	Total Intangible Plant		$ 371,144,066	$ 105,290,392	$ 265,853,674	3
	General Plant					
4	Land and Land Rights	389	$ 8,026,922	$ 1,802,975	$ 6,223,947	4
5	Structures and Improv - Co. Owned	390.1	75,861,022	17,126,716	58,734,306	5
6	Structures and Improv - Leasehold	390.2	2,347,609	0	2,347,609	6
7	Office Furniture and Fixtures	391	12,529,817	978,870	11,550,946	7
8	Computer Software and Hardware	391.1	22,420,424	(2,483,035)	24,903,459	8
9	Transportation Equipment - Light	392.11	3,040,958	(44,882)	3,085,840	9
10	Transportation Equipment - Heavy	392.12	0	(66,922)	66,922	10
11	Transportation Equipment - Aircraft	392.21	8,221,361	0	8,221,361	11
12	Stores Equipment	393	63,037	0	63,037	12
13	Tool, Shop, and Garage Equip.	394	1,320,531	7,699	1,312,833	13
14	Laboratory Equipment	395	1,540,478	78,533	1,461,944	14
15	Power-Operated Equipment	396	259,442	0	259,442	15
16	Communication Equipment	397	7,817,989	59,397	7,758,592	16
17	Telemetry Equipment	397.2	0	0	0	17
18	Miscellaneous Equipment	398	4,943,126	111,430	4,831,696	18
19	Total General Plant		$ 148,392,717	$ 17,570,782	$ 130,821,935	19
20	Total Plant in Service		$ 519,536,782	$ 122,861,174	$ 396,675,609	20
21	Construction Work in Progress		23,752,357	(90,330,855)	114,083,212	21
22	Less: Accumulated Depreciation/Amort.		267,490,156	12,667,567	254,822,590	22
23	Total Net Plant		$ 275,798,983	$ 19,862,752	$ 255,936,231	23

SOUTHWEST GAS CORPORATION
ARIZONA
COMPARATIVE DEPARTMENTAL OPERATING INCOME STATEMENTS

Line No.	Description	Test Year Ended 8/31/2021	Year Ended 12/31/2020	Year Ended 12/31/2019	Line No.
	(a)	(b)	(c)	(d)	
		Company Records	Company Records	Company Records	
	Revenues				
1	Residential	$ 484,833,503	$ 438,233,900	$ 457,314,549	1
2	Small Commercial	132,370,790	111,869,527	130,913,540	2
3	Large Commercial	20,048,084	16,284,029	20,451,971	3
4	Small Industrial	10,606,718	8,079,074	7,334,676	4
5	Commercial-Compressed Nat. Gas	4,739,470	3,050,608	1,727,151	5
6	Irrigation/Water Pumping	8,908,310	6,328,373	5,454,476	6
7	Industrial-Essential Agriculture	2,000,076	1,486,609	1,570,303	7
8	Procurement Sales	8,983,514	2,922,664	1,132,978	8
9	Other Gas Sales	835,048	942	938	9
10	Miscellaneous Service Revenues	8,148,823	7,855,019	9,936,727	10
11	Transportation of Gas for Others	40,560,946	36,523,262	38,835,233	11
12	Rent from Gas Property	0	0	0	12
13	Accrued Unbilled Revenues	1,627,000	519,000	1,142,000	13
14	Decoupling Revenues (DCA)	(5,041,387)	(31,702,191)	(42,289,176)	14
15	LIRA Program Recovery	739,258	259,164	(457,369)	15
16	Tax Reform Savings	3,233,467	1,696,679	2,696,610	16
17	Total Revenues	$ 722,593,620	$ 603,406,659	$ 635,764,607	17
	Operating Expenses				
18	Other Gas Supply and Gas Cost	$ 158,881,993	$ 78,423,845	$ 120,482,742	18
19	Storage	1,973,882	1,719,633	610	19
20	Distribution	109,198,435	105,081,823	107,169,480	20
21	Customer Accounts	28,049,178	25,974,852	25,815,539	21
22	Customer Service & Info.	188,705	282,497	278,979	22
23	Sales	3,425	6,757	10,909	23
24	Administrative and General	98,210,946	97,575,674	92,692,543	24
25	Depreciation and Amortization	128,686,852	120,780,950	108,128,934	25
26	Interest on Customer Deposits	803,794	2,018,375	2,212,712	26
27	Taxes Other than Income	51,219,448	42,165,241	42,062,310	27
28	Income Taxes - Federal	18,999,093	14,774,194	15,464,152	28
29	Income Taxes - State	4,661,537	3,624,934	3,841,775	29
30	Total Operating Expenses	$ 600,877,287	$ 492,428,775	$ 518,160,685	30
31	Operating Income	$ 121,716,333	$ 110,977,884	$ 117,603,922	31
		Sch E-2, Sh 1,	Sch E-2, Sh 1,	Sch E-2, Sh 1,	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Average Customers [1]	Sales (Therms) [1]	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	1,014,587	289,445,329	285	1
2	Multi-Family Residential Gas Service	G-6	37,635	6,174,345	164	2
3	Single-Family Low Income Residential Gas Service	G-10	42,094	11,067,918	263	3
4	Multi-Family Low Income Residential Gas Service	G-11	3,211	579,804	181	4
5	Special Residential Gas Service for Air Conditioning	G-15	50	55,580	1,112	5
6	Master-Metered Mobile Home Park Gas Service	G-20	97	1,255,848	12,947	6
	General Gas Service	G-25				
7	Small		17,112	3,604,882	211	7
8	Medium		16,380	46,695,857	2,851	8
9	Large-1		6,591	96,984,769	14,715	9
10	Large-2		322	26,018,206	80,697	10
11	Transportation Eligible		62	23,156,600	373,494	11
12	Optional Gas Service	G-30	2	12,580,646	6,290,323	12
13	Air Conditioning Gas Service	G-40	18	233,886	12,994	13
14	Street Lighting Gas Service	G-45	4	9,324	2,331	14
15	Compression Gas Service	G-50	25	48	2	15
	Gas Service for Compression on Customer's Premises	G-55				
16	Residential		28	10,686	382	16
17	Small		9	10,153	1,128	17
18	Large		13	9,142,972	703,306	18
19	Electric Generation Gas Service	G-60	18	1,566,814	87,045	19
20	Biogas and Renewable Natural Gas Service	G-65	1	380,867	380,867	20
21	Small Essential Agriculture User Gas Service	G-75	61	2,798,803	45,882	21
22	Natural Gas Engine Gas Service	G-80	415	17,322,965	41,717	22
23	Total Gas Sales		1,138,735	549,096,302	482	23
24	Transportation Service	B-1/T-1	542	174,682,424	322,292	24
25	Total Arizona		1,139,277	723,778,726	635	25

[1] Workpapers, Schedule H-2, Sheets 5-15.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2020

Line No.	Description	Schedule Number	Average Customers	Sales (Therms)	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	998,555	304,765,894	305	1
2	Multi-Family Residential Gas Service	G-6	37,481	6,417,448	171	2
3	Single-Family Low Income Residential Gas Service	G-10	35,429	9,645,440	272	3
4	Multi-Family Low Income Residential Gas Service	G-11	2,826	529,667	187	4
5	Special Residential Gas Service for Air Conditioning	G-15	54	57,765	1,073	5
6	Master-Metered Mobile Home Park Gas Service	G-20	100	1,385,315	13,830	6
	General Gas Service	G-25				
7	Small		16,106	3,359,106	209	7
8	Medium		16,224	42,694,991	2,632	8
9	Large-1		7,357	99,048,698	13,464	9
10	Large-2		387	28,708,660	74,231	10
11	Transportation Eligible		62	24,499,865	392,521	11
12	Optional Gas Service	G-30	2	15,735,254	7,867,627	12
13	Air Conditioning Gas Service	G-40	18	229,370	12,922	13
14	Street Lighting Gas Service	G-45	5	11,151	2,230	14
	Gas Service for Compression on Customer's Premises	G-55				
15	Residential		34	13,333	392	15
16	Small		9	10,162	1,129	16
17	Large		13	8,234,750	650,112	17
18	Electric Generation Gas Service	G-60	17	1,372,356	79,174	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0	0	19
20	Small Essential Agriculture User Gas Service	G-75	62	2,862,306	46,542	20
21	Natural Gas Engine Gas Service	G-80	407	15,986,286	39,262	21
22	Total Gas Sales		1,115,147	565,567,817	507	22
23	Transportation Service	B-1/T-1	538	162,711,424	302,578	23
24	Total Arizona		1,115,685	728,279,241	653	24

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
OPERATING STATISTICS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2019

Line No.	Description	Schedule Number	Average Customers	Sales (Therms)	Average per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	
1	Single-Family Residential Gas Service	G-5	977,461	306,952,959	314	1
2	Multi-Family Residential Gas Service	G-6	36,629	6,385,760	174	2
3	Single-Family Low Income Residential Gas Service	G-10	34,050	9,772,029	287	3
4	Multi-Family Low Income Residential Gas Service	G-11	2,765	539,234	195	4
5	Special Residential Gas Service for Air Conditioning	G-15	61	59,971	986	5
6	Master-Metered Mobile Home Park Gas Service	G-20	103	1,460,101	14,176	6
	General Gas Service	G-25				
7	Small		16,314	4,431,000	272	7
8	Medium		15,922	47,282,434	2,970	8
9	Large-1		7,242	111,936,463	15,458	9
10	Large-2		369	30,690,486	83,134	10
11	Transportation Eligible		64	22,132,683	344,925	11
12	Optional Gas Service	G-30	2	10,895,383	5,447,692	12
13	Air Conditioning Gas Service	G-40	18	248,950	14,226	13
14	Street Lighting Gas Service	G-45	5	11,106	2,221	14
	Gas Service for Compression on Customer's Premises	G-55				
15	Residential		38	18,421	490	15
16	Small		10	12,687	1,279	16
17	Large		15	4,575,256	303,332	17
18	Electric Generation Gas Service	G-60	18	3,309,060	186,426	18
19	Biogas and Renewable Natural Gas Service	G-65	0	0	0	19
20	Small Essential Agriculture User Gas Service	G-75	68	2,779,037	41,171	20
21	Natural Gas Engine Gas Service	G-80	391	14,591,345	37,358	21
22	Total Gas Sales		1,091,542	578,084,365	530	22
23	Transportation Service	B-1/T-1	535	171,537,722	320,531	23
24	Total Arizona		1,092,078	749,622,087	686	24

SOUTHWEST GAS CORPORATION
ARIZONA
TAXES CHARGED TO OPERATIONS
AS RECORDED AT AUGUST 31, 2021

Line No.	Description	Year Ended 12/31/2019	Year Ended 12/31/2020	Test Year Ended 8/31/2021	Line No.
	(a)	(b)	(c)	(d)	
		Sch E-6, Sh 1, Col (d), Lns 27-29	Sch E-6, Sh 1, Col (c), Lns 27-29	Sch E-6, Sh 1, Col (b), Lns 27-29	
	Federal Taxes				
1	Federal Income Tax	$ 15,464,152	$ 14,774,194	$ 18,999,093	1
	State Taxes				
2	State Income Tax	$ 3,841,775	$ 3,624,934	$ 4,661,537	2
	Local Taxes				
3	Property and Miscellaneous	$ 42,062,310	$ 42,165,241	$ 51,219,448	3

SOUTHWEST GAS CORPORATION
ARIZONA
NOTES TO FINANCIAL STATEMENTS

1. The Company uses the accrual method of accounting as prescribed by the Uniform System of Accounts.

2. The Company uses the straight-line method for calculating depreciation expense. Depreciation rates by major classification can be found in the Workpapers, Schedule C-2.

3. The Allowance for Funds Used During Construction (AFUDC) rate used in 2020 was 5.51% and 2021 is 0.96%.

4. The Notes to the Financial Statements included in the 2018-2020 Annual Reports can be found at the following location on the Company's website:

https://investors.swgasholdings.com/financial-information/annual-reports

SCHEDULE F

SOUTHWEST GAS CORPORATION
ARIZONA
PROJECTED INCOME STATEMENTS - PRESENT AND PROPOSED RATES

Line No.	Description	Test Year Ended 8/31/2021	Projected Year Present Rates 8/31/2022	Projected Year Proposed Rates 8/31/2022	Line No.
	(a)	(b)	(c)	(d)	
		Sch A-1, Sh 2, Col (c)		Sch A-1, Sh 2, Col (g)	
1	Operating Margin	$ 565,018,312	$ 575,753,660	$ 669,915,616	1
	Operating Expenses				
2	Other Gas Supply Expenses	$ 1,306,683	$ 1,337,991	$ 1,335,375	2
3	Storage	1,973,882	2,077,143	2,001,101	3
4	Distribution Expenses	109,198,435	112,940,612	111,324,695	4
5	Customer Accounts Expenses	28,049,178	27,520,241	27,166,834	5
6	Customer Service & Info. Expenses	188,705	174,307	167,925	6
7	Sales Expenses	3,425	(203)	(203)	7
8	Administrative and General Expenses	98,210,946	97,672,961	96,125,247	8
9	Depreciation and Amortization Expenses	128,686,852	137,392,359	140,860,975	9
10	Taxes Other than Income	51,219,448	53,165,787	69,307,596	10
11	Interest on Customer Deposits	803,794	803,794	37,125	11
12	Federal Income Taxes	18,999,093	18,458,219	26,239,221	12
13	State Income Taxes	4,661,537	4,528,830	8,225,262	13
14	Total Operating Expenses	$ 443,301,978	$ 456,072,041	$ 482,791,154	14
15	Operating Income	$ 121,716,335	$ 119,681,619	$ 187,124,462	15
16	Less: Interest Expense	50,243,557	50,243,557	53,726,452	16
17	Net Income	$ 71,472,777	$ 69,438,062	$ 133,398,010	17
			Sch A-2, Sh 1, Ln 5(f)	Sch A-2, Sh 1, Ln 5(g)	
18	Earnings per Share of Average Common Stock Outstanding [1]	N/A	N/A	N/A	18
19	Percent Return on Common Equity [1]	N/A	N/A	N/A	19

[1] Projections of earnings per share and return on common equity were not performed because these statistics do not pertain solely to Arizona.

SOUTHWEST GAS CORPORATION
TOTAL SYSTEM
COMPARATIVE STATEMENT OF CASH FLOWS
PROJECTED CHANGES IN FINANCIAL POSITION
($ THOUSANDS)

Line No.	Description	Test Year Ended 8/31/2021	Projected Year At Present Rates Year Ending [1] 8/31/2022	Projected Year At Proposed Rates Year Ending [1] 8/31/2022	Line No.
	(a)	(b) Sch E-3, Sh 1 Col (b)	(c)	(d)	
	CASH FLOWS FROM OPERATING ACTIVITIES:				
1	Net Income	$ 190,401	$ 190,401	$ 258,419	1
2	Adjustments to reconcile net income to net cash				2
3	provided by operating activities:				3
4	Depreciation and amortization	247,819	257,567	257,567	4
5	Other Amortization	6,000	6,000	6,000	5
6	Change in deferred charges	(26,395)	(26,395)	(26,395)	6
7	Change in deferred credits	(61,588)	(61,588)	(61,588)	7
8	Change in deferred taxes	59,253	59,253	59,253	8
9	Change in accrued taxes	(15,478)	(15,478)	(15,478)	9
10	Undistributed earnings of subsidiaries	133	133	133	10
11	Allowance for funds used during construction	(1,754)	(1,754)	(1,754)	11
12	Change in deferred purchased gas costs	(316,621)	(316,621)	(316,621)	12
13	Change in receivable and payables	(28,759)	(28,759)	(28,759)	13
14	Other	(9,968)	(9,968)	(9,968)	14
15	Net cash provided by operating activities	$ 43,043	$ 52,791	$ 120,809	15
			Sch A-5, Sh 1, Ln 1(e)	Sch A-5, Sh 1, Ln 1(f)	
	CASH FLOWS FROM INVESTING ACTIVITIES:				
16	Construction expenditures	$ (600,036)	$ (324,930)	$ (324,930)	16
17	Investment in SWGT/UFCO	0	0	0	17
18	Change in customer advances	18,967	18,967	18,967	18
19	Miscellaneous inflows	674	674	674	19
20	Net cash used in investing activities	$ (580,395)	$ (305,289)	$ (305,289)	20
			Sch A-5, Sh 1, Ln 2(e)	Sch A-5, Sh 1, Ln 2(f)	
	CASH FLOWS FROM FINANCING ACTIVITIES:				
21	Change in notes payable	$ 250,000	$ (250,000)	$ (250,000)	21
22	Dividends paid	(106,900)	(117,000)	(117,000)	22
23	Withholding remittance - share-based compensation	(1,254)	0	0	23
24	Issuance of long-term debt, net	297,318	600,000	600,000	24
25	Retirement of long-term debt	(125,000)	(275,000)	(275,000)	25
26	Change in credit facility	(5,000)	65,000	65,000	26
27	Capital contribution from parent	209,158	330,000	330,000	27
28	Other	(1,012)	0	0	28
29	Net cash provided by (used in) financing activities	$ 517,310	$ 353,000	$ 353,000	29
			Sch A-5, Sh 1, Ln 3(e)	Sch A-5, Sh 1, Ln 3(f)	
30	Change in cash and cash equivalents	$ (20,042)	$ 100,502	$ 168,521	30
31	Cash at beginning of period	133,950	113,908	113,908	31
32	Cash at end of period	$ 113,908	$ 214,410	$ 282,429	32

[1] Prepared based on year ended December 31 consistent with historical cash flows provided on Schedule E-3.

SOUTHWEST GAS CORPORATION
ARIZONA
CONSTRUCTION EXPENDITURES BY PROPERTY CLASSIFICATION
TEST YEAR AND PROJECTED YEARS

Line No.	Description	Test Year Ended 8/31/2021	Projected [2] Year Ending 8/31/2022	Year Ending 8/31/2023	Year Ending 8/30/2024	Line No.
	(a)	(b)	(c)	(d)	(e)	
	Intangible Plant					
1	Arizona Direct	$ 155,759	$ 15,000	$ 0	$ 20,000	1
2	System Allocable [1]	62,018,550	9,669,436	17,440,451	15,302,590	2
3	Total Intangible Plant	$ 62,174,308	$ 9,684,436	$ 17,440,451	$ 15,322,590	3
4	Storage					
5	Arizona Direct	1,475,544	$ 130,000	$ 0	$ 6,930,000	
6	System Allocable [1]	0	0	0	0	
7	Total Storage	1,475,544	$ 130,000	$ 0	$ 6,930,000	
	Distribution Plant					
8	Arizona Direct	$ 232,282,786	$ 294,518,378	$ 262,881,265	$ 303,412,870	8
9	System Allocable [1]	0				9
10	Total Distribution Plant	$ 232,282,786	$ 294,518,378	$ 262,881,265	$ 303,412,870	10
	General Plant					
11	Arizona Direct	$ 14,402,834	$ 16,557,225	$ 17,405,935	$ 23,773,848	11
12	System Allocable [1]	19,012,558	3,044,079	2,060,712	4,146,552	12
13	Total General Plant	$ 33,415,393	$ 19,601,304	$ 19,466,647	$ 27,920,400	13
14	Total Arizona Plant Construction	$ 329,348,031	$ 323,934,118	$ 299,788,363	$ 346,655,859	14

[1] After 4-Factor allocation to AZ. Schedule C-1,Sheet 17, Ln 9(c)

[2] Projections are based on budgets which are compiled on an annual basis.

SOUTHWEST GAS CORPORATION
ARIZONA
ASSUMPTIONS USED IN DEVELOPING PROJECTIONS

1. Customer Growth

Margin related to customer growth is anticipated to increase by 1.9% in the year following the test year.

2. Growth in Consumption and Customer Demand

Margin related to growth in consumption is anticipated to increase by 1.9% in the year following the test year.

3. Changes in Expenses

Operation and Maintenance Expenses – The actual amounts for the recorded test year were adjusted to give the annual effect for known and measurable changes occurring during the test year. The operation and maintenance expenses for the projected year were calculated by taking the adjusted test year and generally increasing the non-labor expenses by 3.8%.

Depreciation and Amortization Expenses – The actual amounts for the recorded test year were adjusted to annualize depreciation expense at the end of the test period plant balances, and to reflect depreciation expense on projected construction expenditures.

4. Construction Requirements, Including Production Reserves and Changes in Plant Capacity Additions to gas plant were based upon anticipated construction expenditures.

SCHEDULE G

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Rate Base									
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564
2	Total Common Systems Allocable Net Plant		$ 142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448
6	Other	1.1	0	0	0	0	0	0	0	0
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)
10	Other	1.1	0	0	0	0	0	0	0	0
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258
	Margin									
12	Net Operating Margin	Direct	$ 564,241,682	$ 401,324,683	$ 11,336,627	$ 712,032	$ 9,736,567	$ 31,952,797	$ 51,052,458	$ 12,906,300
13	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	4,752,048	134,236	8,431	115,290	378,350	604,507	152,822
14	Other Revenue	Various	8,262,618	6,913,105	773,100	770	133,954	208,691	135,781	30,615
15	Total Revenue		$ 579,185,433	$ 412,989,836	$ 12,243,963	$ 721,233	$ 9,985,811	$ 32,539,838	$ 51,792,746	$ 13,089,738
	Operating Expenses									
16	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)
17	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)
18	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)
19	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0
20	Regulatory Amortizations	Various	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)
21	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)
22	Total Operating Deductions		$ (448,132,011)	$ (335,800,084)	$ (11,852,192)	$ (366,441)	$ (6,564,024)	$ (34,902,935)	$ (27,151,366)	$ (8,969,424)
	Taxable Income									
23	Taxable Income before Interest Expense		$ 131,053,423	$ 77,189,751	$ 391,771	$ 354,792	$ 3,421,787	$ (2,363,096)	$ 24,641,380	$ 4,120,313
24	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
25	Total Taxable Income		$ 77,326,971	$ 36,151,796	$ (1,003,201)	$ 300,839	$ 2,610,946	$ (5,581,574)	$ 21,475,724	$ 3,125,599
	State Income Tax									
26	State Income Tax	4.90%	$ 3,789,022	$ 1,771,438	$ (49,157)	$ 14,741	$ 127,936	$ (273,497)	$ 1,052,310	$ 153,154
27	Total State Income Tax		$ 3,789,022	$ 1,771,438	$ (49,157)	$ 14,741	$ 127,936	$ (273,497)	$ 1,052,310	$ 153,154
	Federal Income Tax									
28	Federal Income Tax	19.97%	$ 15,442,969	$ 7,219,875	$ (200,349)	$ 60,080	$ 521,432	$ (1,114,696)	$ 4,288,917	$ 624,213
28	ARAM Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)
29	Total Federal Income Tax		$ 8,158,372	$ 1,655,670	$ (389,489)	$ 52,765	$ 411,493	$ (1,551,079)	$ 3,859,696	$ 489,343
30	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
31	Net Income		$ 119,106,029	$ 73,762,643	$ 830,416	$ 287,286	$ 2,882,358	$ (538,520)	$ 19,729,374	$ 3,477,816
32	Rate of Return on Rate Base		3.49%	2.84%	1.02%	8.16%	5.57%	-0.26%	9.57%	5.36%

SCHEDULE G-1
SHEET 1 OF 2

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	Rate Base										
1	Total Direct Net Plant		$ 3,971,364,293	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		$ 142,424,093	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin										
12	Net Operating Margin	Direct	$ 564,241,682	$ 33,502,947	$ 53,239	$ 7,725	$ 3,367,986	$ 2,500,772	$ 1,493,167	$ 4,294,383	12
13	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	396,705	630	91	39,880	29,611	17,680	50,849	13
14	Other Revenue	Various	8,262,618	41,861	21	90	2,755	651	1,434	19,789	14
15	Total Revenue		$ 579,185,433	$ 33,941,513	$ 53,891	$ 7,906	$ 3,410,621	$ 2,531,034	$ 1,512,282	$ 4,365,021	15
	Operating Expenses										
16	Operations & Maintenance Expense		$ (141,801,067)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	16
17	Administrative & General Expense	Total O&M	(96,125,247)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	17
18	Depreciation Expense	Deprec Exp	(136,545,019)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	18
19	Interest on Customer Deposits	8.0	(37,125)	0	0	0	0	0	0	0	19
20	Regulatory Amortizations	Various	(4,315,957)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	20
21	Taxes Other Than Income	1.1	(69,307,596)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	21
22	Total Operating Deductions		$ (448,132,011)	$ (17,225,734)	$ (32,025)	$ (11,758)	$ (1,822,732)	$ (1,523,816)	$ (596,847)	$ (1,312,633)	22
	Taxable Income										
23	Taxable Income before Interest Expense		$ 131,053,423	$ 16,715,779	$ 21,866	$ (3,851)	$ 1,587,889	$ 1,007,218	$ 915,435	$ 3,052,388	23
24	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	24
25	Total Taxable Income		$ 77,326,971	$ 14,343,202	$ 17,971	$ (5,372)	$ 1,352,691	$ 794,809	$ 833,931	$ 2,909,611	25
	State Income Tax										
26	State Income Tax	4.90%	$ 3,789,022	$ 702,817	$ 881	$ (263)	$ 66,282	$ 38,946	$ 40,863	$ 142,571	26
27	Total State Income Tax		$ 3,789,022	$ 702,817	$ 881	$ (263)	$ 66,282	$ 38,946	$ 40,863	$ 142,571	27
	Federal Income Tax										
28	Federal Income Tax	19.97%	$ 15,442,969	$ 2,864,481	$ 3,589	$ (1,073)	$ 270,146	$ 158,731	$ 166,544	$ 581,079	28
28	ARAM Federal	1.1	(7,284,597)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	28
29	Total Federal Income Tax		$ 8,158,372	$ 2,542,791	$ 3,061	$ (1,279)	$ 238,256	$ 129,931	$ 155,493	$ 561,720	29
30	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	30
31	Net Income		$ 119,106,029	$ 13,470,172	$ 17,924	$ (2,309)	$ 1,283,351	$ 838,341	$ 719,079	$ 2,348,097	31
32	Rate of Return on Rate Base		3.49%	8.69%	7.05%	-2.35%	8.35%	6.04%	13.52%	25.26%	32

SCHEDULE G-1
SHEET 2 OF 2

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PRESENT RATE SCHEDULES AT SYSTEM RATE OF RETURN
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
	Rate Base																	
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin																	
12	Net Operating Margin	Direct	$ 654,971,681	$ 492,641,786	$ 16,161,937	$ 588,896	$ 9,695,313	$ 47,751,195	$ 40,026,270	$ 13,029,455	$ 27,005,097	$ 48,077	$ 17,877	$ 2,791,944	$ 2,402,775	$ 932,242	$ 1,878,818	12
13	Other Revenue		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
14	Special Contract & G-30 & G-65 Margin	Net Op Margin	6,681,133	5,025,263	164,862	6,007	98,898	487,093	408,294	132,909	275,469	490	182	28,480	24,510	9,509	19,165	14
15	Late Charges	12.0	848,431	583,069	48,737	266	29,565	64,644	65,327	28,883	5,525	21	1	2,658	646	871	18,217	15
16	Service Establishment Charges	9.0	6,845,361	5,917,579	693,282	502	87,979	106,046	35,556	1,707	444	0	89	91	0	524	1,563	16
17	Reconnect / Reread Charges	9.0	100	86	10	0	1	2	1	0	0	0	0	0	0	0	0	17
18	Other Revenue - Labor	Net Op Margin	1,050	790	26	1	16	77	64	21	43	0	0	4	4	1	3	18
19	Other Revenue - Parts & Material	Net Op Margin	68	51	2	0	1	5	4	1	3	0	0	0	0	0	0	19
20	Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
21	Other Revenue - Returned Item Fee	13.0	567,609	411,576	31,048	0	16,389	37,936	34,797	0	35,825	0	0	0	0	37	0	21
22	Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
23	Other Revenue	Various	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
24	Total Revenue		$ 669,915,432	$ 504,580,200	$ 17,099,904	$ 595,673	$ 9,928,163	$ 48,446,997	$ 40,570,312	$ 13,192,975	$ 27,322,406	$ 48,589	$ 18,149	$ 2,823,177	$ 2,427,935	$ 943,185	$ 1,917,766	24
	Operating Deductions																	
25	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	25
26	Incremental Uncollectible Expense		(194,660)	(180,577)	(6,947)	(16)	(2,932)	(2,822)	(1,155)	(68)	(35)	(3)	(8)	(10)	(4)	(11)	(71)	26
27	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	27
28	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	28
29	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0	0	0	0	0	0	0	0	29
30	Regulatory Amortizations	Various	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	
31	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	31
32	Total Operating Deductions		$ (448,326,671)	$ (335,980,661)	$ (11,859,139)	$ (366,458)	$ (6,566,956)	$ (34,905,757)	$ (27,152,520)	$ (8,969,492)	$ (17,225,769)	$ (32,029)	$ (11,766)	$ (1,822,742)	$ (1,523,820)	$ (596,858)	$ (1,312,704)	32
	State Income Tax																	
33	Taxable Income before Interest Expense		$ 221,588,761	$ 168,599,539	$ 5,240,766	$ 229,216	$ 3,361,207	$ 13,541,240	$ 13,417,791	$ 4,223,483	$ 10,096,638	$ 16,560	$ 6,383	$ 1,000,434	$ 904,115	$ 346,326	$ 605,062	33
34	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,216,478)	(3,165,656)	(994,715)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	34
35	Total State Taxable Income		$ 167,862,309	$ 127,561,584	$ 3,845,794	$ 175,262	$ 2,550,365	$ 10,322,762	$ 10,252,135	$ 3,228,768	$ 7,724,061	$ 12,666	$ 4,862	$ 765,236	$ 691,705	$ 264,822	$ 462,285	35
36	State Income Tax	4.90%	$ 8,225,253	$ 6,250,518	$ 188,444	$ 8,588	$ 124,968	$ 505,815	$ 502,355	$ 158,210	$ 378,479	$ 621	$ 238	$ 37,497	$ 33,894	$ 12,976	$ 22,652	36
37	Total State Income Tax		$ 8,225,253	$ 6,250,518	$ 188,444	$ 8,588	$ 124,968	$ 505,815	$ 502,355	$ 158,210	$ 378,479	$ 621	$ 238	$ 37,497	$ 33,894	$ 12,976	$ 22,652	37
	Federal Income Tax																	
38	Taxable Income before Interest Expense		$ 221,588,761	$ 168,599,539	$ 5,240,766	$ 229,216	$ 3,361,207	$ 13,541,240	$ 13,417,791	$ 4,223,483	$ 10,096,638	$ 16,560	$ 6,383	$ 1,000,434	$ 904,115	$ 346,326	$ 605,062	38
39	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,216,478)	(3,165,656)	(994,715)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	39
40	Total Federal Taxable Income		$ 167,862,309	$ 127,561,584	$ 3,845,794	$ 175,262	$ 2,550,365	$ 10,322,762	$ 10,252,135	$ 3,228,768	$ 7,724,061	$ 12,666	$ 4,862	$ 765,236	$ 691,705	$ 264,822	$ 462,285	40
40	Federal Income Tax	19.97%	$ 33,523,782	$ 25,475,324	$ 768,044	$ 35,002	$ 509,333	$ 2,061,559	$ 2,047,454	$ 644,817	$ 1,542,572	$ 2,529	$ 971	$ 152,825	$ 138,140	$ 52,888	$ 92,323	40
41	ARAM Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	41
42	Total Federal Income Tax		$ 26,239,184	$ 19,911,119	$ 578,904	$ 27,686	$ 399,394	$ 1,625,176	$ 1,618,233	$ 509,947	$ 1,220,882	$ 2,001	$ 765	$ 120,936	$ 109,341	$ 41,837	$ 72,964	42
43	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	43
44	Net Income		$ 187,124,323	$ 142,437,902	$ 4,473,418	$ 192,942	$ 2,836,845	$ 11,410,249	$ 11,297,204	$ 3,555,327	$ 8,497,277	$ 13,938	$ 5,380	$ 842,002	$ 760,881	$ 291,513	$ 509,448	44
45	Rate of Return on Rate Base		5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	5.48%	45

SCHEDULE G-2
SHEET 1 OF 3

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Single-Family Residential	Multi-Family Residential	Master-Metered Mobile Home Park (MMMHP)	Small General	Medium General	Large-1 General	Large-2 General
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Rate Base									
1	Total Direct Net Plant		$ 3,971,364,293	$ 3,033,453,064	$ 103,113,829	$ 3,988,162	$ 59,935,943	$ 237,904,199	$ 233,999,704	$ 73,527,564
2	Total Common Systems Allocable Net Plant		142,424,093	108,788,006	3,697,947	143,026	2,149,468	8,531,902	8,391,876	2,636,902
3	Cash Working Capital	11.2	(16,619,324)	(12,321,367)	(440,224)	(11,731)	(226,742)	(1,474,668)	(1,032,178)	(352,645)
4	Materials & Supplies	1.1	30,847,268	23,562,114	800,929	30,978	465,548	1,847,903	1,817,575	571,120
5	Prepayments	1.1	14,121,283	10,786,280	366,650	14,181	213,119	845,934	832,051	261,448
6	Other	1.1	0	0	0	0	0	0	0	0
7	Customer Deposits	8.0	(33,750,043)	(29,175,748)	(3,418,126)	(2,477)	(433,766)	(522,844)	(175,302)	(8,416)
8	Customer Advances	8.0	(59,445,400)	(51,388,498)	(6,020,493)	(4,363)	(764,010)	(920,908)	(308,766)	(14,824)
9	Deferred Taxes	1.1	(634,525,981)	(484,670,919)	(16,475,045)	(637,210)	(9,576,284)	(38,011,218)	(37,387,376)	(11,747,890)
10	Other	1.1	0	0	0	0	0	0	0	0
11	Total Rate Base		$ 3,414,416,189	$ 2,599,032,933	$ 81,625,467	$ 3,520,566	$ 51,763,276	$ 208,200,298	$ 206,137,582	$ 64,873,258
	Margin									
12	Net Operating Margin	Direct	$ 654,971,681	$ 469,568,174	$ 13,575,468	$ 793,609	$ 11,079,616	$ 38,567,559	$ 56,597,120	$ 14,711,213
13	Special Contract & Optional Margin	Net Op Margin	6,682,250	5,026,104	164,890	6,008	98,915	487,174	408,362	132,931
14	Other Revenue	Various	8,261,501	6,912,310	773,078	769	133,935	208,628	135,680	30,590
15	Total Revenue		$ 669,915,432	$ 481,506,588	$ 14,513,436	$ 800,386	$ 11,312,466	$ 39,263,362	$ 57,141,162	$ 14,874,734
	Operating Deductions									
16	Operations & Maintenance Expense		$ (141,801,067)	$ (105,129,605)	$ (3,756,127)	$ (100,093)	$ (1,934,634)	$ (12,582,309)	$ (8,806,855)	$ (3,008,869)
17	Incremental Uncollectible Expense		(194,660)	(180,577)	(6,947)	(16)	(2,932)	(2,822)	(1,155)	(68)
18	Administrative & General Expense	Total O&M	(96,125,247)	(71,266,101)	(2,546,233)	(67,852)	(1,311,465)	(8,529,397)	(5,970,062)	(2,039,676)
19	Depreciation Expense	Deprec Exp	(136,545,019)	(103,872,917)	(3,686,937)	(120,664)	(2,234,005)	(9,396,366)	(7,810,884)	(2,482,422)
20	Interest on Customer Deposits	8.0	(37,125)	(34,683)	(1,334)	(3)	(563)	(542)	0	0
21	Regulatory Amortizations	1.1	(4,315,957)	(2,557,455)	(62,035)	(8,228)	(37,365)	(242,456)	(479,841)	(155,266)
22	Taxes Other Than Income	1.1	(69,307,596)	(52,939,323)	(1,799,526)	(69,601)	(1,045,992)	(4,151,865)	(4,083,724)	(1,283,191)
23	Total Operating Deductions		$ (448,326,671)	$ (335,980,661)	$ (11,859,139)	$ (366,458)	$ (6,566,956)	$ (34,905,757)	$ (27,152,520)	$ (8,969,492)
	State Income Tax									
24	Taxable Income before Interest Expense		$ 221,588,761	$ 145,525,927	$ 2,654,297	$ 433,929	$ 4,745,510	$ 4,357,605	$ 29,988,641	$ 5,905,242
25	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
26	Total State Taxable Income		$ 167,862,309	$ 104,487,972	$ 1,259,326	$ 379,975	$ 3,934,669	$ 1,139,127	$ 26,822,985	$ 4,910,527
27	State Income Tax	4.90%	$ 8,225,253	$ 5,119,911	$ 61,707	$ 18,619	$ 192,799	$ 55,817	$ 1,314,326	$ 240,616
28	Total State Income Tax		$ 8,225,253	$ 5,119,911	$ 61,707	$ 18,619	$ 192,799	$ 55,817	$ 1,314,326	$ 240,616
	Federal Income Tax									
29	Taxable Income before Interest Expense		$ 221,588,761	$ 145,525,927	$ 2,654,297	$ 433,929	$ 4,745,510	$ 4,357,605	$ 29,988,641	$ 5,905,242
30	Interest Expense	1.1	(53,726,452)	(41,037,955)	(1,394,972)	(53,954)	(810,841)	(3,218,478)	(3,165,656)	(994,715)
31	Total Federal Taxable Income		$ 167,862,309	$ 104,487,972	$ 1,259,326	$ 379,975	$ 3,934,669	$ 1,139,127	$ 26,822,985	$ 4,910,527
32	Federal Income Tax	19.97%	$ 33,523,782	$ 20,867,293	$ 251,500	$ 75,885	$ 785,793	$ 227,495	$ 5,356,818	$ 980,681
33	South Georgia Federal	1.1	(7,284,597)	(5,564,205)	(189,140)	(7,315)	(109,939)	(436,383)	(429,221)	(134,870)
34	Total Federal Income Tax		$ 26,239,184	$ 15,303,088	$ 62,360	$ 68,569	$ 675,853	$ (208,888)	$ 4,927,597	$ 845,811
35	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
36	Net Income		$ 187,124,323	$ 125,102,928	$ 2,530,230	$ 346,740	$ 3,876,858	$ 4,510,676	$ 23,746,718	$ 4,818,815
37	Rate of Return on Rate Base		5.48%	4.81%	3.10%	9.85%	7.49%	2.17%	11.52%	7.43%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CLASS COST OF SERVICE STUDY SUMMARY - PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor	Total Amount	Transportation Eligible General	Air Conditioning	Street Lighting	Compression on Customer's Premises (CNG)	Electric Generation	Small Essential Agricultural	Natural Gas Engines	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	Rate Base										
1	Total Direct Net Plant		$ 3,971,364,293	$ 175,376,699	$ 287,882	$ 112,444	$ 17,385,436	$ 15,700,941	$ 6,024,641	$ 10,553,786	1
2	Total Common Systems Allocable Net Plant		142,424,093	6,289,493	10,324	4,033	623,490	563,079	216,060	378,488	2
3	Cash Working Capital	11.2	(16,619,324)	(577,169)	(1,139)	(398)	(62,953)	(49,559)	(20,025)	(48,526)	3
4	Materials & Supplies	1.1	30,847,268	1,362,225	2,236	873	135,040	121,956	46,796	81,976	4
5	Prepayments	1.1	14,121,283	623,600	1,024	400	61,819	55,829	21,422	37,527	5
6	Other	1.1	0	0	0	0	0	0	0	0	6
7	Customer Deposits	8.0	(33,750,043)	(2,191)	0	(438)	(448)	0	(2,581)	(7,705)	7
8	Customer Advances	8.0	(59,445,400)	(3,858)	0	(772)	(790)	0	(4,547)	(13,570)	8
9	Deferred Taxes	1.1	(634,525,981)	(28,020,867)	(45,996)	(17,966)	(2,777,764)	(2,508,623)	(962,589)	(1,686,234)	9
10	Other	1.1	0	0	0	0	0	0	0	0	10
11	Total Rate Base		$ 3,414,416,189	$ 155,047,932	$ 254,331	$ 98,175	$ 15,363,830	$ 13,883,624	$ 5,319,177	$ 9,295,740	11
	Margin										
12	Net Operating Margin	Direct	$ 654,971,681	$ 37,243,844	$ 59,899	$ 9,865	$ 3,754,742	$ 2,833,618	$ 1,622,306	$ 4,554,647	12
13	Special Contract & Optional Margin	Net Op Margin	6,682,250	275,515	491	182	28,484	24,514	9,511	19,168	13
14	Other Revenue	Various	8,261,501	41,794	21	90	2,749	646	1,431	19,780	14
15	Total Revenue		$ 669,915,432	$ 37,561,153	$ 60,411	$ 10,138	$ 3,785,975	$ 2,858,778	$ 1,633,249	$ 4,593,596	15
	Operating Deductions										
16	Operations & Maintenance Expense		$ (141,801,067)	$ (4,924,579)	$ (9,715)	$ (3,397)	$ (537,135)	$ (422,852)	$ (170,857)	$ (414,041)	16
17	Incremental Uncollectible Expense		(194,660)	(35)	(3)	(8)	(10)	(4)	(11)	(71)	17
18	Administrative & General Expense	Total O&M	(96,125,247)	(3,338,313)	(6,586)	(2,303)	(364,117)	(286,647)	(115,822)	(280,673)	18
19	Depreciation Expense	Deprec Exp	(136,545,019)	(5,342,144)	(9,181)	(4,022)	(561,455)	(476,673)	(183,225)	(364,123)	19
20	Interest on Customer Deposits	8.0	(37,125)	0	0	0	0	0	0	0	20
21	Regulatory Amortizations	1.1	(4,315,957)	(560,052)	(1,519)	(74)	(56,617)	(63,634)	(21,803)	(69,613)	
22	Taxes Other Than Income	1.1	(69,307,596)	(3,060,645)	(5,024)	(1,962)	(303,408)	(274,010)	(105,141)	(184,183)	22
23	Total Operating Deductions		$ (448,326,671)	$ (17,225,769)	$ (32,029)	$ (11,766)	$ (1,822,742)	$ (1,523,820)	$ (596,858)	$ (1,312,704)	23
	State Income Tax										
24	Taxable Income before Interest Expense		$ 221,588,761	$ 20,335,385	$ 28,382	$ (1,628)	$ 1,963,232	$ 1,334,958	$ 1,036,390	$ 3,280,891	24
25	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	25
26	Total State Taxable Income		$ 167,862,309	$ 17,962,808	$ 24,488	$ (3,149)	$ 1,728,034	$ 1,122,548	$ 954,886	$ 3,138,115	26
27	State Income Tax	4.90%	$ 8,225,253	$ 880,178	$ 1,200	$ (154)	$ 84,674	$ 55,005	$ 46,789	$ 153,768	27
28	Total State Income Tax		$ 8,225,253	$ 880,178	$ 1,200	$ (154)	$ 84,674	$ 55,005	$ 46,789	$ 153,768	28
	Federal Income Tax										
29	Taxable Income before Interest Expense		$ 221,588,761	$ 20,335,385	$ 28,382	$ (1,628)	$ 1,963,232	$ 1,334,958	$ 1,036,390	$ 3,280,891	29
30	Interest Expense	1.1	(53,726,452)	(2,372,577)	(3,895)	(1,521)	(235,198)	(212,410)	(81,504)	(142,776)	30
31	Total Federal Taxable Income		$ 167,862,309	$ 17,962,808	$ 24,488	$ (3,149)	$ 1,728,034	$ 1,122,548	$ 954,886	$ 3,138,115	31
32	Federal Income Tax	19.97%	$ 33,523,782	$ 3,587,352	$ 4,890	$ (629)	$ 345,106	$ 224,184	$ 190,700	$ 626,713	32
33	South Georgia Federal	1.1	(7,284,597)	(321,690)	(528)	(206)	(31,890)	(28,800)	(11,051)	(19,359)	33
34	Total Federal Income Tax		$ 26,239,184	$ 3,265,662	$ 4,362	$ (835)	$ 313,216	$ 195,384	$ 179,649	$ 607,354	34
35	Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	35
36	Net Income		$ 187,124,323	$ 16,189,545	$ 22,820	$ (639)	$ 1,565,343	$ 1,084,569	$ 809,952	$ 2,519,770	36
37	Rate of Return on Rate Base		5.48%	10.44%	8.97%	-0.65%	10.19%	7.81%	15.23%	27.11%	37

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 17,988	$ 46,962	$ 109
2	302.00	Franchises & Consents	1.1	1,378,298	291,088	759,932	1,767
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 309,077	$ 806,894	$ 1,876
5		Allocation Percentage	Intang. Plant	100%	21.12%	1	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 951,279	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	7,487,036	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	16,566,194	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	4,574,647	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	3,910,387	0	0
11	363.50	Other Equipment	2.0	9,812,144	5,265,543	0	0
12		Total Storage Plant		$ 72,218,669	$ 38,755,086	$ 0	$ 0
		Allocation Percentage		100%	54%	0.00%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 444,521	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	1,563,941	0	0
15	375.00	Structures	1.0	455,882	276,812	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	740,383,206	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	1,131,120,036	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	23,492,480	35,890,623	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	739,734,632	0
21	381.00	Meters	6.0	323,771,492	0	189,159,046	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	4,874,022
23	387.00	Other Equipment	1.0	(3,442,867)	(2,090,513)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 764,070,447	$ 2,095,904,337	$ 4,874,022
23		Allocation Percentage	Net Dist Plant	100.00%	20.49%	56.20%	0.13%
		Total Direct Plant		$ 3,801,367,146	$ 802,825,533	$ 2,095,904,337	$ 4,874,022
25		Allocation Percentage	Net Dist Plant	100.00%	21.12%	55.14%	0.13%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 35,593,283	$ 92,921,952	$ 216,090
27		Total Direct Net Plant		$ 3,971,364,293	$ 838,727,892	$ 2,189,633,183	$ 5,091,989
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 19,325,240	$ 50,451,628	$ 117,325
29	389-398	Total Common General Plant	1.1	50,919,363	10,753,859	28,074,666	65,288
30		Total Systems Allocable		$ 142,424,093	$ 30,079,099	$ 78,526,294	$ 182,613
31		Total Net Plant		$ 4,113,788,386	$ 868,806,991	$ 2,268,159,477	$ 5,274,601
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (1,955,267)	$ (10,196,803)	$ (169,297)
33		Materials & Supplies	1.1	30,847,268	6,514,755	17,007,808	39,552
34		Prepayments	1.1	14,121,283	2,982,329	7,785,846	18,106
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(29,175,748)	0
37		Customer Advances	9.0	(59,445,400)	0	(51,388,498)	0
38		Deferred Taxes	1.1	(634,525,981)	(134,008,013)	(349,849,332)	(813,574)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 742,340,795	$ 1,852,342,750	$ 4,349,388

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 307	$ 1,902	$ 2
2	302.00	Franchises & Consents	1.1	1,378,298	4,975	30,772	39
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,282	$ 32,674	$ 42
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 18,215	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	143,363	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	317,213	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	87,596	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	74,877	0	0
11	363.50	Other Equipment	2.0	9,812,144	100,826	0	0
12		Total Storage Plant		$ 72,218,669	$ 742,090	$ 0	$ 0
		Allocation Percentage		100%	1.03%	0.00%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,550	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,564	0	0
15	375.00	Structures	1.0	455,882	4,702	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,575,841	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	43,512,658	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	399,033	1,380,664	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	32,700,795	0
21	381.00	Meters	6.0	323,771,492	0	7,276,693	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	108,885
23	387.00	Other Equipment	1.0	(3,442,867)	(35,509)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 12,978,182	$ 84,870,809	$ 108,885
23		Allocation Percentage	Net Dist Plant	100.00%	0.35%	2.28%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 13,720,273	$ 84,870,809	$ 108,885
25		Allocation Percentage	Net Dist Plant	100.00%	0.36%	2.23%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 608,289	$ 3,762,749	$ 4,827
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,333,843	$ 88,666,232	$ 113,754
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 330,268	$ 2,042,970	$ 2,621
29	389-398	Total Common General Plant	1.1	50,919,363	183,783	1,136,846	1,459
30		Total Systems Allocable		$ 142,424,093	$ 514,051	$ 3,179,816	$ 4,080
31		Total Net Plant		$ 4,113,788,386	$ 14,847,894	$ 91,846,048	$ 117,834
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (33,484)	$ (402,959)	$ (3,782)
33		Materials & Supplies	1.1	30,847,268	111,337	688,708	884
34		Prepayments	1.1	14,121,283	50,968	315,277	404
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(3,418,126)	0
37		Customer Advances	9.0	(59,445,400)	0	(6,020,493)	0
38		Deferred Taxes	1.1	(634,525,981)	(2,290,194)	(14,166,675)	(18,175)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 12,686,522	$ 68,841,781	$ 97,165

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 76	$ 9	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	1,233	144	7
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 1,309	$ 153	$ 8
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 4,001	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	31,493	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	69,683	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	19,242	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	16,448	0	0
11	363.50	Other Equipment	2.0	9,812,144	22,149	0	0
12		Total Storage Plant		$ 72,218,669	$ 163,016	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 1,883	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	6,625	0	0
15	375.00	Structures	1.0	455,882	1,173	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	3,136,170	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	103,332	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	99,511	3,279	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	162,370	0
21	381.00	Meters	6.0	323,771,492	0	128,697	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	20,246
23	387.00	Other Equipment	1.0	(3,442,867)	(8,855)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 3,236,506	$ 397,677	$ 20,246
23		Allocation Percentage	Net Dist Plant	100.00%	0.09%	0.01%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 3,399,522	$ 397,677	$ 20,246
25		Allocation Percentage	Net Dist Plant	100.00%	0.09%	0.01%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 150,718	$ 17,631	$ 898
27		Total Direct Net Plant		$ 3,971,364,293	$ 3,551,549	$ 415,462	$ 21,151
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 81,832	$ 9,573	$ 487
29	389-398	Total Common General Plant	1.1	50,919,363	45,537	5,327	271
30		Total Systems Allocable		$ 142,424,093	$ 127,368	$ 14,900	$ 759
31		Total Net Plant		$ 4,113,788,386	$ 3,678,917	$ 430,361	$ 21,910
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (8,279)	$ (2,749)	$ (703)
33		Materials & Supplies	1.1	30,847,268	27,586	3,227	164
34		Prepayments	1.1	14,121,283	12,629	1,477	75
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,477)	0
37		Customer Advances	9.0	(59,445,400)	0	(4,363)	0
38		Deferred Taxes	1.1	(634,525,981)	(567,450)	(66,381)	(3,379)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 3,143,404	$ 359,095	$ 18,067

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 238	$ 1,047	$ 1
2	302.00	Franchises & Consents	1.1	1,378,298	3,845	16,935	21
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 4,083	$ 17,981	$ 23
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 12,225	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	96,218	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	212,897	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	58,790	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	50,254	0	0
11	363.50	Other Equipment	2.0	9,812,144	67,669	0	0
12		Total Storage Plant		$ 72,218,669	$ 498,053	$ 0	$ 0
		Allocation Percentage		100%	1%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 5,880	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	20,687	0	0
15	375.00	Structures	1.0	455,882	3,662	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	9,793,552	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	18,367,884	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	310,751	582,816	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	24,684,434	0
21	381.00	Meters	6.0	323,771,492	0	3,071,691	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	58,584
23	387.00	Other Equipment	1.0	(3,442,867)	(27,653)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 10,106,880	$ 46,706,825	$ 58,584
23		Allocation Percentage	Net Dist Plant	100.00%	0.27%	1.25%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 10,604,933	$ 46,706,825	$ 58,584
25		Allocation Percentage	Net Dist Plant	100.00%	0.28%	1.23%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 470,170	$ 2,070,748	$ 2,597
27		Total Direct Net Plant		$ 3,971,364,293	$ 11,079,185	$ 48,795,554	$ 61,204
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 255,277	$ 1,124,305	$ 1,410
29	389-398	Total Common General Plant	1.1	50,919,363	142,053	625,639	785
30		Total Systems Allocable		$ 142,424,093	$ 397,330	$ 1,749,943	$ 2,195
31		Total Net Plant		$ 4,113,788,386	$ 11,476,515	$ 50,545,497	$ 63,399
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (25,816)	$ (198,891)	$ (2,035)
33		Materials & Supplies	1.1	30,847,268	86,057	379,016	475
34		Prepayments	1.1	14,121,283	39,395	173,506	218
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(433,766)	0
37		Customer Advances	9.0	(59,445,400)	0	(764,010)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,770,180)	(7,796,325)	(9,779)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 9,805,971	$ 41,905,027	$ 52,278

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 1,887	$ 3,199	$ 17
2	302.00	Franchises & Consents	1.1	1,378,298	30,530	51,760	277
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 32,416	$ 54,959	$ 294
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 114,978	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	904,934	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	2,002,304	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	552,923	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	472,636	0	0
11	363.50	Other Equipment	2.0	9,812,144	636,430	0	0
12		Total Storage Plant		$ 72,218,669	$ 4,684,205	$ 0	$ 0
		Allocation Percentage		100%	6%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 46,262	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	162,760	0	0
15	375.00	Structures	1.0	455,882	28,808	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	77,052,161	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	17,675,894	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	2,444,878	560,859	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	53,896,991	0
21	381.00	Meters	6.0	323,771,492	0	70,622,002	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	763,279
23	387.00	Other Equipment	1.0	(3,442,867)	(217,561)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 79,517,307	$ 142,755,746	$ 763,279
23		Allocation Percentage	Net Dist Plant	100.00%	2.13%	3.83%	0.02%
		Total Direct Plant		$ 3,801,367,146	$ 84,201,512	$ 142,755,746	$ 763,279
25		Allocation Percentage	Net Dist Plant	100.00%	2.22%	3.76%	0.02%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 3,733,075	$ 6,329,078	$ 33,840
27		Total Direct Net Plant		$ 3,971,364,293	$ 87,967,004	$ 149,139,783	$ 797,412
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 2,026,859	$ 3,436,349	$ 18,373
29	389-398	Total Common General Plant	1.1	50,919,363	1,127,880	1,912,215	10,224
30		Total Systems Allocable		$ 142,424,093	$ 3,154,740	$ 5,348,565	$ 28,597
31		Total Net Plant		$ 4,113,788,386	$ 91,121,743	$ 154,488,347	$ 826,010
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (205,600)	$ (1,242,556)	$ (26,512)
33		Materials & Supplies	1.1	30,847,268	683,277	1,158,432	6,194
34		Prepayments	1.1	14,121,283	312,791	530,308	2,835
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(522,844)	0
37		Customer Advances	9.0	(59,445,400)	0	(920,908)	0
38		Deferred Taxes	1.1	(634,525,981)	(14,054,956)	(23,828,856)	(127,407)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 77,857,256	$ 129,661,922	$ 681,120

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 3,695	$ 1,287	$ 36
2	302.00	Franchises & Consents	1.1	1,378,298	59,800	20,826	586
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 63,495	$ 22,113	$ 623
5		Allocation Percentage	Intang. Plant	100%	4.34%	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 231,076	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	1,818,683	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	4,024,111	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	1,111,232	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	949,876	0	0
11	363.50	Other Equipment	2.0	9,812,144	1,279,058	0	0
12		Total Storage Plant		$ 72,218,669	$ 9,414,037	$ 0	$ 0
		Allocation Percentage		100%	13%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 90,475	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	318,315	0	0
15	375.00	Structures	1.0	455,882	56,341	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	150,692,889	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	7,232,920	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	4,781,510	229,502	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	17,691,293	0
21	381.00	Meters	6.0	323,771,492	0	32,284,395	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	1,616,990
23	387.00	Other Equipment	1.0	(3,442,867)	(425,490)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 155,514,039	$ 57,438,109	$ 1,616,990
23		Allocation Percentage	Net Dist Plant	100.00%	4.17%	1.54%	0.04%
		Total Direct Plant		$ 3,801,367,146	$ 164,928,076	$ 57,438,109	$ 1,616,990
25		Allocation Percentage	Net Dist Plant	100.00%	4.34%	1.51%	0.04%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 7,312,089	$ 2,546,519	$ 71,689
27		Total Direct Net Plant		$ 3,971,364,293	$ 172,303,660	$ 60,006,741	$ 1,689,302
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 3,970,071	$ 1,382,623	$ 38,923
29	389-398	Total Common General Plant	1.1	50,919,363	2,209,214	769,384	21,660
30		Total Systems Allocable		$ 142,424,093	$ 6,179,285	$ 2,152,007	$ 60,583
31		Total Net Plant		$ 4,113,788,386	$ 178,482,945	$ 62,158,749	$ 1,749,885
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (402,919)	$ (573,094)	$ (56,166)
33		Materials & Supplies	1.1	30,847,268	1,338,355	466,098	13,122
34		Prepayments	1.1	14,121,283	612,673	213,371	6,007
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(175,302)	0
37		Customer Advances	9.0	(59,445,400)	0	(308,766)	0
38		Deferred Taxes	1.1	(634,525,981)	(27,529,872)	(9,587,596)	(269,909)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 152,501,184	$ 52,193,459	$ 1,442,939

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 1,184	$ 382	$ 12
2	302.00	Franchises & Consents	1.1	1,378,298	19,152	6,174	193
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 20,335	$ 6,556	$ 204
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 75,441	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	593,757	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	1,313,776	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	362,791	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	310,112	0	0
11	363.50	Other Equipment	2.0	9,812,144	417,582	0	0
12		Total Storage Plant		$ 72,218,669	$ 3,073,458	$ 0	$ 0
		Allocation Percentage		100%	4%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 28,942	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	101,826	0	0
15	375.00	Structures	1.0	455,882	18,023	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	48,205,191	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	424,427	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	1,529,559	13,467	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	3,970,114	0
21	381.00	Meters	6.0	323,771,492	0	12,620,098	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	531,168
23	387.00	Other Equipment	1.0	(3,442,867)	(136,110)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 49,747,430	$ 17,028,106	$ 531,168
23		Allocation Percentage	Net Dist Plant	100.00%	1.33%	0.46%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 52,820,888	$ 17,028,106	$ 531,168
25		Allocation Percentage	Net Dist Plant	100.00%	1.39%	0.45%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 2,341,815	$ 754,941	$ 23,549
27		Total Direct Net Plant		$ 3,971,364,293	$ 55,183,039	$ 17,789,603	$ 554,922
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 1,271,480	$ 409,893	$ 12,786
29	389-398	Total Common General Plant	1.1	50,919,363	707,536	228,092	7,115
30		Total Systems Allocable		$ 142,424,093	$ 1,979,016	$ 637,984	$ 19,901
31		Total Net Plant		$ 4,113,788,386	$ 57,162,055	$ 18,427,587	$ 574,823
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (129,091)	$ (205,104)	$ (18,450)
33		Materials & Supplies	1.1	30,847,268	428,630	138,179	4,310
34		Prepayments	1.1	14,121,283	196,219	63,256	1,973
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(8,416)	0
37		Customer Advances	9.0	(59,445,400)	0	(14,824)	0
38		Deferred Taxes	1.1	(634,525,981)	(8,816,887)	(2,842,339)	(88,663)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 48,840,925	$ 15,558,339	$ 473,994

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 3,505	$ 210	$ 46
2	302.00	Franchises & Consents	1.1	1,378,298	56,710	3,406	750
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 60,215	$ 3,616	$ 796
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 266,179	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	2,094,958	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	4,635,410	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	1,280,038	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	1,094,171	0	0
11	363.50	Other Equipment	2.0	9,812,144	1,473,359	0	0
12		Total Storage Plant		$ 72,218,669	$ 10,844,114	$ 0	$ 0
		Allocation Percentage		100%	15%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 84,686	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	297,948	0	0
15	375.00	Structures	1.0	455,882	52,736	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	141,051,233	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	219,448	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	4,475,579	6,963	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	3,202,686	0
21	381.00	Meters	6.0	323,771,492	0	5,964,150	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	2,068,294
23	387.00	Other Equipment	1.0	(3,442,867)	(398,266)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 145,563,916	$ 9,393,248	$ 2,068,294
23		Allocation Percentage	Net Dist Plant	100.00%	3.90%	0.25%	0.06%
		Total Direct Plant		$ 3,801,367,146	$ 156,408,030	$ 9,393,248	$ 2,068,294
25		Allocation Percentage	Net Dist Plant	100.00%	4.11%	0.25%	0.05%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 6,934,353	$ 416,450	$ 91,698
27		Total Direct Net Plant		$ 3,971,364,293	$ 163,402,597	$ 9,813,314	$ 2,160,788
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 3,764,981	$ 226,110	$ 49,787
29	389-398	Total Common General Plant	1.1	50,919,363	2,095,088	125,823	27,705
30		Total Systems Allocable		$ 142,424,093	$ 5,860,068	$ 351,933	$ 77,492
31		Total Net Plant		$ 4,113,788,386	$ 169,262,666	$ 10,165,246	$ 2,238,280
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (383,739)	$ (121,588)	$ (71,841)
33		Materials & Supplies	1.1	30,847,268	1,269,217	76,224	16,784
34		Prepayments	1.1	14,121,283	581,023	34,894	7,683
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,191)	0
37		Customer Advances	9.0	(59,445,400)	0	(3,858)	0
38		Deferred Taxes	1.1	(634,525,981)	(26,107,701)	(1,567,925)	(345,241)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 144,621,465	$ 8,580,802	$ 1,845,665

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 5	$ 1	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	83	15	2
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 88	$ 16	$ 2
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 695	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	5,471	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	12,105	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	3,343	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	2,857	0	0
11	363.50	Other Equipment	2.0	9,812,144	3,847	0	0
12		Total Storage Plant		$ 72,218,669	$ 28,318	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 116	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	410	0	0
15	375.00	Structures	1.0	455,882	73	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	193,925	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	20,240	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	6,153	642	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	17,658	0
21	381.00	Meters	6.0	323,771,492	0	3,385	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	5,186
23	387.00	Other Equipment	1.0	(3,442,867)	(548)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 200,129	$ 41,926	$ 5,186
23		Allocation Percentage	Net Dist Plant	100.00%	0.01%	0.00%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 228,447	$ 41,926	$ 5,186
25		Allocation Percentage	Net Dist Plant	100.00%	0.01%	0.00%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 10,128	$ 1,859	$ 230
27		Total Direct Net Plant		$ 3,971,364,293	$ 238,663	$ 43,801	$ 5,418
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 5,499	$ 1,009	$ 125
29	389-398	Total Common General Plant	1.1	50,919,363	3,060	562	69
30		Total Systems Allocable		$ 142,424,093	$ 8,559	$ 1,571	$ 194
31		Total Net Plant		$ 4,113,788,386	$ 247,222	$ 45,371	$ 5,612
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (571)	$ (387)	$ (180)
33		Materials & Supplies	1.1	30,847,268	1,854	340	42
34		Prepayments	1.1	14,121,283	849	156	19
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	0	0
37		Customer Advances	9.0	(59,445,400)	0	0	0
38		Deferred Taxes	1.1	(634,525,981)	(38,133)	(6,998)	(866)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 211,221	$ 38,482	$ 4,628

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 0	$ 2	$ 0
2	302.00	Franchises & Consents	1.1	1,378,298	4	35	0
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 4	$ 38	$ 0
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 20	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	157	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	347	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	96	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	82	0	0
11	363.50	Other Equipment	2.0	9,812,144	110	0	0
12		Total Storage Plant		$ 72,218,669	$ 811	$ 0	$ 0
		Allocation Percentage		100%	0%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 5	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	19	0	0
15	375.00	Structures	1.0	455,882	3	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	8,919	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	51,134	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	283	1,622	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	44,708	0
21	381.00	Meters	6.0	323,771,492	0	0	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	150
23	387.00	Other Equipment	1.0	(3,442,867)	(25)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 9,204	$ 97,464	$ 150
23		Allocation Percentage	Net Dist Plant	100.00%	0.00%	0.00%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 10,016	$ 97,464	$ 150
25		Allocation Percentage	Net Dist Plant	100.00%	0.00%	0.00%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 444	$ 4,321	$ 7
27		Total Direct Net Plant		$ 3,971,364,293	$ 10,464	$ 101,823	$ 157
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 241	$ 2,346	$ 4
29	389-398	Total Common General Plant	1.1	50,919,363	134	1,306	2
30		Total Systems Allocable		$ 142,424,093	$ 375	$ 3,652	$ 6
31		Total Net Plant		$ 4,113,788,386	$ 10,839	$ 105,475	$ 163
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (25)	$ (368)	$ (5)
33		Materials & Supplies	1.1	30,847,268	81	791	1
34		Prepayments	1.1	14,121,283	37	362	1
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(438)	0
37		Customer Advances	9.0	(59,445,400)	0	(772)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,672)	(16,269)	(25)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 9,261	$ 88,780	$ 134

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 313	$ 55	$ 5
2	302.00	Franchises & Consents	1.1	1,378,298	5,057	894	83
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,369	$ 950	$ 88
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 26,652	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	209,764	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	464,134	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	128,168	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	109,557	0	0
11	363.50	Other Equipment	2.0	9,812,144	147,524	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,085,799	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,482	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,325	0	0
15	375.00	Structures	1.0	455,882	4,659	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,462,427	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	64,982	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	395,435	2,062	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	1,350,748	0
21	381.00	Meters	6.0	323,771,492	0	1,048,768	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	227,741
23	387.00	Other Equipment	1.0	(3,442,867)	(35,188)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 12,861,140	$ 2,466,560	$ 227,741
23		Allocation Percentage	Net Dist Plant	100.00%	0.34%	0.07%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 13,946,939	$ 2,466,560	$ 227,741
25		Allocation Percentage	Net Dist Plant	100.00%	0.37%	0.06%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 618,338	$ 109,355	$ 10,097
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,570,646	$ 2,576,865	$ 237,925
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 335,724	$ 59,374	$ 5,482
29	389-398	Total Common General Plant	1.1	50,919,363	186,819	33,040	3,051
30		Total Systems Allocable		$ 142,424,093	$ 522,544	$ 92,413	$ 8,533
31		Total Net Plant		$ 4,113,788,386	$ 15,093,190	$ 2,669,278	$ 246,458
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (34,320)	$ (20,723)	$ (7,910)
33		Materials & Supplies	1.1	30,847,268	113,176	20,016	1,848
34		Prepayments	1.1	14,121,283	51,810	9,163	846
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(448)	0
37		Customer Advances	9.0	(59,445,400)	0	(790)	0
38		Deferred Taxes	1.1	(634,525,981)	(2,328,030)	(411,719)	(38,015)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 12,895,827	$ 2,264,776	$ 203,227

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 322	$ 10	$ 5
2	302.00	Franchises & Consents	1.1	1,378,298	5,205	161	83
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 5,526	$ 171	$ 88
5		Allocation Percentage	Intang. Plant	100%	0.38%	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 29,867	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	235,064	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	520,115	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	143,627	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	122,771	0	0
11	363.50	Other Equipment	2.0	9,812,144	165,318	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,216,762	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 7,643	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	26,892	0	0
15	375.00	Structures	1.0	455,882	4,760	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	12,730,718	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	26,632	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	403,948	845	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	105,145	0
21	381.00	Meters	6.0	323,771,492	0	311,725	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	229,728
23	387.00	Other Equipment	1.0	(3,442,867)	(35,946)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 13,138,014	$ 444,347	$ 229,728
23		Allocation Percentage	Net Dist Plant	100.00%	0.35%	0.01%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 14,354,776	$ 444,347	$ 229,728
25		Allocation Percentage	Net Dist Plant	100.00%	0.38%	0.01%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 636,419	$ 19,700	$ 10,185
27		Total Direct Net Plant		$ 3,971,364,293	$ 14,996,722	$ 464,218	$ 240,001
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 345,541	$ 10,696	$ 5,530
29	389-398	Total Common General Plant	1.1	50,919,363	192,282	5,952	3,077
30		Total Systems Allocable		$ 142,424,093	$ 537,824	$ 16,648	$ 8,607
31		Total Net Plant		$ 4,113,788,386	$ 15,534,546	$ 480,866	$ 248,608
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (35,408)	$ (6,172)	$ (7,980)
33		Materials & Supplies	1.1	30,847,268	116,486	3,606	1,864
34		Prepayments	1.1	14,121,283	53,325	1,651	853
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	0	0
37		Customer Advances	9.0	(59,445,400)	0	0	0
38		Deferred Taxes	1.1	(634,525,981)	(2,396,106)	(74,171)	(38,346)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 13,272,843	$ 405,780	$ 205,000

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 121	$ 7	$ 2
2	302.00	Franchises & Consents	1.1	1,378,298	1,950	113	27
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 2,071	$ 120	$ 29
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 10,274	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	80,860	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	178,916	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	49,406	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	42,232	0	0
11	363.50	Other Equipment	2.0	9,812,144	56,868	0	0
12		Total Storage Plant		$ 72,218,669	$ 418,557	$ 0	$ 0
		Allocation Percentage		100%	1%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 2,886	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	10,154	0	0
15	375.00	Structures	1.0	455,882	1,797	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	4,807,096	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	71,374	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	152,530	2,265	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	62,004	0
21	381.00	Meters	6.0	323,771,492	0	176,486	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	75,175
23	387.00	Other Equipment	1.0	(3,442,867)	(13,573)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 4,960,890	$ 312,130	$ 75,175
23		Allocation Percentage	Net Dist Plant	100.00%	0.13%	0.01%	0.00%
		Total Direct Plant		$ 3,801,367,146	$ 5,379,447	$ 312,130	$ 75,175
25		Allocation Percentage	Net Dist Plant	100.00%	0.14%	0.01%	0.00%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 238,498	$ 13,838	$ 3,333
27		Total Direct Net Plant		$ 3,971,364,293	$ 5,620,016	$ 326,088	$ 78,536
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 129,492	$ 7,513	$ 1,810
29	389-398	Total Common General Plant	1.1	50,919,363	72,058	4,181	1,007
30		Total Systems Allocable		$ 142,424,093	$ 201,549	$ 11,694	$ 2,817
31		Total Net Plant		$ 4,113,788,386	$ 5,821,565	$ 337,782	$ 81,353
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (13,237)	$ (4,176)	$ (2,611)
33		Materials & Supplies	1.1	30,847,268	43,653	2,533	610
34		Prepayments	1.1	14,121,283	19,984	1,159	279
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(2,581)	0
37		Customer Advances	9.0	(59,445,400)	0	(4,547)	0
38		Deferred Taxes	1.1	(634,525,981)	(897,940)	(52,101)	(12,548)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 4,974,025	$ 278,069	$ 67,083

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
RATE BASE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cost of Service					
		Direct					
		Intangible Plant					
1	301.00	Organization	1.1	$ 85,175	$ 173	$ 47	$ 6
2	302.00	Franchises & Consents	1.1	1,378,298	2,806	756	101
3	303.00	Miscellaneous Intangible Plant	1.1	0	0	0	0
4		Total Direct Intangible Plant		$ 1,463,473	$ 2,979	$ 802	$ 108
5		Allocation Percentage	Intang. Plant	100%	0	0	0
		Storage Plant					
6	360.00	Land and Land Rights	2.0	$ 1,772,673	$ 31,771	$ 0	$ 0
7	361.00	Structures and Improvements	2.0	13,951,814	250,056	0	0
8	363.10	Liquifaction Equipment	2.0	30,870,490	553,286	0	0
9	363.20	Vaporizing Equipment	2.0	8,524,686	152,786	0	0
10	363.30	Compressor Equipment	2.0	7,286,861	130,601	0	0
11	363.50	Other Equipment	2.0	9,812,144	175,861	0	0
12		Total Storage Plant		$ 72,218,669	$ 1,294,362	$ 0	$ 0
		Allocation Percentage		100%	2%	0%	0%
		Distribution Plant					
13	374.10	Land & Land Rights	1.0	$ 732,082	$ 3,749	$ 0	$ 0
14	374.20	Rights of Way	1.0	2,575,655	13,190	0	0
15	375.00	Structures	1.0	455,882	2,335	0	0
16	376.00	Mains - Demand	1.0	1,219,337,581	6,244,255	0	0
17	376.00	Mains - Customer	5.0	1,219,337,581	0	446,620	0
18	378.00	Measuring & Regulating Station	2.2	77,379,561	198,131	14,171	0
19	380.00	Services - Demand	1.0	0	0	0	0
20	380.00	Services - Customer	7.0	878,142,657	0	519,079	0
21	381.00	Meters	6.0	323,771,492	0	1,104,357	0
22	385.00	Industrial Measuring & Regulating Station	3.0	10,858,853	0	0	279,405
23	387.00	Other Equipment	1.0	(3,442,867)	(17,631)	0	0
24		Total Direct Distribution Plant		$ 3,729,148,477	$ 6,444,029	$ 2,084,227	$ 279,405
23		Allocation Percentage	Net Dist Plant	100.00%	0.17%	0.06%	0.01%
		Total Direct Plant		$ 3,801,367,146	$ 7,738,391	$ 2,084,227	$ 279,405
25		Allocation Percentage	Net Dist Plant	100.00%	0.20%	0.05%	0.01%
26	389-398	Total Direct General Plant	1.1	$ 168,533,673	$ 343,082	$ 92,404	$ 12,387
27		Total Direct Net Plant		$ 3,971,364,293	$ 8,084,452	$ 2,177,434	$ 291,900
		Common - Systems Allocable					
28	301-303	Total Common Intangible Plant	1.1	$ 91,504,730	$ 186,275	$ 50,171	$ 6,726
29	389-398	Total Common General Plant	1.1	50,919,363	103,656	27,918	3,743
30		Total Systems Allocable		$ 142,424,093	$ 289,931	$ 78,089	$ 10,468
31		Total Net Plant		$ 4,113,788,386	$ 8,374,382	$ 2,255,523	$ 302,368
		Other Rate Base Items					
32		Cash Working Capital	11.2	$ (16,619,324)	$ (19,632)	$ (19,189)	$ (9,705)
33		Materials & Supplies	1.1	30,847,268	62,795	16,913	2,267
34		Prepayments	1.1	14,121,283	28,747	7,742	1,038
35		Other	1.1	0	0	0	0
36		Customer Deposits	9.0	(33,750,043)	0	(7,705)	0
37		Customer Advances	9.0	(59,445,400)	0	(13,570)	0
38		Deferred Taxes	1.1	(634,525,981)	(1,291,696)	(347,900)	(46,638)
39		Other	1.1	0	0	0	0
40		Total Allocated Rate Base		$ 3,414,416,189	$ 7,154,596	$ 1,891,814	$ 249,330

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 17,899	$ 46,728	$ 109
2	360 - 363.50	Storage Plant	2.0	3,571,136	1,916,397	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	30,785	0	0
	375.00	Structures	1.0	3,704	2,249	0	0
	376.00	Mains	2.2	47,744,070	14,495,128	22,144,923	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	1,175,146	1,795,329	0
	380.00	Services	7.0	35,893,910	0	30,236,509	0
	381.00	Meters	6.0	14,097,273	0	8,236,138	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	111,074
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	15,703,308	62,412,899	111,074
4	389 - 398	General Plant	1.1	14,327,615	3,025,905	7,899,608	18,371
5		Total Direct Depreciation Expense		$ 119,891,319	$ 20,663,509	$ 70,359,235	$ 129,554
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 2,614,729	$ 6,826,168	$ 15,874
7		General Plant	1.1	4,272,997	902,431	2,355,940	5,479
8		Total System Allocable Amortization		$ 16,653,700	$ 3,517,160	$ 9,182,107	$ 21,353
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 902,431	$ 2,355,940	$ 5,479
10		Total Depreciation Expense		$ 136,545,019	$ 24,180,668	$ 79,541,343	$ 150,907
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 24,180,668	$ 79,541,343	$ 150,907
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	599,386
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 599,386
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 1,073,862	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 1,087,821	$ 5,372,119	$ 119,489
22		Materials & Expenses	5.5	1,271,396	142,255	702,515	15,626
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	567,921
24		Materials & Expenses	3.0	51,869	0	0	23,281
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	1,249,661	3,157,735	0
26		Materials & Expenses	4.4	14,594,880	3,257,883	8,232,258	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	652,446	996,774	0
28		Materials & Expenses	2.2	732,095	222,264	339,564	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	4,205,684	0
30		Materials & Expenses	6.0	3,556,774	0	2,077,997	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	6,545,897	0
32		Materials & Expenses	6.0	1,752,586	0	1,023,924	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	668,849	3,303,059	73,468
34		Materials & Expenses	5.5	4,526,461	506,460	2,501,113	55,631
35	881.00	Rents	5.5	(838,690)	(93,840)	(463,421)	(10,308)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 7,693,800	$ 37,995,218	$ 845,109
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 8,767,662	$ 37,995,218	$ 1,444,495

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 442,159	$ 1,375,769	$ 0
2		Materials & Expenses	6.6	249,786	46,453	144,538	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	495	0	0
4		Materials & Expenses	1.0	6,846	4,157	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	3,473,056	5,305,959	0
6		Materials & Expenses	2.2	10,664,855	3,237,856	4,946,633	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	442,649	676,256	0
8		Materials & Expenses	2.2	697,186	211,666	323,373	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	4,302,703	0
10		Materials & Expenses	3.3	5,366,958	0	4,521,047	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	2,126,871	0
12		Materials & Expenses	6.0	1,246,741	0	728,392	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	39,401	122,595	0
14		Materials & Expenses	6.6	93,400	17,370	54,045	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 7,915,261	$ 24,628,180	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 16,682,923	$ 62,623,398	$ 1,444,495
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 2,156,389	$ 0
18		Materials & Expenses	10.1	54,104	0	48,589	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	1,129,392	0
20		Materials & Expenses	11.0	407,223	0	377,761	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	7,492,468	0
22		Materials & Expenses	4.0	12,265,589	0	11,378,189	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	1,570,246	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	69,954	0
27		Materials & Expenses	10.1	237	0	213	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 24,223,200	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	155,776	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 155,776	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(188)	0
42		Total Sales Expense		$ (203)	$ 0	$ (188)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 16,682,923	$ 87,002,187	$ 1,444,495
44		Allocation Percentage	Total O&M	1	0	1	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 11,309,154	$ 58,977,742	$ 979,206
2		Interest on Customer Deposits	8.0	37,125	0	34,683	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 553,438	$ 1,444,838	$ 3,360
5		GCU Acquisition Adjustment	1.1	318,752	67,318	175,746	409
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	786,386	0
7		LNG Deferral Amortizaton	2.0	3,983,884	2,137,893	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	293,910	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	317,141	484,513	0
10		TRIMP/DOT	2.2	(1,146,342)	(348,030)	(531,703)	0
11		DSM	1.1	(3,702,079)	(781,856)	(2,041,161)	(4,747)
12		Total Regulatory Amortizations		4,315,957	1,945,904	612,529	(978)
13		Taxes Other Than Income	1.1	69,307,596	14,637,341	38,213,118	88,865
14		Total Allocated Operating Deductions		$ 315,902,948	$ 46,521,226	$ 185,452,787	$ 2,510,609
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 11,346,699	$ 29,622,370	$ 68,887
16		South Georgia - Federal	1.1	(7,284,597)	(1,538,462)	(4,016,402)	(9,340)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 838,727,892	$ 2,189,633,183	$ 5,091,989
18		Total Common Systems Allocable Net Plant		142,424,093	30,079,099	78,526,294	182,613
19		Cash Working Capital	11.2	(16,619,324)	(1,955,267)	(10,196,803)	(169,297)
20		Materials & Supplies	1.1	30,847,268	6,514,755	17,007,808	39,552
21		Prepayments	1.1	14,121,283	2,982,329	7,785,846	18,106
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(29,175,748)	0
24		Customer Advances	9.0	(59,445,400)	0	(51,388,498)	0
25		Deferred Taxes	1.1	(634,525,981)	(134,008,013)	(349,849,332)	(813,574)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 742,340,795	$ 1,852,342,750	$ 4,349,388
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 136,840,429	$ 264,484,254
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,620,315	3,131,733
30		Late Charges	12.0	848,431	0	583,069	0
31		Service Establishment Charges	9.0	6,845,361	0	5,917,579	0
32		Reconnect / Reread Charges	9.0	100	0	86	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	255	492
34		Other Revenue - Parts & Material	Net Op Margin	68	0	16	32
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	411,576	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 145,373,325	$ 267,616,511
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (16,682,923)	$ (87,002,187)	$ (1,444,495)
40		A & G	Total O&M	(96,125,247)	(11,309,154)	(58,977,742)	(979,206)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(24,180,668)	(79,541,343)	(150,907)
42		Interest on Customer Deposits	8.0	(37,125)	0	(34,683)	0
43		Regulatory Amortizations	Various	(4,315,957)	(1,945,904)	(612,529)	978
44		Taxes Other Than Income	1.1	(69,307,596)	(14,637,341)	(38,213,118)	(88,865)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (68,755,990)	$ (119,008,275)	$ 264,954,017
46		Interest Expense	1.1	(53,726,452)	(11,346,699)	(29,622,370)	(68,887)
47		State Taxable Income		$ 77,326,971	$ (80,102,689)	$ (148,630,645)	$ 264,885,130
48		State Income Tax	4.90%	$ 3,789,022	$ (3,925,032)	$ (7,282,902)	$ 12,979,371
49		Total State Income Tax		$ 3,789,022	$ (3,925,032)	$ (7,282,902)	$ 12,979,371
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (68,755,990)	$ (119,008,275)	$ 264,954,017
51		Interest Expense	1.1	(53,726,452)	(11,346,699)	(29,622,370)	(68,887)
52		Federal Taxable Income		$ 77,326,971	$ (80,102,689)	$ (148,630,645)	$ 264,885,130
53		Federal Income Tax	19.97%	$ 15,442,969	$ (15,997,308)	$ (29,683,026)	$ 52,900,209
54		South Georgia Federal	1.1	(7,284,597)	(1,538,462)	(4,016,402)	(9,340)
55		Total Federal Income Tax		$ 8,158,372	$ (17,535,771)	$ (33,699,428)	$ 52,890,869
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (47,295,188)	$ (78,025,945)	$ 199,083,776
58		Rate of Return on Rate Base		3.49%	-6.37%	-4.21%	4577%
59		Rate of Return by Class Total				2.84%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 306	$ 1,892	$ 2
2	360 - 363.50	Storage Plant	2.0	3,571,136	36,696	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	523	0	0
	375.00	Structures	1.0	3,704	38	0	0
	376.00	Mains	2.2	47,744,070	246,208	851,885	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	19,961	69,064	0
	380.00	Services	7.0	35,893,910	0	1,336,639	0
	381.00	Meters	6.0	14,097,273	0	316,833	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	2,481
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	266,730	2,574,421	2,481
4	389 - 398	General Plant	1.1	14,327,615	51,713	319,884	410
5		Total Direct Depreciation Expense		$ 119,891,319	$ 355,444	$ 2,896,197	$ 2,894
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 44,686	$ 276,416	$ 355
7		General Plant	1.1	4,272,997	15,423	95,401	122
8		Total System Allocable Amortization		$ 16,653,700	$ 60,108	$ 371,817	$ 477
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 15,423	$ 95,401	$ 122
10		Total Depreciation Expense		$ 136,545,019	$ 415,552	$ 3,268,014	$ 3,371
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 415,552	$ 3,268,014	$ 3,371
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	13,390
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 13,390
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 20,563	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,477	$ 211,881	$ 2,669
22		Materials & Expenses	5.5	1,271,396	2,416	27,708	349
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	12,687
24		Materials & Expenses	3.0	51,869	0	0	520
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,226	128,637	0
26		Materials & Expenses	4.4	14,594,880	55,337	335,359	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	11,082	38,345	0
28		Materials & Expenses	2.2	732,095	3,775	13,063	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	161,787	0
30		Materials & Expenses	6.0	3,556,774	0	79,938	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	251,812	0
32		Materials & Expenses	6.0	1,752,586	0	39,389	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,361	130,275	1,641
34		Materials & Expenses	5.5	4,526,461	8,603	98,646	1,243
35	881.00	Rents	5.5	(838,690)	(1,594)	(18,278)	(230)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 130,684	$ 1,498,561	$ 18,880
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 151,246	$ 1,498,561	$ 32,270

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,510	$ 55,961	$ 0
2		Materials & Expenses	6.6	249,786	789	5,879	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	8	0	0
4		Materials & Expenses	1.0	6,846	71	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	58,992	204,113	0
6		Materials & Expenses	2.2	10,664,855	54,997	190,290	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,519	26,015	0
8		Materials & Expenses	2.2	697,186	3,595	12,440	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	190,206	0
10		Materials & Expenses	3.3	5,366,958	0	199,858	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	81,818	0
12		Materials & Expenses	6.0	1,246,741	0	28,020	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	669	4,987	0
14		Materials & Expenses	6.6	93,400	295	2,198	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 134,445	$ 1,001,785	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 285,692	$ 2,500,346	$ 32,270
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 82,953	$ 0
18		Materials & Expenses	10.1	54,104	0	1,869	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	43,446	0
20		Materials & Expenses	11.0	407,223	0	14,532	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	288,225	0
22		Materials & Expenses	4.0	12,265,589	0	437,704	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	60,405	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	2,691	0
27		Materials & Expenses	10.1	237	0	8	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 931,834	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	5,993	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 5,993	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(7)	0
42		Total Sales Expense		$ (203)	$ 0	$ (7)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 285,692	$ 3,438,165	$ 32,270
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Multi-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 193,667	$ 2,330,691	$ 21,875
2		Interest on Customer Deposits	8.0	37,125	0	1,334	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,458	$ 58,507	$ 75
5		GCU Acquisition Adjustment	1.1	318,752	1,150	7,117	9
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	30,251	0
7		LNG Deferral Amortizaton	2.0	3,983,884	40,937	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	12,993	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,387	18,639	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,911)	(20,454)	0
11		DSM	1.1	(3,702,079)	(13,362)	(82,654)	(106)
12		Total Regulatory Amortizations		4,315,957	37,659	24,398	(22)
13		Taxes Other Than Income	1.1	69,307,596	250,152	1,547,388	1,985
14		Total Allocated Operating Deductions		$ 315,902,948	$ 804,828	$ 7,366,375	$ 56,087
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 193,915	$ 1,199,518	$ 1,539
16		South Georgia - Federal	1.1	(7,284,597)	(26,292)	(162,639)	(209)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,333,843	$ 88,666,232	$ 113,754
18		Total Common Systems Allocable Net Plant		142,424,093	514,051	3,179,816	4,080
19		Cash Working Capital	11.2	(16,619,324)	(33,484)	(402,959)	(3,782)
20		Materials & Supplies	1.1	30,847,268	111,337	688,708	884
21		Prepayments	1.1	14,121,283	50,968	315,277	404
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(3,418,126)	0
24		Customer Advances	9.0	(59,445,400)	0	(6,020,493)	0
25		Deferred Taxes	1.1	(634,525,981)	(2,290,194)	(14,166,675)	(18,175)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 12,686,522	$ 68,841,781	$ 97,165
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 4,754,484	$ 6,582,143
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	56,297	77,939
30		Late Charges	12.0	848,431	0	48,737	0
31		Service Establishment Charges	9.0	6,845,361	0	693,282	0
32		Reconnect / Reread Charges	9.0	100	0	10	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	9	12
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	1
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	31,048	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,583,868	$ 6,660,094
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (285,692)	$ (3,438,165)	$ (32,270)
40		A & G	Total O&M	(96,125,247)	(193,667)	(2,330,691)	(21,875)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(415,552)	(3,268,014)	(3,371)
42		Interest on Customer Deposits	8.0	(37,125)	0	(1,334)	0
43		Regulatory Amortizations	Various	(4,315,957)	(37,659)	(24,398)	22
44		Taxes Other Than Income	1.1	(69,307,596)	(250,152)	(1,547,388)	(1,985)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,182,721)	$ (5,026,123)	$ 6,600,614
46		Interest Expense	1.1	(53,726,452)	(193,915)	(1,199,518)	(1,539)
47		State Taxable Income		$ 77,326,971	$ (1,376,636)	$ (6,225,640)	$ 6,599,076
48		State Income Tax	4.90%	$ 3,789,022	$ (67,455)	$ (305,056)	$ 323,355
49		Total State Income Tax		$ 3,789,022	$ (67,455)	$ (305,056)	$ 323,355
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,182,721)	$ (5,026,123)	$ 6,600,614
51		Interest Expense	1.1	(53,726,452)	(193,915)	(1,199,518)	(1,539)
52		Federal Taxable Income		$ 77,326,971	$ (1,376,636)	$ (6,225,640)	$ 6,599,076
53		Federal Income Tax	19.97%	$ 15,442,969	$ (274,928)	$ (1,243,323)	$ 1,317,901
54		South Georgia Federal	1.1	(7,284,597)	(26,292)	(162,639)	(209)
55		Total Federal Income Tax		$ 8,158,372	$ (301,220)	$ (1,405,961)	$ 1,317,693
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (814,046)	$ (3,315,105)	$ 4,959,567
58		Rate of Return on Rate Base		3.49%	-6.42%	-4.82%	5104.29%
59		Rate of Return by Class Total				1.02%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 76	$ 9	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	8,061	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	130	0	0
	375.00	Structures	1.0	3,704	10	0	0
	376.00	Mains	2.2	47,744,070	61,400	2,023	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	4,978	164	0
	380.00	Services	7.0	35,893,910	0	6,637	0
	381.00	Meters	6.0	14,097,273	0	5,604	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	461
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	66,517	14,427	461
4	389 - 398	General Plant	1.1	14,327,615	12,813	1,499	76
5		Total Direct Depreciation Expense		$ 119,891,319	$ 87,467	$ 15,935	$ 538
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 11,072	$ 1,295	$ 66
7		General Plant	1.1	4,272,997	3,821	447	23
8		Total System Allocable Amortization		$ 16,653,700	$ 14,893	$ 1,742	$ 89
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 3,821	$ 447	$ 23
10		Total Depreciation Expense		$ 136,545,019	$ 102,360	$ 17,677	$ 627
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 102,360	$ 17,677	$ 627
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	2,490
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 2,490
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 4,517	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 4,608	$ 2,257	$ 496
22		Materials & Expenses	5.5	1,271,396	603	295	65
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	2,359
24		Materials & Expenses	3.0	51,869	0	0	97
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	5,293	448	0
26		Materials & Expenses	4.4	14,594,880	13,800	1,169	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	2,764	91	0
28		Materials & Expenses	2.2	732,095	941	31	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	2,861	0
30		Materials & Expenses	6.0	3,556,774	0	1,414	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	4,454	0
32		Materials & Expenses	6.0	1,752,586	0	697	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	2,833	1,387	305
34		Materials & Expenses	5.5	4,526,461	2,145	1,051	231
35	881.00	Rents	5.5	(838,690)	(397)	(195)	(43)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 32,590	$ 15,960	$ 3,510
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 37,107	$ 15,960	$ 6,000

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 1,873	$ 294	$ 0
2		Materials & Expenses	6.6	249,786	197	31	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	2	0	0
4		Materials & Expenses	1.0	6,846	18	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	14,711	485	0
6		Materials & Expenses	2.2	10,664,855	13,715	452	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	1,875	62	0
8		Materials & Expenses	2.2	697,186	897	30	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	944	0
10		Materials & Expenses	3.3	5,366,958	0	992	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	1,447	0
12		Materials & Expenses	6.0	1,246,741	0	496	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	167	26	0
14		Materials & Expenses	6.6	93,400	74	12	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 33,528	$ 5,270	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 70,635	$ 21,231	$ 6,000
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 197	$ 0
18		Materials & Expenses	10.1	54,104	0	4	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	103	0
20		Materials & Expenses	11.0	407,223	0	35	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	684	0
22		Materials & Expenses	4.0	12,265,589	0	1,039	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	143	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	6	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 2,213	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	14	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 14	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 70,635	$ 23,458	$ 6,000
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 47,883	$ 15,902	$ 4,067
2		Interest on Customer Deposits	8.0	37,125	0	3	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 2,344	$ 274	$ 14
5		GCU Acquisition Adjustment	1.1	318,752	285	33	2
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	72	0
7		LNG Deferral Amortizaton	2.0	3,983,884	8,993	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	65	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	1,343	44	0
10		TRIMP/DOT	2.2	(1,146,342)	(1,474)	(49)	0
11		DSM	1.1	(3,702,079)	(3,311)	(387)	(20)
12		Total Regulatory Amortizations		4,315,957	8,180	52	(4)
13		Taxes Other Than Income	1.1	69,307,596	61,981	7,251	369
14		Total Allocated Operating Deductions		$ 315,902,948	$ 196,858	$ 46,718	$ 10,429
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 48,047	$ 5,621	$ 286
16		South Georgia - Federal	1.1	(7,284,597)	(6,515)	(762)	(39)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 3,551,549	$ 415,462	$ 21,151
18		Total Common Systems Allocable Net Plant		142,424,093	127,368	14,900	759
19		Cash Working Capital	11.2	(16,619,324)	(8,279)	(2,749)	(703)
20		Materials & Supplies	1.1	30,847,268	27,586	3,227	164
21		Prepayments	1.1	14,121,283	12,629	1,477	75
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,477)	0
24		Customer Advances	9.0	(59,445,400)	0	(4,363)	0
25		Deferred Taxes	1.1	(634,525,981)	(567,450)	(66,381)	(3,379)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 3,143,404	$ 359,095	$ 18,067
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 76,824	$ 635,208
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	910	7,521
30		Late Charges	12.0	848,431	0	266	0
31		Service Establishment Charges	9.0	6,845,361	0	502	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	1
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 78,503	$ 642,731
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (70,635)	$ (23,458)	$ (6,000)
40		A & G	Total O&M	(96,125,247)	(47,883)	(15,902)	(4,067)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(102,360)	(17,677)	(627)
42		Interest on Customer Deposits	8.0	(37,125)	0	(3)	0
43		Regulatory Amortizations	Various	(4,315,957)	(8,180)	(52)	4
44		Taxes Other Than Income	1.1	(69,307,596)	(61,981)	(7,251)	(369)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (291,039)	$ 14,160	$ 631,671
46		Interest Expense	1.1	(53,726,452)	(48,047)	(5,621)	(286)
47		State Taxable Income		$ 77,326,971	$ (339,086)	$ 8,539	$ 631,385
48		State Income Tax	4.90%	$ 3,789,022	$ (16,615)	$ 418	$ 30,938
49		Total State Income Tax		$ 3,789,022	$ (16,615)	$ 418	$ 30,938
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (291,039)	$ 14,160	$ 631,671
51		Interest Expense	1.1	(53,726,452)	(48,047)	(5,621)	(286)
52		Federal Taxable Income		$ 77,326,971	$ (339,086)	$ 8,539	$ 631,385
53		Federal Income Tax	19.97%	$ 15,442,969	$ (67,719)	$ 1,705	$ 126,094
54		South Georgia Federal	1.1	(7,284,597)	(6,515)	(762)	(39)
55		Total Federal Income Tax		$ 8,158,372	$ (74,233)	$ 943	$ 126,055
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (200,190)	$ 12,798	$ 474,678
58		Rate of Return on Rate Base		3.49%	-6.37%	3.56%	2627.39%
59		Rate of Return by Class Total				8.16%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 236	$ 1,041	$ 1
2	360 - 363.50	Storage Plant	2.0	3,571,136	24,628	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	407	0	0
	375.00	Structures	1.0	3,704	30	0	0
	376.00	Mains	2.2	47,744,070	191,737	359,604	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	15,544	29,154	0
	380.00	Services	7.0	35,893,910	0	1,008,971	0
	381.00	Meters	6.0	14,097,273	0	133,744	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	1,335
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	207,718	1,531,473	1,335
4	389 - 398	General Plant	1.1	14,327,615	39,971	176,041	221
5		Total Direct Depreciation Expense		$ 119,891,319	$ 272,554	$ 1,708,556	$ 1,557
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 34,539	$ 152,120	$ 191
7		General Plant	1.1	4,272,997	11,921	52,502	66
8		Total System Allocable Amortization		$ 16,653,700	$ 46,460	$ 204,621	$ 257
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 11,921	$ 52,502	$ 66
10		Total Depreciation Expense		$ 136,545,019	$ 319,014	$ 1,913,177	$ 1,814
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 319,014	$ 1,913,177	$ 1,814
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	7,204
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 7,204
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 13,801	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 14,389	$ 102,829	$ 1,436
22		Materials & Expenses	5.5	1,271,396	1,882	13,447	188
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	6,826
24		Materials & Expenses	3.0	51,869	0	0	280
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	16,530	72,666	0
26		Materials & Expenses	4.4	14,594,880	43,094	189,442	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	8,630	16,186	0
28		Materials & Expenses	2.2	732,095	2,940	5,514	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	68,295	0
30		Materials & Expenses	6.0	3,556,774	0	33,744	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	106,297	0
32		Materials & Expenses	6.0	1,752,586	0	16,627	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	8,847	63,225	883
34		Materials & Expenses	5.5	4,526,461	6,699	47,874	669
35	881.00	Rents	5.5	(838,690)	(1,241)	(8,870)	(124)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 101,771	$ 727,275	$ 10,158
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 115,572	$ 727,275	$ 17,362

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 5,849	$ 31,409	$ 0
2		Materials & Expenses	6.6	249,786	614	3,300	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	7	0	0
4		Materials & Expenses	1.0	6,846	55	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	45,940	86,162	0
6		Materials & Expenses	2.2	10,664,855	42,829	80,327	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	5,855	10,982	0
8		Materials & Expenses	2.2	697,186	2,800	5,251	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	143,578	0
10		Materials & Expenses	3.3	5,366,958	0	150,864	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	34,538	0
12		Materials & Expenses	6.0	1,246,741	0	11,828	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	521	2,799	0
14		Materials & Expenses	6.6	93,400	230	1,234	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 104,701	$ 562,271	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 220,272	$ 1,289,546	$ 17,362
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 36,047	$ 0
18		Materials & Expenses	10.1	54,104	0	812	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	18,340	0
20		Materials & Expenses	11.0	407,223	0	6,134	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	121,668	0
22		Materials & Expenses	4.0	12,265,589	0	184,767	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	10,447	0
24		Materials & Expenses - KAM	15.0	2,968	0	40	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	25,499	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,169	0
27		Materials & Expenses	10.1	237	0	4	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 404,926	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	2,530	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 2,530	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(3)	0
42		Total Sales Expense		$ (203)	$ 0	$ (3)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 220,272	$ 1,696,999	$ 17,362
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small General Demand	Small General Customer	Small General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 149,320	$ 1,150,375	$ 11,770
2		Interest on Customer Deposits	8.0	37,125	0	563	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 7,311	$ 32,198	$ 40
5		GCU Acquisition Adjustment	1.1	318,752	889	3,916	5
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	12,770	0
7		LNG Deferral Amortizaton	2.0	3,983,884	27,475	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	9,808	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	4,195	7,868	0
10		TRIMP/DOT	2.2	(1,146,342)	(4,604)	(8,634)	0
11		DSM	1.1	(3,702,079)	(10,328)	(45,487)	(57)
12		Total Regulatory Amortizations		4,315,957	24,938	12,439	(12)
13		Taxes Other Than Income	1.1	69,307,596	193,352	851,572	1,068
14		Total Allocated Operating Deductions		$ 315,902,948	$ 612,820	$ 3,724,387	$ 30,177
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 149,884	$ 660,129	$ 828
16		South Georgia - Federal	1.1	(7,284,597)	(20,322)	(89,505)	(112)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 11,079,185	$ 48,795,554	$ 61,204
18		Total Common Systems Allocable Net Plant		142,424,093	397,330	1,749,943	2,195
19		Cash Working Capital	11.2	(16,619,324)	(25,816)	(198,891)	(2,035)
20		Materials & Supplies	1.1	30,847,268	86,057	379,016	475
21		Prepayments	1.1	14,121,283	39,395	173,506	218
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(433,766)	0
24		Customer Advances	9.0	(59,445,400)	0	(764,010)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,770,180)	(7,796,325)	(9,779)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 9,805,971	$ 41,905,027	$ 52,278
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 5,711,446	$ 4,025,121
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	67,629	47,661
30		Late Charges	12.0	848,431	0	29,565	0
31		Service Establishment Charges	9.0	6,845,361	0	87,979	0
32		Reconnect / Reread Charges	9.0	100	0	1	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	11	7
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	16,389	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,913,021	$ 4,072,790
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (220,272)	$ (1,696,999)	$ (17,362)
40		A & G	Total O&M	(96,125,247)	(149,320)	(1,150,375)	(11,770)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(319,014)	(1,913,177)	(1,814)
42		Interest on Customer Deposits	8.0	(37,125)	0	(563)	0
43		Regulatory Amortizations	Various	(4,315,957)	(24,938)	(12,439)	12
44		Taxes Other Than Income	1.1	(69,307,596)	(193,352)	(851,572)	(1,068)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (906,896)	$ 287,895	$ 4,040,788
46		Interest Expense	1.1	(53,726,452)	(149,884)	(660,129)	(828)
47		State Taxable Income		$ 77,326,971	$ (1,056,780)	$ (372,234)	$ 4,039,960
48		State Income Tax	4.90%	$ 3,789,022	$ (51,782)	$ (18,239)	$ 197,958
49		Total State Income Tax		$ 3,789,022	$ (51,782)	$ (18,239)	$ 197,958
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (906,896)	$ 287,895	$ 4,040,788
51		Interest Expense	1.1	(53,726,452)	(149,884)	(660,129)	(828)
52		Federal Taxable Income		$ 77,326,971	$ (1,056,780)	$ (372,234)	$ 4,039,960
53		Federal Income Tax	19.97%	$ 15,442,969	$ (211,050)	$ (74,339)	$ 806,820
54		South Georgia Federal	1.1	(7,284,597)	(20,322)	(89,505)	(112)
55		Total Federal Income Tax		$ 8,158,372	$ (231,372)	$ (163,844)	$ 806,708
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (623,742)	$ 469,978	$ 3,036,122
58		Rate of Return on Rate Base		3.49%	-6.36%	1.12%	5807.64%
59		Rate of Return by Class Total				5.57%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 1,877	$ 3,183	$ 17
2	360 - 363.50	Storage Plant	2.0	3,571,136	231,629	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	3,204	0	0
	375.00	Structures	1.0	3,704	234	0	0
	376.00	Mains	2.2	47,744,070	1,508,517	346,056	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	122,298	28,055	0
	380.00	Services	7.0	35,893,910	0	2,203,029	0
	381.00	Meters	6.0	14,097,273	0	3,074,939	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	17,394
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	1,634,253	5,652,080	17,394
4	389 - 398	General Plant	1.1	14,327,615	317,361	538,056	2,877
5		Total Direct Depreciation Expense		$ 119,891,319	$ 2,185,121	$ 6,193,319	$ 20,288
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 274,237	$ 464,942	$ 2,486
7		General Plant	1.1	4,272,997	94,648	160,467	858
8		Total System Allocable Amortization		$ 16,653,700	$ 368,885	$ 625,410	$ 3,344
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 94,648	$ 160,467	$ 858
10		Total Depreciation Expense		$ 136,545,019	$ 2,554,006	$ 6,818,729	$ 23,632
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 2,554,006	$ 6,818,729	$ 23,632
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	93,865
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 93,865
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 129,794	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 113,210	$ 1,137,650	$ 18,712
22		Materials & Expenses	5.5	1,271,396	14,805	148,771	2,447
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	88,937
24		Materials & Expenses	3.0	51,869	0	0	3,646
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	130,053	120,805	0
26		Materials & Expenses	4.4	14,594,880	339,050	314,940	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	67,900	15,576	0
28		Materials & Expenses	2.2	732,095	23,131	5,306	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	1,570,180	0
30		Materials & Expenses	6.0	3,556,774	0	775,814	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	2,443,892	0
32		Materials & Expenses	6.0	1,752,586	0	382,279	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	69,608	699,487	11,505
34		Materials & Expenses	5.5	4,526,461	52,708	529,659	8,712
35	881.00	Rents	5.5	(838,690)	(9,766)	(98,138)	(1,614)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 800,699	$ 8,046,222	$ 132,345
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 930,493	$ 8,046,222	$ 226,210

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 46,016	$ 113,076	$ 0
2		Materials & Expenses	6.6	249,786	4,834	11,880	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	52	0	0
4		Materials & Expenses	1.0	6,846	433	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	361,443	82,916	0
6		Materials & Expenses	2.2	10,664,855	336,966	77,301	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	46,067	10,568	0
8		Materials & Expenses	2.2	697,186	22,028	5,053	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	313,494	0
10		Materials & Expenses	3.3	5,366,958	0	329,403	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	794,061	0
12		Materials & Expenses	6.0	1,246,741	0	271,943	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	4,100	10,076	0
14		Materials & Expenses	6.6	93,400	1,808	4,442	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 823,746	$ 2,024,213	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 1,754,239	$ 10,070,435	$ 226,210
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 47,092	$ 0
18		Materials & Expenses	10.1	54,104	0	1,061	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	17,649	0
20		Materials & Expenses	11.0	407,223	0	5,903	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	117,084	0
22		Materials & Expenses	4.0	12,265,589	0	177,806	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	135,809	0
24		Materials & Expenses - KAM	15.0	2,968	0	519	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	24,538	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,528	0
27		Materials & Expenses	10.1	237	0	5	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 528,994	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	2,434	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 2,434	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(3)	0
42		Total Sales Expense		$ (203)	$ 0	$ (3)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 1,754,239	$ 10,601,860	$ 226,210
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Medium General Demand	Medium General Customer	Medium General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 1,189,178	$ 7,186,874	$ 153,345
2		Interest on Customer Deposits	8.0	37,125	0	542	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 58,045	$ 98,410	$ 526
5		GCU Acquisition Adjustment	1.1	318,752	7,060	11,970	64
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	12,289	0
7		LNG Deferral Amortizaton	2.0	3,983,884	258,400	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	21,414	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	33,005	7,571	0
10		TRIMP/DOT	2.2	(1,146,342)	(36,220)	(8,309)	0
11		DSM	1.1	(3,702,079)	(82,002)	(139,027)	(743)
12		Total Regulatory Amortizations		4,315,957	238,289	4,319	(153)
13		Taxes Other Than Income	1.1	69,307,596	1,535,186	2,602,763	13,916
14		Total Allocated Operating Deductions		$ 315,902,948	$ 4,955,182	$ 20,400,677	$ 393,165
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 1,190,058	$ 2,017,632	$ 10,788
16		South Georgia - Federal	1.1	(7,284,597)	(161,356)	(273,564)	(1,463)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 87,967,004	$ 149,139,783	$ 797,412
18		Total Common Systems Allocable Net Plant		142,424,093	3,154,740	5,348,565	28,597
19		Cash Working Capital	11.2	(16,619,324)	(205,600)	(1,242,556)	(26,512)
20		Materials & Supplies	1.1	30,847,268	683,277	1,158,432	6,194
21		Prepayments	1.1	14,121,283	312,791	530,308	2,835
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(522,844)	0
24		Customer Advances	9.0	(59,445,400)	0	(920,908)	0
25		Deferred Taxes	1.1	(634,525,981)	(14,054,956)	(23,828,856)	(127,407)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 77,857,256	$ 129,661,922	$ 681,120
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 8,659,176	$ 23,293,621
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	102,532	275,818
30		Late Charges	12.0	848,431	0	64,644	0
31		Service Establishment Charges	9.0	6,845,361	0	106,046	0
32		Reconnect / Reread Charges	9.0	100	0	2	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	16	43
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	3
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	37,936	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 8,970,354	$ 23,569,485
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (1,754,239)	$ (10,601,860)	$ (226,210)
40		A & G	Total O&M	(96,125,247)	(1,189,178)	(7,186,874)	(153,345)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(2,554,006)	(6,818,729)	(23,632)
42		Interest on Customer Deposits	8.0	(37,125)	0	(542)	0
43		Regulatory Amortizations	Various	(4,315,957)	(238,289)	(4,319)	153
44		Taxes Other Than Income	1.1	(69,307,596)	(1,535,186)	(2,602,763)	(13,916)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (7,270,898)	$ (18,244,733)	$ 23,152,535
46		Interest Expense	1.1	(53,726,452)	(1,190,058)	(2,017,632)	(10,788)
47		State Taxable Income		$ 77,326,971	$ (8,460,956)	$ (20,262,365)	$ 23,141,747
48		State Income Tax	4.90%	$ 3,789,022	$ (414,587)	$ (992,856)	$ 1,133,946
49		Total State Income Tax		$ 3,789,022	$ (414,587)	$ (992,856)	$ 1,133,946
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (7,270,898)	$ (18,244,733)	$ 23,152,535
51		Interest Expense	1.1	(53,726,452)	(1,190,058)	(2,017,632)	(10,788)
52		Federal Taxable Income		$ 77,326,971	$ (8,460,956)	$ (20,262,365)	$ 23,141,747
53		Federal Income Tax	19.97%	$ 15,442,969	$ (1,689,738)	$ (4,046,597)	$ 4,621,638
54		South Georgia Federal	1.1	(7,284,597)	(161,356)	(273,564)	(1,463)
55		Total Federal Income Tax		$ 8,158,372	$ (1,851,094)	$ (4,320,161)	$ 4,620,176
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (5,005,217)	$ (12,931,716)	$ 17,398,413
58		Rate of Return on Rate Base		3.49%	-6.43%	-9.97%	2554.38%
59		Rate of Return by Class Total				-0.26%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 3,677	$ 1,281	$ 36
2	360 - 363.50	Storage Plant	2.0	3,571,136	465,514	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	6,266	0	0
	375.00	Structures	1.0	3,704	458	0	0
	376.00	Mains	2.2	47,744,070	2,950,246	141,605	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	239,182	11,480	0
	380.00	Services	7.0	35,893,910	0	723,128	0
	381.00	Meters	6.0	14,097,273	0	1,405,689	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	36,850
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	3,196,151	2,281,902	36,850
4	389 - 398	General Plant	1.1	14,327,615	621,625	216,488	6,095
5		Total Direct Depreciation Expense		$ 119,891,319	$ 4,286,968	$ 2,499,671	$ 42,980
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 537,156	$ 187,071	$ 5,266
7		General Plant	1.1	4,272,997	185,390	64,564	1,818
8		Total System Allocable Amortization		$ 16,653,700	$ 722,546	$ 251,635	$ 7,084
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 185,390	$ 64,564	$ 1,818
10		Total Depreciation Expense		$ 136,545,019	$ 5,009,514	$ 2,751,306	$ 50,064
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 5,009,514	$ 2,751,306	$ 50,064
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	198,850
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 198,850
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 260,853	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 221,408	$ 510,276	$ 39,641
22		Materials & Expenses	5.5	1,271,396	28,954	66,729	5,184
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	188,412
24		Materials & Expenses	3.0	51,869	0	0	7,724
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	254,348	42,069	0
26		Materials & Expenses	4.4	14,594,880	663,089	109,673	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	132,795	6,374	0
28		Materials & Expenses	2.2	732,095	45,238	2,171	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	717,798	0
30		Materials & Expenses	6.0	3,556,774	0	354,658	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	1,117,210	0
32		Materials & Expenses	6.0	1,752,586	0	174,757	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	136,133	313,744	24,374
34		Materials & Expenses	5.5	4,526,461	103,082	237,570	18,456
35	881.00	Rents	5.5	(838,690)	(19,100)	(44,019)	(3,420)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 1,565,947	$ 3,609,010	$ 280,371
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 1,826,800	$ 3,609,010	$ 479,221

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 89,994	$ 46,214	$ 0
2		Materials & Expenses	6.6	249,786	9,455	4,855	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	101	0	0
4		Materials & Expenses	1.0	6,846	846	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	706,884	33,929	0
6		Materials & Expenses	2.2	10,664,855	659,013	31,631	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	90,094	4,324	0
8		Materials & Expenses	2.2	697,186	43,081	2,068	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	102,902	0
10		Materials & Expenses	3.3	5,366,958	0	108,124	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	363,000	0
12		Materials & Expenses	6.0	1,246,741	0	124,317	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	8,019	4,118	0
14		Materials & Expenses	6.6	93,400	3,535	1,815	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 1,611,022	$ 827,299	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 3,437,822	$ 4,436,309	$ 479,221
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 40,283	$ 0
18		Materials & Expenses	10.1	54,104	0	908	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	7,222	0
20		Materials & Expenses	11.0	407,223	0	2,416	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	47,910	0
22		Materials & Expenses	4.0	12,265,589	0	72,758	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	268,633	0
24		Materials & Expenses - KAM	15.0	2,968	0	1,027	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	10,041	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	1,307	0
27		Materials & Expenses	10.1	237	0	4	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 452,509	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	996	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 996	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(1)	0
42		Total Sales Expense		$ (203)	$ 0	$ (1)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 3,437,822	$ 4,889,812	$ 479,221
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 2,330,458	$ 3,314,745	$ 324,858
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 113,695	$ 39,596	$ 1,115
5		GCU Acquisition Adjustment	1.1	318,752	13,830	4,816	136
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	5,029	0
7		LNG Deferral Amortizaton	2.0	3,983,884	519,318	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	7,029	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	64,549	3,098	0
10		TRIMP/DOT	2.2	(1,146,342)	(70,836)	(3,400)	0
11		DSM	1.1	(3,702,079)	(160,620)	(55,938)	(1,575)
12		Total Regulatory Amortizations		4,315,957	479,935	230	(324)
13		Taxes Other Than Income	1.1	69,307,596	3,007,015	1,047,228	29,481
14		Total Allocated Operating Deductions		$ 315,902,948	$ 9,735,166	$ 9,252,245	$ 832,912
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 2,331,004	$ 811,799	$ 22,854
16		South Georgia - Federal	1.1	(7,284,597)	(316,053)	(110,069)	(3,099)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 172,303,660	$ 60,006,741	$ 1,689,302
18		Total Common Systems Allocable Net Plant		142,424,093	6,179,285	2,152,007	60,583
19		Cash Working Capital	11.2	(16,619,324)	(402,919)	(573,094)	(56,166)
20		Materials & Supplies	1.1	30,847,268	1,338,355	466,098	13,122
21		Prepayments	1.1	14,121,283	612,673	213,371	6,007
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(175,302)	0
24		Customer Advances	9.0	(59,445,400)	0	(308,766)	0
25		Deferred Taxes	1.1	(634,525,981)	(27,529,872)	(9,587,596)	(269,909)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 152,501,184	$ 52,193,459	$ 1,442,939
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 6,509,416	$ 44,543,042
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	77,077	527,430
30		Late Charges	12.0	848,431	0	65,327	0
31		Service Establishment Charges	9.0	6,845,361	0	35,556	0
32		Reconnect / Reread Charges	9.0	100	0	1	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	12	83
34		Other Revenue - Parts & Material	Net Op Margin	68	0	1	5
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	34,797	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 6,722,186	$ 45,070,560
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (3,437,822)	$ (4,889,812)	$ (479,221)
40		A & G	Total O&M	(96,125,247)	(2,330,458)	(3,314,745)	(324,858)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(5,009,514)	(2,751,306)	(50,064)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(479,935)	(230)	324
44		Taxes Other Than Income	1.1	(69,307,596)	(3,007,015)	(1,047,228)	(29,481)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (14,264,744)	$ (5,281,135)	$ 44,187,259
46		Interest Expense	1.1	(53,726,452)	(2,331,004)	(811,799)	(22,854)
47		State Taxable Income		$ 77,326,971	$ (16,595,748)	$ (6,092,934)	$ 44,164,406
48		State Income Tax	4.90%	$ 3,789,022	$ (813,192)	$ (298,554)	$ 2,164,056
49		Total State Income Tax		$ 3,789,022	$ (813,192)	$ (298,554)	$ 2,164,056
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (14,264,744)	$ (5,281,135)	$ 44,187,259
51		Interest Expense	1.1	(53,726,452)	(2,331,004)	(811,799)	(22,854)
52		Federal Taxable Income		$ 77,326,971	$ (16,595,748)	$ (6,092,934)	$ 44,164,406
53		Federal Income Tax	19.97%	$ 15,442,969	$ (3,314,337)	$ (1,216,820)	$ 8,820,073
54		South Georgia Federal	1.1	(7,284,597)	(316,053)	(110,069)	(3,099)
55		Total Federal Income Tax		$ 8,158,372	$ (3,630,390)	$ (1,326,889)	$ 8,816,975
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (9,821,163)	$ (3,655,692)	$ 33,206,229
58		Rate of Return on Rate Base		3.49%	-6.44%	-7.00%	2301.29%
59		Rate of Return by Class Total				9.57%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 1,178	$ 380	$ 12
2	360 - 363.50	Storage Plant	2.0	3,571,136	151,979	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	2,004	0	0
	375.00	Structures	1.0	3,704	146	0	0
	376.00	Mains	2.2	47,744,070	943,755	8,309	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	76,512	674	0
	380.00	Services	7.0	35,893,910	0	162,278	0
	381.00	Meters	6.0	14,097,273	0	549,489	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	12,105
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	1,022,418	720,750	12,105
4	389 - 398	General Plant	1.1	14,327,615	199,086	64,180	2,002
5		Total Direct Depreciation Expense		$ 119,891,319	$ 1,374,660	$ 785,310	$ 14,119
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 172,033	$ 55,459	$ 1,730
7		General Plant	1.1	4,272,997	59,374	19,141	597
8		Total System Allocable Amortization		$ 16,653,700	$ 231,407	$ 74,600	$ 2,327
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 59,374	$ 19,141	$ 597
10		Total Depreciation Expense		$ 136,545,019	$ 1,606,067	$ 859,909	$ 16,446
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 1,606,067	$ 859,909	$ 16,446
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	65,321
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 65,321
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 85,162	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 70,826	$ 192,314	$ 13,022
22		Materials & Expenses	5.5	1,271,396	9,262	25,149	1,703
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	61,892
24		Materials & Expenses	3.0	51,869	0	0	2,537
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	81,363	7,417	0
26		Materials & Expenses	4.4	14,594,880	212,116	19,337	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	42,480	374	0
28		Materials & Expenses	2.2	732,095	14,471	127	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	280,590	0
30		Materials & Expenses	6.0	3,556,774	0	138,637	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	436,722	0
32		Materials & Expenses	6.0	1,752,586	0	68,313	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	43,548	118,245	8,007
34		Materials & Expenses	5.5	4,526,461	32,975	89,536	6,063
35	881.00	Rents	5.5	(838,690)	(6,110)	(16,590)	(1,123)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 500,931	$ 1,360,172	$ 92,100
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 586,093	$ 1,360,172	$ 157,420

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 28,788	$ 14,523	$ 0
2		Materials & Expenses	6.6	249,786	3,024	1,526	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	32	0	0
4		Materials & Expenses	1.0	6,846	271	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	226,125	1,991	0
6		Materials & Expenses	2.2	10,664,855	210,812	1,856	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	28,820	254	0
8		Materials & Expenses	2.2	697,186	13,781	121	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	23,092	0
10		Materials & Expenses	3.3	5,366,958	0	24,264	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	141,898	0
12		Materials & Expenses	6.0	1,246,741	0	48,596	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	2,565	1,294	0
14		Materials & Expenses	6.6	93,400	1,131	571	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 515,350	$ 259,987	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 1,101,444	$ 1,620,158	$ 157,420
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 11,554	$ 0
18		Materials & Expenses	10.1	54,104	0	260	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	424	0
20		Materials & Expenses	11.0	407,223	0	142	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	2,811	0
22		Materials & Expenses	4.0	12,265,589	0	4,269	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	108,946	0
24		Materials & Expenses - KAM	15.0	2,968	0	417	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	589	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	375	0
27		Materials & Expenses	10.1	237	0	1	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 129,788	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	58	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 58	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 1,101,444	$ 1,750,005	$ 157,420
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 746,656	$ 1,186,307	$ 106,713
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 36,413	$ 11,739	$ 366
5		GCU Acquisition Adjustment	1.1	318,752	4,429	1,428	45
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	295	0
7		LNG Deferral Amortizaton	2.0	3,983,884	169,545	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	1,577	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	20,649	182	0
10		TRIMP/DOT	2.2	(1,146,342)	(22,660)	(200)	0
11		DSM	1.1	(3,702,079)	(51,441)	(16,583)	(517)
12		Total Regulatory Amortizations		4,315,957	156,934	(1,562)	(107)
13		Taxes Other Than Income	1.1	69,307,596	963,045	310,461	9,684
14		Total Allocated Operating Deductions		$ 315,902,948	$ 3,125,013	$ 3,243,649	$ 273,605
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 746,542	$ 240,666	$ 7,507
16		South Georgia - Federal	1.1	(7,284,597)	(101,221)	(32,631)	(1,018)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 55,183,039	$ 17,789,603	$ 554,922
18		Total Common Systems Allocable Net Plant		142,424,093	1,979,016	637,984	19,901
19		Cash Working Capital	11.2	(16,619,324)	(129,091)	(205,104)	(18,450)
20		Materials & Supplies	1.1	30,847,268	428,630	138,179	4,310
21		Prepayments	1.1	14,121,283	196,219	63,256	1,973
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(8,416)	0
24		Customer Advances	9.0	(59,445,400)	0	(14,824)	0
25		Deferred Taxes	1.1	(634,525,981)	(8,816,887)	(2,842,339)	(88,663)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 48,840,925	$ 15,558,339	$ 473,994
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 2,231,662	$ 10,674,638
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	26,425	126,397
30		Late Charges	12.0	848,431	0	28,883	0
31		Service Establishment Charges	9.0	6,845,361	0	1,707	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	4	20
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	1
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 2,288,681	$ 10,801,057
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (1,101,444)	$ (1,750,005)	$ (157,420)
40		A & G	Total O&M	(96,125,247)	(746,656)	(1,186,307)	(106,713)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(1,606,067)	(859,909)	(16,446)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(156,934)	1,562	107
44		Taxes Other Than Income	1.1	(69,307,596)	(963,045)	(310,461)	(9,684)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (4,574,146)	$ (1,816,440)	$ 10,510,899
46		Interest Expense	1.1	(53,726,452)	(746,542)	(240,666)	(7,507)
47		State Taxable Income		$ 77,326,971	$ (5,320,688)	$ (2,057,106)	$ 10,503,392
48		State Income Tax	4.90%	$ 3,789,022	$ (260,714)	$ (100,798)	$ 514,666
49		Total State Income Tax		$ 3,789,022	$ (260,714)	$ (100,798)	$ 514,666
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (4,574,146)	$ (1,816,440)	$ 10,510,899
51		Interest Expense	1.1	(53,726,452)	(746,542)	(240,666)	(7,507)
52		Federal Taxable Income		$ 77,326,971	$ (5,320,688)	$ (2,057,106)	$ 10,503,392
53		Federal Income Tax	19.97%	$ 15,442,969	$ (1,062,595)	$ (410,825)	$ 2,097,632
54		South Georgia Federal	1.1	(7,284,597)	(101,221)	(32,631)	(1,018)
55		Total Federal Income Tax		$ 8,158,372	$ (1,163,816)	$ (443,456)	$ 2,096,615
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (3,149,617)	$ (1,272,186)	$ 7,899,619
58		Rate of Return on Rate Base		3.49%	-6.45%	-8.18%	1666.61%
59		Rate of Return by Class Total				5.36%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 3,487	$ 209	$ 46
2	360 - 363.50	Storage Plant	2.0	3,571,136	536,230	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	5,865	0	0
	375.00	Structures	1.0	3,704	428	0	0
	376.00	Mains	2.2	47,744,070	2,761,483	4,296	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	223,878	348	0
	380.00	Services	7.0	35,893,910	0	130,909	0
	381.00	Meters	6.0	14,097,273	0	259,684	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	47,134
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	2,991,655	395,238	47,134
4	389 - 398	General Plant	1.1	14,327,615	589,513	35,404	7,796
5		Total Direct Depreciation Expense		$ 119,891,319	$ 4,120,884	$ 430,851	$ 54,976
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 509,407	$ 30,593	$ 6,736
7		General Plant	1.1	4,272,997	175,813	10,559	2,325
8		Total System Allocable Amortization		$ 16,653,700	$ 685,220	$ 41,152	$ 9,061
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 175,813	$ 10,559	$ 2,325
10		Total Depreciation Expense		$ 136,545,019	$ 4,806,104	$ 472,003	$ 64,037
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 4,806,104	$ 472,003	$ 64,037
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	254,350
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 254,350
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 300,479	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 207,242	$ 92,546	$ 50,705
22		Materials & Expenses	5.5	1,271,396	27,101	12,102	6,631
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	240,997
24		Materials & Expenses	3.0	51,869	0	0	9,879
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	238,074	5,776	0
26		Materials & Expenses	4.4	14,594,880	620,663	15,058	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	124,298	193	0
28		Materials & Expenses	2.2	732,095	42,344	66	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	132,604	0
30		Materials & Expenses	6.0	3,556,774	0	65,519	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	206,391	0
32		Materials & Expenses	6.0	1,752,586	0	32,284	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	127,423	56,902	31,176
34		Materials & Expenses	5.5	4,526,461	96,486	43,087	23,607
35	881.00	Rents	5.5	(838,690)	(17,878)	(7,983)	(4,374)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 1,465,754	$ 654,545	$ 358,622
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 1,766,233	$ 654,545	$ 612,972

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 84,236	$ 7,824	$ 0
2		Materials & Expenses	6.6	249,786	8,850	822	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	94	0	0
4		Materials & Expenses	1.0	6,846	792	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	661,656	1,029	0
6		Materials & Expenses	2.2	10,664,855	616,848	960	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	84,329	131	0
8		Materials & Expenses	2.2	697,186	40,325	63	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	18,629	0
10		Materials & Expenses	3.3	5,366,958	0	19,574	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	67,060	0
12		Materials & Expenses	6.0	1,246,741	0	22,966	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	7,506	697	0
14		Materials & Expenses	6.6	93,400	3,309	307	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 1,507,945	$ 140,062	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 3,274,178	$ 794,607	$ 612,972
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 21,614	$ 0
18		Materials & Expenses	10.1	54,104	0	487	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	219	0
20		Materials & Expenses	11.0	407,223	0	73	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	1,454	0
22		Materials & Expenses	4.0	12,265,589	0	2,207	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	214,907	0
24		Materials & Expenses - KAM	15.0	2,968	0	822	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	305	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	701	0
27		Materials & Expenses	10.1	237	0	2	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 242,791	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	30	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 30	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 3,274,178	$ 1,037,428	$ 612,972
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Transportation Eligible General Demand	Transportation Eligible General Customer	Transportation Eligible General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 2,219,526	$ 703,260	$ 415,527
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 107,822	$ 6,475	$ 1,426
5		GCU Acquisition Adjustment	1.1	318,752	13,115	788	173
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	153	0
7		LNG Deferral Amortizaton	2.0	3,983,884	598,207	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	1,272	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	60,419	94	0
10		TRIMP/DOT	2.2	(1,146,342)	(66,304)	(103)	0
11		DSM	1.1	(3,702,079)	(152,323)	(9,148)	(2,014)
12		Total Regulatory Amortizations		4,315,957	560,936	(469)	(415)
13		Taxes Other Than Income	1.1	69,307,596	2,851,675	171,260	37,710
14		Total Allocated Operating Deductions		$ 315,902,948	$ 9,467,253	$ 1,911,011	$ 1,065,378
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 2,210,586	$ 132,759	$ 29,232
16		South Georgia - Federal	1.1	(7,284,597)	(299,726)	(18,000)	(3,963)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 163,402,597	$ 9,813,314	$ 2,160,788
18		Total Common Systems Allocable Net Plant		142,424,093	5,860,068	351,933	77,492
19		Cash Working Capital	11.2	(16,619,324)	(383,739)	(121,588)	(71,841)
20		Materials & Supplies	1.1	30,847,268	1,269,217	76,224	16,784
21		Prepayments	1.1	14,121,283	581,023	34,894	7,683
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,191)	0
24		Customer Advances	9.0	(59,445,400)	0	(3,858)	0
25		Deferred Taxes	1.1	(634,525,981)	(26,107,701)	(1,567,925)	(345,241)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 144,621,465	$ 8,580,802	$ 1,845,665
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 15,551,126	$ 2,348,400	$ 15,603,421
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	184,139	27,807	184,759
30		Late Charges	12.0	848,431	0	5,525	0
31		Service Establishment Charges	9.0	6,845,361	0	444	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	29	4	29
34		Other Revenue - Parts & Material	Net Op Margin	68	2	0	2
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	35,825	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 15,735,296	$ 2,418,006	$ 15,788,211
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (3,274,178)	$ (1,037,428)	$ (612,972)
40		A & G	Total O&M	(96,125,247)	(2,219,526)	(703,260)	(415,527)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(4,806,104)	(472,003)	(64,037)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(560,936)	469	415
44		Taxes Other Than Income	1.1	(69,307,596)	(2,851,675)	(171,260)	(37,710)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ 2,022,876	$ 34,524	$ 14,658,380
46		Interest Expense	1.1	(53,726,452)	(2,210,586)	(132,759)	(29,232)
47		State Taxable Income		$ 77,326,971	$ (187,710)	$ (98,235)	$ 14,629,148
48		State Income Tax	4.90%	$ 3,789,022	$ (9,198)	$ (4,814)	$ 716,828
49		Total State Income Tax		$ 3,789,022	$ (9,198)	$ (4,814)	$ 716,828
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ 2,022,876	$ 34,524	$ 14,658,380
51		Interest Expense	1.1	(53,726,452)	(2,210,586)	(132,759)	(29,232)
52		Federal Taxable Income		$ 77,326,971	$ (187,710)	$ (98,235)	$ 14,629,148
53		Federal Income Tax	19.97%	$ 15,442,969	$ (37,488)	$ (19,619)	$ 2,921,587
54		South Georgia Federal	1.1	(7,284,597)	(299,726)	(18,000)	(3,963)
55		Total Federal Income Tax		$ 8,158,372	$ (337,214)	$ (37,619)	$ 2,917,624
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ 2,369,287	$ 76,956	$ 11,023,928
58		Rate of Return on Rate Base		3.49%	1.64%	0.90%	597.29%
59		Rate of Return by Class Total				8.69%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 5	$ 1	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	1,400	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	8	0	0
	375.00	Structures	1.0	3,704	1	0	0
	376.00	Mains	2.2	47,744,070	3,797	396	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	308	32	0
	380.00	Services	7.0	35,893,910	0	722	0
	381.00	Meters	6.0	14,097,273	0	147	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	118
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	4,113	1,298	118
4	389 - 398	General Plant	1.1	14,327,615	861	158	20
5		Total Direct Depreciation Expense		$ 119,891,319	$ 6,380	$ 1,457	$ 138
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 744	$ 137	$ 17
7		General Plant	1.1	4,272,997	257	47	6
8		Total System Allocable Amortization		$ 16,653,700	$ 1,001	$ 184	$ 23
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 257	$ 47	$ 6
10		Total Depreciation Expense		$ 136,545,019	$ 7,380	$ 1,640	$ 161
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 7,380	$ 1,640	$ 161
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	638
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 638
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 785	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 285	$ 102	$ 127
22		Materials & Expenses	5.5	1,271,396	37	13	17
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	604
24		Materials & Expenses	3.0	51,869	0	0	25
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	327	64	0
26		Materials & Expenses	4.4	14,594,880	853	167	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	171	18	0
28		Materials & Expenses	2.2	732,095	58	6	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	75	0
30		Materials & Expenses	6.0	3,556,774	0	37	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	117	0
32		Materials & Expenses	6.0	1,752,586	0	18	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	175	62	78
34		Materials & Expenses	5.5	4,526,461	133	47	59
35	881.00	Rents	5.5	(838,690)	(25)	(9)	(11)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 2,015	$ 718	$ 899
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 2,800	$ 718	$ 1,537

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 116	$ 28	$ 0
2		Materials & Expenses	6.6	249,786	12	3	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	0	0	0
4		Materials & Expenses	1.0	6,846	1	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	910	95	0
6		Materials & Expenses	2.2	10,664,855	848	89	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	116	12	0
8		Materials & Expenses	2.2	697,186	55	6	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	103	0
10		Materials & Expenses	3.3	5,366,958	0	108	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	38	0
12		Materials & Expenses	6.0	1,246,741	0	13	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	10	2	0
14		Materials & Expenses	6.6	93,400	5	1	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 2,073	$ 497	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 4,873	$ 1,216	$ 1,537
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 186	$ 0
18		Materials & Expenses	10.1	54,104	0	4	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	20	0
20		Materials & Expenses	11.0	407,223	0	7	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	134	0
22		Materials & Expenses	4.0	12,265,589	0	204	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	1,492	0
24		Materials & Expenses - KAM	15.0	2,968	0	6	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	28	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	6	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 2,087	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	3	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 3	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 4,873	$ 3,305	$ 1,537
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 3,303	$ 2,241	$ 1,042
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 157	$ 29	$ 4
5		GCU Acquisition Adjustment	1.1	318,752	19	4	0
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	14	0
7		LNG Deferral Amortizaton	2.0	3,983,884	1,562	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	7	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	83	9	0
10		TRIMP/DOT	2.2	(1,146,342)	(91)	(10)	0
11		DSM	1.1	(3,702,079)	(222)	(41)	(5)
12		Total Regulatory Amortizations		4,315,957	1,508	12	(1)
13		Taxes Other Than Income	1.1	69,307,596	4,165	764	95
14		Total Allocated Operating Deductions		$ 315,902,948	$ 15,358	$ 6,334	$ 2,671
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 3,229	$ 593	$ 73
16		South Georgia - Federal	1.1	(7,284,597)	(438)	(80)	(10)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 238,663	$ 43,801	$ 5,418
18		Total Common Systems Allocable Net Plant		142,424,093	8,559	1,571	194
19		Cash Working Capital	11.2	(16,619,324)	(571)	(387)	(180)
20		Materials & Supplies	1.1	30,847,268	1,854	340	42
21		Prepayments	1.1	14,121,283	849	156	19
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	0	0
24		Customer Advances	9.0	(59,445,400)	0	0	0
25		Deferred Taxes	1.1	(634,525,981)	(38,133)	(6,998)	(866)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 211,221	$ 38,482	$ 4,628
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 5,370	$ 47,869
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	64	567
30		Late Charges	12.0	848,431	0	21	0
31		Service Establishment Charges	9.0	6,845,361	0	0	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	0
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 5,455	$ 48,436
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (4,873)	$ (3,305)	$ (1,537)
40		A & G	Total O&M	(96,125,247)	(3,303)	(2,241)	(1,042)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(7,380)	(1,640)	(161)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(1,508)	(12)	1
44		Taxes Other Than Income	1.1	(69,307,596)	(4,165)	(764)	(95)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (21,230)	$ (2,507)	$ 45,603
46		Interest Expense	1.1	(53,726,452)	(3,229)	(593)	(73)
47		State Taxable Income		$ 77,326,971	$ (24,459)	$ (3,100)	$ 45,530
48		State Income Tax	4.90%	$ 3,789,022	$ (1,198)	$ (152)	$ 2,231
49		Total State Income Tax		$ 3,789,022	$ (1,198)	$ (152)	$ 2,231
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (21,230)	$ (2,507)	$ 45,603
51		Interest Expense	1.1	(53,726,452)	(3,229)	(593)	(73)
52		Federal Taxable Income		$ 77,326,971	$ (24,459)	$ (3,100)	$ 45,530
53		Federal Income Tax	19.97%	$ 15,442,969	$ (4,885)	$ (619)	$ 9,093
54		South Georgia Federal	1.1	(7,284,597)	(438)	(80)	(10)
55		Total Federal Income Tax		$ 8,158,372	$ (5,322)	$ (699)	$ 9,083
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (14,709)	$ (1,656)	$ 34,289
58		Rate of Return on Rate Base		3.49%	-6.96%	-4.30%	740.97%
59		Rate of Return by Class Total				7.05%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 0	$ 2	$ 0
2	360 - 363.50	Storage Plant	2.0	3,571,136	40	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	0	0	0
	375.00	Structures	1.0	3,704	0	0	0
	376.00	Mains	2.2	47,744,070	175	1,001	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	14	81	0
	380.00	Services	7.0	35,893,910	0	1,827	0
	381.00	Meters	6.0	14,097,273	0	0	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	3
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	189	2,910	3
4	389 - 398	General Plant	1.1	14,327,615	38	367	1
5		Total Direct Depreciation Expense		$ 119,891,319	$ 267	$ 3,279	$ 4
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 33	$ 317	$ 0
7		General Plant	1.1	4,272,997	11	110	0
8		Total System Allocable Amortization		$ 16,653,700	$ 44	$ 427	$ 1
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 11	$ 110	$ 0
10		Total Depreciation Expense		$ 136,545,019	$ 311	$ 3,706	$ 5
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 311	$ 3,706	$ 5
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	18
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 18
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 22	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 13	$ 130	$ 4
22		Materials & Expenses	5.5	1,271,396	2	17	0
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	18
24		Materials & Expenses	3.0	51,869	0	0	1
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	15	162	0
26		Materials & Expenses	4.4	14,594,880	39	422	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	8	45	0
28		Materials & Expenses	2.2	732,095	3	15	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	0	0
30		Materials & Expenses	6.0	3,556,774	0	0	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	0	0
32		Materials & Expenses	6.0	1,752,586	0	0	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	8	80	2
34		Materials & Expenses	5.5	4,526,461	6	61	2
35	881.00	Rents	5.5	(838,690)	(1)	(11)	(0)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 93	$ 920	$ 26
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 115	$ 920	$ 45

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 5	$ 63	$ 0
2		Materials & Expenses	6.6	249,786	1	7	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	0	0	0
4		Materials & Expenses	1.0	6,846	0	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	42	240	0
6		Materials & Expenses	2.2	10,664,855	39	224	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	5	31	0
8		Materials & Expenses	2.2	697,186	3	15	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	260	0
10		Materials & Expenses	3.3	5,366,958	0	273	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	0	0
12		Materials & Expenses	6.0	1,246,741	0	0	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	0	6	0
14		Materials & Expenses	6.6	93,400	0	2	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 95	$ 1,119	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 211	$ 2,040	$ 45
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 97	$ 0
18		Materials & Expenses	10.1	54,104	0	2	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	51	0
20		Materials & Expenses	11.0	407,223	0	17	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	339	0
22		Materials & Expenses	4.0	12,265,589	0	514	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	71	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	3	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 1,095	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	7	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 7	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 211	$ 3,142	$ 45
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 143	$ 2,130	$ 30
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 7	$ 67	$ 0
5		GCU Acquisition Adjustment	1.1	318,752	1	8	0
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	36	0
7		LNG Deferral Amortizaton	2.0	3,983,884	45	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	18	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	4	22	0
10		TRIMP/DOT	2.2	(1,146,342)	(4)	(24)	0
11		DSM	1.1	(3,702,079)	(10)	(95)	(0)
12		Total Regulatory Amortizations		4,315,957	42	32	(0)
13		Taxes Other Than Income	1.1	69,307,596	183	1,777	3
14		Total Allocated Operating Deductions		$ 315,902,948	$ 621	$ 7,111	$ 77
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 142	$ 1,378	$ 2
16		South Georgia - Federal	1.1	(7,284,597)	(19)	(187)	(0)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 10,464	$ 101,823	$ 157
18		Total Common Systems Allocable Net Plant		142,424,093	375	3,652	6
19		Cash Working Capital	11.2	(16,619,324)	(25)	(368)	(5)
20		Materials & Supplies	1.1	30,847,268	81	791	1
21		Prepayments	1.1	14,121,283	37	362	1
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(438)	0
24		Customer Advances	9.0	(59,445,400)	0	(772)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,672)	(16,269)	(25)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 9,261	$ 88,780	$ 134
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 0	$ 7,725
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	0	91
30		Late Charges	12.0	848,431	0	1	0
31		Service Establishment Charges	9.0	6,845,361	0	89	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	0
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 90	$ 7,816
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (211)	$ (3,142)	$ (45)
40		A & G	Total O&M	(96,125,247)	(143)	(2,130)	(30)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(311)	(3,706)	(5)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(42)	(32)	0
44		Taxes Other Than Income	1.1	(69,307,596)	(183)	(1,777)	(3)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (889)	$ (10,696)	$ 7,734
46		Interest Expense	1.1	(53,726,452)	(142)	(1,378)	(2)
47		State Taxable Income		$ 77,326,971	$ (1,031)	$ (12,074)	$ 7,732
48		State Income Tax	4.90%	$ 3,789,022	$ (51)	$ (592)	$ 379
49		Total State Income Tax		$ 3,789,022	$ (51)	$ (592)	$ 379
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (889)	$ (10,696)	$ 7,734
51		Interest Expense	1.1	(53,726,452)	(142)	(1,378)	(2)
52		Federal Taxable Income		$ 77,326,971	$ (1,031)	$ (12,074)	$ 7,732
53		Federal Income Tax	19.97%	$ 15,442,969	$ (206)	$ (2,411)	$ 1,544
54		South Georgia Federal	1.1	(7,284,597)	(19)	(187)	(0)
55		Total Federal Income Tax		$ 8,158,372	$ (225)	$ (2,598)	$ 1,544
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (614)	$ (7,507)	$ 5,812
58		Rate of Return on Rate Base		3.49%	-6.63%	-8.46%	4332.65%
59		Rate of Return by Class Total				-2.35%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 311	$ 55	$ 5
2	360 - 363.50	Storage Plant	2.0	3,571,136	53,692	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	518	0	0
	375.00	Structures	1.0	3,704	38	0	0
	376.00	Mains	2.2	47,744,070	243,988	1,272	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	19,781	103	0
	380.00	Services	7.0	35,893,910	0	55,212	0
	381.00	Meters	6.0	14,097,273	0	45,664	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	5,190
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	264,324	102,251	5,190
4	389 - 398	General Plant	1.1	14,327,615	52,567	9,297	858
5		Total Direct Depreciation Expense		$ 119,891,319	$ 370,894	$ 111,603	$ 6,053
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 45,424	$ 8,033	$ 742
7		General Plant	1.1	4,272,997	15,677	2,773	256
8		Total System Allocable Amortization		$ 16,653,700	$ 61,101	$ 10,806	$ 998
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 15,677	$ 2,773	$ 256
10		Total Depreciation Expense		$ 136,545,019	$ 431,995	$ 122,409	$ 7,051
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 431,995	$ 122,409	$ 7,051
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	28,007
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 28,007
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 30,086	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,311	$ 17,282	$ 5,583
22		Materials & Expenses	5.5	1,271,396	2,394	2,260	730
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	26,536
24		Materials & Expenses	3.0	51,869	0	0	1,088
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,035	2,390	0
26		Materials & Expenses	4.4	14,594,880	54,838	6,230	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	10,982	57	0
28		Materials & Expenses	2.2	732,095	3,741	20	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	23,318	0
30		Materials & Expenses	6.0	3,556,774	0	11,521	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	36,293	0
32		Materials & Expenses	6.0	1,752,586	0	5,677	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,258	10,626	3,433
34		Materials & Expenses	5.5	4,526,461	8,525	8,046	2,599
35	881.00	Rents	5.5	(838,690)	(1,580)	(1,491)	(482)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 129,505	$ 122,227	$ 39,488
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 159,591	$ 122,227	$ 67,495

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises		
					Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,443	$ 1,955	$ 0
2		Materials & Expenses	6.6	249,786	782	205	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	8	0	0
4		Materials & Expenses	1.0	6,846	70	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	58,460	305	0
6		Materials & Expenses	2.2	10,664,855	54,501	284	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,451	39	0
8		Materials & Expenses	2.2	697,186	3,563	19	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	7,857	0
10		Materials & Expenses	3.3	5,366,958	0	8,255	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	11,792	0
12		Materials & Expenses	6.0	1,246,741	0	4,038	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	663	174	0
14		Materials & Expenses	6.6	93,400	292	77	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 133,233	$ 35,001	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 292,824	$ 157,228	$ 67,495
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,743	$ 0
18		Materials & Expenses	10.1	54,104	0	39	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	65	0
20		Materials & Expenses	11.0	407,223	0	22	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	430	0
22		Materials & Expenses	4.0	12,265,589	0	654	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	16,416	0
24		Materials & Expenses - KAM	15.0	2,968	0	63	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	90	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	57	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 19,579	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	9	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 9	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 292,824	$ 176,816	$ 67,495
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Compression on Customer's Premises Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 198,502	$ 119,861	$ 45,754
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,615	$ 1,700	$ 157
5		GCU Acquisition Adjustment	1.1	318,752	1,169	207	19
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	45	0
7		LNG Deferral Amortizaton	2.0	3,983,884	59,897	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	537	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,338	28	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,858)	(31)	0
11		DSM	1.1	(3,702,079)	(13,583)	(2,402)	(222)
12		Total Regulatory Amortizations		4,315,957	56,579	84	(46)
13		Taxes Other Than Income	1.1	69,307,596	254,285	44,971	4,152
14		Total Allocated Operating Deductions		$ 315,902,948	$ 858,768	$ 341,817	$ 117,309
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 197,118	$ 34,861	$ 3,219
16		South Georgia - Federal	1.1	(7,284,597)	(26,727)	(4,727)	(436)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,570,646	$ 2,576,865	$ 237,925
18		Total Common Systems Allocable Net Plant		142,424,093	522,544	92,413	8,533
19		Cash Working Capital	11.2	(16,619,324)	(34,320)	(20,723)	(7,910)
20		Materials & Supplies	1.1	30,847,268	113,176	20,016	1,848
21		Prepayments	1.1	14,121,283	51,810	9,163	846
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(448)	0
24		Customer Advances	9.0	(59,445,400)	0	(790)	0
25		Deferred Taxes	1.1	(634,525,981)	(2,328,030)	(411,719)	(38,015)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 12,895,827	$ 2,264,776	$ 203,227
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 78,565	$ 3,289,421
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	930	38,950
30		Late Charges	12.0	848,431	0	2,658	0
31		Service Establishment Charges	9.0	6,845,361	0	91	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	6
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 82,244	$ 3,328,377
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (292,824)	$ (176,816)	$ (67,495)
40		A & G	Total O&M	(96,125,247)	(198,502)	(119,861)	(45,754)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(431,995)	(122,409)	(7,051)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(56,579)	(84)	46
44		Taxes Other Than Income	1.1	(69,307,596)	(254,285)	(44,971)	(4,152)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,234,185)	$ (381,897)	$ 3,203,971
46		Interest Expense	1.1	(53,726,452)	(197,118)	(34,861)	(3,219)
47		State Taxable Income		$ 77,326,971	$ (1,431,303)	$ (416,758)	$ 3,200,752
48		State Income Tax	4.90%	$ 3,789,022	$ (70,134)	$ (20,421)	$ 156,837
49		Total State Income Tax		$ 3,789,022	$ (70,134)	$ (20,421)	$ 156,837
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,234,185)	$ (381,897)	$ 3,203,971
51		Interest Expense	1.1	(53,726,452)	(197,118)	(34,861)	(3,219)
52		Federal Taxable Income		$ 77,326,971	$ (1,431,303)	$ (416,758)	$ 3,200,752
53		Federal Income Tax	19.97%	$ 15,442,969	$ (285,846)	$ (83,231)	$ 639,222
54		South Georgia Federal	1.1	(7,284,597)	(26,727)	(4,727)	(436)
55		Total Federal Income Tax		$ 8,158,372	$ (312,572)	$ (87,957)	$ 638,786
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (851,479)	$ (273,519)	$ 2,408,348
58		Rate of Return on Rate Base		3.49%	-6.60%	-12.08%	1185.05%
59		Rate of Return by Class Total				8.35%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 320	$ 10	$ 5
2	360 - 363.50	Storage Plant	2.0	3,571,136	60,168	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	529	0	0
	375.00	Structures	1.0	3,704	39	0	0
	376.00	Mains	2.2	47,744,070	249,240	521	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	20,206	42	0
	380.00	Services	7.0	35,893,910	0	4,298	0
	381.00	Meters	6.0	14,097,273	0	13,573	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	5,235
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	270,015	18,434	5,235
4	389 - 398	General Plant	1.1	14,327,615	54,104	1,675	866
5		Total Direct Depreciation Expense		$ 119,891,319	$ 384,607	$ 20,119	$ 6,106
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 46,752	$ 1,447	$ 748
7		General Plant	1.1	4,272,997	16,136	499	258
8		Total System Allocable Amortization		$ 16,653,700	$ 62,888	$ 1,947	$ 1,006
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 16,136	$ 499	$ 258
10		Total Depreciation Expense		$ 136,545,019	$ 447,494	$ 22,066	$ 7,113
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 447,494	$ 22,066	$ 7,113
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	28,251
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 28,251
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 33,715	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 18,705	$ 4,783	$ 5,632
22		Materials & Expenses	5.5	1,271,396	2,446	625	736
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	26,768
24		Materials & Expenses	3.0	51,869	0	0	1,097
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	21,488	222	0
26		Materials & Expenses	4.4	14,594,880	56,019	580	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	11,219	23	0
28		Materials & Expenses	2.2	732,095	3,822	8	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	6,931	0
30		Materials & Expenses	6.0	3,556,774	0	3,424	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	10,787	0
32		Materials & Expenses	6.0	1,752,586	0	1,687	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	11,501	2,941	3,463
34		Materials & Expenses	5.5	4,526,461	8,708	2,227	2,622
35	881.00	Rents	5.5	(838,690)	(1,614)	(413)	(486)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 132,293	$ 33,827	$ 39,833
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 166,008	$ 33,827	$ 68,084

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 7,603	$ 373	$ 0
2		Materials & Expenses	6.6	249,786	799	39	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	9	0	0
4		Materials & Expenses	1.0	6,846	71	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	59,718	125	0
6		Materials & Expenses	2.2	10,664,855	55,674	116	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	7,611	16	0
8		Materials & Expenses	2.2	697,186	3,640	8	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	612	0
10		Materials & Expenses	3.3	5,366,958	0	643	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	3,505	0
12		Materials & Expenses	6.0	1,246,741	0	1,200	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	677	33	0
14		Materials & Expenses	6.6	93,400	299	15	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 136,101	$ 6,685	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 302,109	$ 40,512	$ 68,084
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,081	$ 0
18		Materials & Expenses	10.1	54,104	0	24	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	27	0
20		Materials & Expenses	11.0	407,223	0	9	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	176	0
22		Materials & Expenses	4.0	12,265,589	0	268	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	10,447	0
24		Materials & Expenses - KAM	15.0	2,968	0	40	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	37	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	35	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 12,144	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	4	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 4	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 302,109	$ 52,660	$ 68,084
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Electric Generation Demand	Electric Generation Customer	Electric Generation Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 204,796	$ 35,697	$ 46,153
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 9,896	$ 306	$ 158
5		GCU Acquisition Adjustment	1.1	318,752	1,204	37	19
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	19	0
7		LNG Deferral Amortizaton	2.0	3,983,884	67,122	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	42	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	5,453	11	0
10		TRIMP/DOT	2.2	(1,146,342)	(5,984)	(13)	0
11		DSM	1.1	(3,702,079)	(13,980)	(433)	(224)
12		Total Regulatory Amortizations		4,315,957	63,710	(30)	(46)
13		Taxes Other Than Income	1.1	69,307,596	261,720	8,101	4,188
14		Total Allocated Operating Deductions		$ 315,902,948	$ 896,046	$ 96,398	$ 118,333
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 202,883	$ 6,280	$ 3,247
16		South Georgia - Federal	1.1	(7,284,597)	(27,508)	(852)	(440)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 14,996,722	$ 464,218	$ 240,001
18		Total Common Systems Allocable Net Plant		142,424,093	537,824	16,648	8,607
19		Cash Working Capital	11.2	(16,619,324)	(35,408)	(6,172)	(7,980)
20		Materials & Supplies	1.1	30,847,268	116,486	3,606	1,864
21		Prepayments	1.1	14,121,283	53,325	1,651	853
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	0	0
24		Customer Advances	9.0	(59,445,400)	0	0	0
25		Deferred Taxes	1.1	(634,525,981)	(2,396,106)	(74,171)	(38,346)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 13,272,843	$ 405,780	$ 205,000
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 101,208	$ 2,399,564
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,198	28,413
30		Late Charges	12.0	848,431	0	646	0
31		Service Establishment Charges	9.0	6,845,361	0	0	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	4
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 103,053	$ 2,427,982
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (302,109)	$ (52,660)	$ (68,084)
40		A & G	Total O&M	(96,125,247)	(204,796)	(35,697)	(46,153)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(447,494)	(22,066)	(7,113)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(63,710)	30	46
44		Taxes Other Than Income	1.1	(69,307,596)	(261,720)	(8,101)	(4,188)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (1,279,831)	$ (15,441)	$ 2,302,490
46		Interest Expense	1.1	(53,726,452)	(202,883)	(6,280)	(3,247)
47		State Taxable Income		$ 77,326,971	$ (1,482,713)	$ (21,721)	$ 2,299,243
48		State Income Tax	4.90%	$ 3,789,022	$ (72,653)	$ (1,064)	$ 112,663
49		Total State Income Tax		$ 3,789,022	$ (72,653)	$ (1,064)	$ 112,663
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (1,279,831)	$ (15,441)	$ 2,302,490
51		Interest Expense	1.1	(53,726,452)	(202,883)	(6,280)	(3,247)
52		Federal Taxable Income		$ 77,326,971	$ (1,482,713)	$ (21,721)	$ 2,299,243
53		Federal Income Tax	19.97%	$ 15,442,969	$ (296,113)	$ (4,338)	$ 459,182
54		South Georgia Federal	1.1	(7,284,597)	(27,508)	(852)	(440)
55		Total Federal Income Tax		$ 8,158,372	$ (323,621)	$ (5,190)	$ 458,742
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (883,557)	$ (9,187)	$ 1,731,086
58		Rate of Return on Rate Base		3.49%	-6.66%	-2.26%	844.43%
59		Rate of Return by Class Total				6.04%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 120	$ 7	$ 2
2	360 - 363.50	Storage Plant	2.0	3,571,136	20,697	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	200	0	0
	375.00	Structures	1.0	3,704	15	0	0
	376.00	Mains	2.2	47,744,070	94,113	1,397	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	7,630	113	0
	380.00	Services	7.0	35,893,910	0	2,534	0
	381.00	Meters	6.0	14,097,273	0	7,684	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	1,713
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	101,957	11,729	1,713
4	389 - 398	General Plant	1.1	14,327,615	20,276	1,176	283
5		Total Direct Depreciation Expense		$ 119,891,319	$ 143,050	$ 12,913	$ 1,998
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 17,520	$ 1,017	$ 245
7		General Plant	1.1	4,272,997	6,047	351	85
8		Total System Allocable Amortization		$ 16,653,700	$ 23,567	$ 1,367	$ 329
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 6,047	$ 351	$ 85
10		Total Depreciation Expense		$ 136,545,019	$ 166,617	$ 14,280	$ 2,328
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 166,617	$ 14,280	$ 2,328
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	9,245
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 9,245
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 11,598	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 7,063	$ 2,794	$ 1,843
22		Materials & Expenses	5.5	1,271,396	924	365	241
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	8,759
24		Materials & Expenses	3.0	51,869	0	0	359
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	8,114	225	0
26		Materials & Expenses	4.4	14,594,880	21,152	587	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	4,236	63	0
28		Materials & Expenses	2.2	732,095	1,443	21	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	3,924	0
30		Materials & Expenses	6.0	3,556,774	0	1,939	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	6,107	0
32		Materials & Expenses	6.0	1,752,586	0	955	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	4,343	1,718	1,133
34		Materials & Expenses	5.5	4,526,461	3,288	1,301	858
35	881.00	Rents	5.5	(838,690)	(609)	(241)	(159)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 49,954	$ 19,758	$ 13,035
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 61,551	$ 19,758	$ 22,279

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 2,871	$ 247	$ 0
2		Materials & Expenses	6.6	249,786	302	26	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	3	0	0
4		Materials & Expenses	1.0	6,846	27	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	22,550	335	0
6		Materials & Expenses	2.2	10,664,855	21,022	312	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	2,874	43	0
8		Materials & Expenses	2.2	697,186	1,374	20	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	361	0
10		Materials & Expenses	3.3	5,366,958	0	379	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	1,984	0
12		Materials & Expenses	6.0	1,246,741	0	680	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	256	22	0
14		Materials & Expenses	6.6	93,400	113	10	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 51,392	$ 4,418	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 112,943	$ 24,176	$ 22,279
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 1,019	$ 0
18		Materials & Expenses	10.1	54,104	0	23	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	71	0
20		Materials & Expenses	11.0	407,223	0	24	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	473	0
22		Materials & Expenses	4.0	12,265,589	0	718	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	8,954	0
24		Materials & Expenses - KAM	15.0	2,968	0	34	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	99	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	33	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 11,449	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	10	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 10	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 112,943	$ 35,635	$ 22,279
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 76,563	$ 24,156	$ 15,103
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 3,708	$ 215	$ 52
5		GCU Acquisition Adjustment	1.1	318,752	451	26	6
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	50	0
7		LNG Deferral Amortizaton	2.0	3,983,884	23,089	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	25	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	2,059	31	0
10		TRIMP/DOT	2.2	(1,146,342)	(2,260)	(34)	0
11		DSM	1.1	(3,702,079)	(5,239)	(304)	(73)
12		Total Regulatory Amortizations		4,315,957	21,809	9	(15)
13		Taxes Other Than Income	1.1	69,307,596	98,080	5,691	1,371
14		Total Allocated Operating Deductions		$ 315,902,948	$ 331,204	$ 65,499	$ 38,722
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 76,030	$ 4,411	$ 1,062
16		South Georgia - Federal	1.1	(7,284,597)	(10,309)	(598)	(144)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 5,620,016	$ 326,088	$ 78,536
18		Total Common Systems Allocable Net Plant		142,424,093	201,549	11,694	2,817
19		Cash Working Capital	11.2	(16,619,324)	(13,237)	(4,176)	(2,611)
20		Materials & Supplies	1.1	30,847,268	43,653	2,533	610
21		Prepayments	1.1	14,121,283	19,984	1,159	279
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(2,581)	0
24		Customer Advances	9.0	(59,445,400)	0	(4,547)	0
25		Deferred Taxes	1.1	(634,525,981)	(897,940)	(52,101)	(12,548)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 4,974,025	$ 278,069	$ 67,083
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 96,480	$ 1,396,687
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	1,142	16,538
30		Late Charges	12.0	848,431	0	871	0
31		Service Establishment Charges	9.0	6,845,361	0	524	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	0	3
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	37	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 99,054	$ 1,413,228
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (112,943)	$ (35,635)	$ (22,279)
40		A & G	Total O&M	(96,125,247)	(76,563)	(24,156)	(15,103)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(166,617)	(14,280)	(2,328)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(21,809)	(9)	15
44		Taxes Other Than Income	1.1	(69,307,596)	(98,080)	(5,691)	(1,371)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (476,011)	$ 19,283	$ 1,372,163
46		Interest Expense	1.1	(53,726,452)	(76,030)	(4,411)	(1,062)
47		State Taxable Income		$ 77,326,971	$ (552,042)	$ 14,872	$ 1,371,100
48		State Income Tax	4.90%	$ 3,789,022	$ (27,050)	$ 729	$ 67,184
49		Total State Income Tax		$ 3,789,022	$ (27,050)	$ 729	$ 67,184
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (476,011)	$ 19,283	$ 1,372,163
51		Interest Expense	1.1	(53,726,452)	(76,030)	(4,411)	(1,062)
52		Federal Taxable Income		$ 77,326,971	$ (552,042)	$ 14,872	$ 1,371,100
53		Federal Income Tax	19.97%	$ 15,442,969	$ (110,248)	$ 2,970	$ 273,822
54		South Georgia Federal	1.1	(7,284,597)	(10,309)	(598)	(144)
55		Total Federal Income Tax		$ 8,158,372	$ (120,557)	$ 2,372	$ 273,678
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (328,404)	$ 16,183	$ 1,031,300
58		Rate of Return on Rate Base		3.49%	-6.60%	5.82%	1537.35%
59		Rate of Return by Class Total				13.52%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Depreciation Expense & Amortization					
		Direct					
1	301 - 303	Intangible Plant	Intang. Plant	$ 84,750	$ 173	$ 46	$ 6
2	360 - 363.50	Storage Plant	2.0	3,571,136	64,005	0	0
		Distribution Plant					
	374.10	Land & Land Rights	1.0	0	0	0	0
	374.20	Rights of Way	1.0	50,700	260	0	0
	375.00	Structures	1.0	3,704	19	0	0
	376.00	Mains	2.2	47,744,070	122,249	8,744	0
	378.00	Measuring & Regulating Station	2.2	3,870,699	9,911	709	0
	380.00	Services	7.0	35,893,910	0	21,217	0
	381.00	Meters	6.0	14,097,273	0	48,085	0
	385.00	Industrial Measuring & Regulating Station	3.0	247,463	0	0	6,367
	387.00	Other Equipment	1.0	0	0	0	0
3	374.1 - 387	Distribution Plant	Net Dist. Plant	101,907,818	132,439	78,755	6,367
4	389 - 398	General Plant	1.1	14,327,615	29,167	7,856	1,053
5		Total Direct Depreciation Expense		$ 119,891,319	$ 225,783	$ 86,657	$ 7,427
		System Allocable Amortization					
6		Miscellaneous Intangible Plant	1.1	$ 12,380,703	$ 25,203	$ 6,788	$ 910
7		General Plant	1.1	4,272,997	8,698	2,343	314
8		Total System Allocable Amortization		$ 16,653,700	$ 33,902	$ 9,131	$ 1,224
9		Total System Depreciation Expense	1.1	$ 4,272,997	$ 8,698	$ 2,343	$ 314
10		Total Depreciation Expense		$ 136,545,019	$ 259,684	$ 95,788	$ 8,651
11		Amortization Gas Plant Acquisition	1.1	$ 0	$ 0	$ 0	$ 0
12		Regulatory Amortizations	1.1	0	0	0	0
13		Total Depreciation Expense		$ 0	$ 0	$ 0	$ 0
14		Total Depreciation & Amortization Expense		$ 136,545,019	$ 259,684	$ 95,788	$ 8,651
		Operation and Maintenance Expense					
		Gas Supply Expenses					
15	803.00	Natural Gas Transmission Line Purchases	3.0	$ 0	$ 0	$ 0	$ 0
16	805.10	Purchased Gas Cost Adjustments	3.0	0	0	0	0
17	810.00	Gas Used for Compression Station Fuel	3.0	0	0	0	0
18	813.00	Other Gas Supply Expenses	3.0	1,335,375	0	0	34,360
19		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 34,360
		Storage					
20	Various	Various	2.0	$ 2,001,101	$ 35,865	$ 0	$ 0
		Distribution Expenses - Operation					
	870.00	Operation Supervision and Engineering					
21		Labor & Labor Loading	5.5	$ 9,722,347	$ 9,174	$ 17,642	$ 6,850
22		Materials & Expenses	5.5	1,271,396	1,200	2,307	896
	871.00	Distribution Load Dispatching					
23		Labor & Labor Loading	3.0	1,265,272	0	0	32,556
24		Materials & Expenses	3.0	51,869	0	0	1,335
	874.00	Mains and Services Expenses					
25		Labor & Labor Loading	4.4	5,598,315	10,539	1,630	0
26		Materials & Expenses	4.4	14,594,880	27,476	4,249	0
	875.00	Measuring & Regulating Exps. - General					
27		Labor & Labor Loading	2.2	2,149,027	5,503	394	0
28		Materials & Expenses	2.2	732,095	1,875	134	0
	878.00	Meter and House Regulator Expenses					
29		Labor & Labor Loading	6.0	7,198,601	0	24,554	0
30		Materials & Expenses	6.0	3,556,774	0	12,132	0
	879.00	Customer Installation Expense					
31		Labor & Labor Loading	6.0	11,204,195	0	38,217	0
32		Materials & Expenses	6.0	1,752,586	0	5,978	0
	880.00	Other Expenses					
33		Labor & Labor Loading	5.5	5,977,806	5,641	10,847	4,212
34		Materials & Expenses	5.5	4,526,461	4,271	8,214	3,189
35	881.00	Rents	5.5	(838,690)	(791)	(1,522)	(591)
36		Total Distribution Operating Expenses		$ 68,762,934	$ 64,888	$ 124,775	$ 48,446
37		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 100,753	$ 124,775	$ 82,806

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Maintenance Expenses					
	885.00	Maintenance Supervision & Engineering					
1		Labor & Labor Loading	6.6	$ 2,377,566	$ 3,729	$ 1,638	$ 0
2		Materials & Expenses	6.6	249,786	392	172	0
	886.00	Maintenance of Structures & Improvement					
3		Labor & Labor Loading	1.0	816	4	0	0
4		Materials & Expenses	1.0	6,846	35	0	0
	887.00	Maintenance of Mains					
5		Labor & Labor Loading	2.2	11,439,556	29,291	2,095	0
6		Materials & Expenses	2.2	10,664,855	27,307	1,953	0
	889.00	Maintenance of Measuring & Reg. Station Equip.					
7		Labor & Labor Loading	2.2	1,457,997	3,733	267	0
8		Materials & Expenses	2.2	697,186	1,785	128	0
	892.00	Maintenance of Services					
9		Labor & Labor Loading	3.3	5,107,760	0	3,019	0
10		Materials & Expenses	3.3	5,366,958	0	3,172	0
	893.00	Maintenance of Meter & House Regulators					
11		Labor & Labor Loading	6.0	3,640,430	0	12,417	0
12		Materials & Expenses	6.0	1,246,741	0	4,253	0
	894.00	Maintenance of Other Equipment					
13		Labor & Labor Loading	6.6	211,865	332	146	0
14		Materials & Expenses	6.6	93,400	146	64	0
15		Total Distribution-Maintenance		$ 42,561,761	$ 66,756	$ 29,325	$ 0
16		Total Distribution O & M		$ 114,661,171	$ 167,509	$ 154,100	$ 82,806
		Customer Accounts Expenses					
	901.00	Supervision Expenses					
17		Labor & Labor Loading	10.1	$ 2,401,107	$ 0	$ 851	$ 0
18		Materials & Expenses	10.1	54,104	0	19	0
	902.00	Meter Reading Expenses					
19		Labor & Labor Loading	11.0	1,217,475	0	446	0
20		Materials & Expenses	11.0	407,223	0	149	0
	903.00	Customer Records & Collections Expenses					
21		Labor & Labor Loading	4.0	8,076,815	0	2,958	0
22		Materials & Expenses	4.0	12,265,589	0	4,493	0
	903.00	Customer Records & Collections - KAM					
23		Labor & Labor Loading - KAM	15.0	776,052	0	0	0
24		Materials & Expenses - KAM	15.0	2,968	0	0	0
25	904.00	Uncollectible Accounts Expense	4.0	1,692,711	0	620	0
	905.00	Miscellaneous Customer Accounts Expenses					
26		Labor & Labor Loading	10.1	77,892	0	28	0
27		Materials & Expenses	10.1	237	0	0	0
28		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 9,564	$ 0
		Customer Service & Informational Expenses					
	908.00	Customer Assistance Expense					
29		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
30		Materials & Expenses	4.0	0	0	0	0
	909.00	Info. & Instructional Advertising Expense					
31		Labor & Labor Loading	4.0	0	0	0	0
32		Materials & Expenses	4.0	0	0	0	0
	910.00	Misc. Customer Service & Informational Expenses					
33		Labor & Labor Loading	4.0	0	0	0	0
34		Materials & Expenses	4.0	167,925	0	62	0
35		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 62	$ 0
		Sales Expense					
	911.00	Supervision					
36		Labor & Labor Loading	4.0	$ 0	$ 0	$ 0	$ 0
37		Materials & Expenses	4.0	0	0	0	0
	912.00	Demonstrating & Selling Expense					
38		Labor & Labor Loading	4.0	0	0	0	0
39		Materials & Expenses	4.0	0	0	0	0
	913.00	Advertising Expenses					
40		Labor & Labor Loading	4.0	0	0	0	0
41		Materials & Expenses	4.0	(203)	0	(0)	0
42		Total Sales Expense		$ (203)	$ 0	$ (0)	$ 0
43		Total O & M Expense		$ 141,801,067	$ 167,509	$ 163,726	$ 82,806
44		Allocation Percentage	Total O&M	1	0	0	0

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
EXPENSE ALLOCATION TO CLASSES OF SERVICE
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Account No.	Description	Allocation Factor No.	Total Amount	Natural Gas Engine Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Other Operating Deductions					
1		Administrative & General Expense	Total O&M	$ 96,125,247	$ 113,553	$ 110,988	$ 56,133
2		Interest on Customer Deposits	8.0	37,125	0	0	0
3		Regulatory Amortizations					
4		Recorded	1.1	2,620,521	$ 5,335	$ 1,437	$ 193
5		GCU Acquisition Adjustment	1.1	318,752	649	175	23
6		COVID-19 Late Fees Waived and Suppressed	4.0	847,717	0	311	0
7		LNG Deferral Amortizaton	2.0	3,983,884	71,402	0	0
8		COYL Regulatory Amortization Balance	7.0	348,902	0	206	0
9		VSP Regulatory Amortization Balance	2.2	1,044,601	2,675	191	0
10		TRIMP/DOT	2.2	(1,146,342)	(2,935)	(210)	0
11		DSM	1.1	(3,702,079)	(7,536)	(2,030)	(272)
12		Total Regulatory Amortizations		4,315,957	69,589	80	(56)
13		Taxes Other Than Income	1.1	69,307,596	141,089	38,000	5,094
14		Total Allocated Operating Deductions		$ 315,902,948	$ 561,329	$ 312,873	$ 143,921
		Tax Adjustments					
15		Interest Expense	1.1	$ 53,726,452	$ 109,370	$ 29,457	$ 3,949
16		South Georgia - Federal	1.1	(7,284,597)	(14,829)	(3,994)	(535)
		Summary of Allocated Cost of Service					
		Rate Base					
17		Total Direct Net Plant		$ 3,971,364,293	$ 8,084,452	$ 2,177,434	$ 291,900
18		Total Common Systems Allocable Net Plant		142,424,093	289,931	78,089	10,468
19		Cash Working Capital	11.2	(16,619,324)	(19,632)	(19,189)	(9,705)
20		Materials & Supplies	1.1	30,847,268	62,795	16,913	2,267
21		Prepayments	1.1	14,121,283	28,747	7,742	1,038
22		Other	1.1	0	0	0	0
23		Customer Deposits	9.0	(33,750,043)	0	(7,705)	0
24		Customer Advances	9.0	(59,445,400)	0	(13,570)	0
25		Deferred Taxes	1.1	(634,525,981)	(1,291,696)	(347,900)	(46,638)
26		Other	1.1	0	0	0	0
27		Total Rate Base		$ 3,414,416,189	$ 7,154,596	$ 1,891,814	$ 249,330
		Revenue					
28		Net Operating Margin	Direct	$ 564,241,682	$ 0	$ 314,190	$ 3,980,193
29		Special Contract & Optional Margin	Net Op Margin	6,681,133	0	3,720	47,129
30		Late Charges	12.0	848,431	0	18,217	0
31		Service Establishment Charges	9.0	6,845,361	0	1,563	0
32		Reconnect / Reread Charges	9.0	100	0	0	0
33		Other Revenue - Labor	Net Op Margin	1,050	0	1	7
34		Other Revenue - Parts & Material	Net Op Margin	68	0	0	0
35		Other Revenue - Field Collection Fee	Net Op Margin	0	0	0	0
36		Other Revenue - Returned Item Fee	13.0	567,609	0	0	0
37		Other Revenue - Rental Income & UESC Revenue	Net Op Margin	0	0	0	0
38		Total Revenue		$ 579,185,433	$ 0	$ 337,691	$ 4,027,330
		Operating Deductions					
39		O & M		$ (141,801,067)	$ (167,509)	$ (163,726)	$ (82,806)
40		A & G	Total O&M	(96,125,247)	(113,553)	(110,988)	(56,133)
41		Depreciation Expense	Deprec Exp	(136,545,019)	(259,684)	(95,788)	(8,651)
42		Interest on Customer Deposits	8.0	(37,125)	0	0	0
43		Regulatory Amortizations	Various	(4,315,957)	(69,589)	(80)	56
44		Taxes Other Than Income	1.1	(69,307,596)	(141,089)	(38,000)	(5,094)
		State Income Tax					
45		Taxable Income before Interest Expense		$ 131,053,423	$ (751,424)	$ (70,890)	$ 3,874,702
46		Interest Expense	1.1	(53,726,452)	(109,370)	(29,457)	(3,949)
47		State Taxable Income		$ 77,326,971	$ (860,794)	$ (100,347)	$ 3,870,753
48		State Income Tax	4.90%	$ 3,789,022	$ (42,179)	$ (4,917)	$ 189,667
49		Total State Income Tax		$ 3,789,022	$ (42,179)	$ (4,917)	$ 189,667
		Federal Income Tax					
50		Taxable Income before Interest Expense		$ 131,053,423	$ (751,424)	$ (70,890)	$ 3,874,702
51		Interest Expense	1.1	(53,726,452)	(109,370)	(29,457)	(3,949)
52		Federal Taxable Income		$ 77,326,971	$ (860,794)	$ (100,347)	$ 3,870,753
53		Federal Income Tax	19.97%	$ 15,442,969	$ (171,909)	$ (20,040)	$ 773,028
54		South Georgia Federal	1.1	(7,284,597)	(14,829)	(3,994)	(535)
55		Total Federal Income Tax		$ 8,158,372	$ (186,738)	$ (24,034)	$ 772,493
56		Regulatory Amortization	1.1	$ 0	$ 0	$ 0	$ 0
57		Net Income		$ 119,106,029	$ (522,507)	$ (41,938)	$ 2,912,542
58		Rate of Return on Rate Base		3.49%	-7.30%	-2.22%	1168.15%
59		Rate of Return by Class Total				25.26%	

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF RATE BASE BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Cost of Service														
		Direct														
		Intangible Plant														
1	301.00	Organization	Dist Plant	$ 85,175	$ 0	$ 1,618	$ 0	$ 0	$ 0	$ 28,195	$ 55,118	$ 243	$ 0	$ 0	$ 0	1
2	302.00	Franchises & Consents	Dist Plant	1,378,298	0	26,185	0	0	0	456,251	891,925	3,937	0	0	0	2
3	303.00	Miscellaneous Intangible Plant	Dist Plant	0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Direct Intangible Plant		$ 1,463,473	$ 0	$ 27,803	$ 0	$ 0	$ 0	$ 484,446	$ 947,043	$ 4,181	$ 0	$ 0	$ 0	4
		Storage Plant														
5	360.00	Land and Land Rights		$ 1,772,673	$ 0	$ 1,772,673	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6	361.00	Structures and Improvements		13,951,814	0	13,951,814	0	0	0	0	0	0	0	0	0	6
7	363.10	Liquifaction Equipment		30,870,490	0	30,870,490	0	0	0	0	0	0	0	0	0	7
8	363.20	Vaporizing Equipment		8,524,686	0	8,524,686	0	0	0	0	0	0	0	0	0	8
9	363.30	Compressor Equipment		7,286,861	0	7,286,861	0	0	0	0	0	0	0	0	0	9
10	363.50	Other Equipment		9,812,144	0	9,812,144	0	0	0	0	0	0	0	0	0	10
11		Total Storage Plant		$ 72,218,669	$ 0	$ 72,218,669	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	11
		Distribution Plant														
12	374.10	Land & Land Rights	Demand	$ 732,082	$ 0	$ 0	$ 0	$ 0	$ 0	$ 732,082	$ 0	$ 0	$ 0	$ 0	$ 0	12
13	374.20	Rights of Way	Demand	2,575,655	0	0	0	0	0	2,575,655	0	0	0	0	0	13
14	375.00	Structures	Demand	455,882	0	0	0	0	0	455,882	0	0	0	0	0	14
15	376.00	Mains	Dmd/Cust	2,438,675,162	0	0	0	0	0	1,219,337,581	1,219,337,581	0	0	0	0	15
16	378.00	Measuring & Regulating Station	Commodity	77,379,561	0	0	0	0	0	38,689,781	38,689,781	0	0	0	0	16
17	380.00	Services	Customer	878,142,657	0	0	0	0	0	0	878,142,657	0	0	0	0	17
18	381.00	Meters	Customer	323,771,492	0	0	0	0	0	0	323,771,492	0	0	0	0	18
19	385.00	Industrial Measuring & Regulating Station	Commodity	10,858,853	0	0	0	0	0	0	0	10,858,853	0	0	0	19
20	387.00	Other Equipment	Demand	(3,442,867)	0	0	0	0	0	(3,442,867)	0	0	0	0	0	20
21		Total Direct Distribution Plant		$ 3,729,148,477	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,258,348,114	$ 2,459,941,511	$ 10,858,853	$ 0	$ 0	$ 0	21
22		Total Direct Plant		$ 3,801,367,146	$ 0	$ 72,218,669	$ 0	$ 0	$ 0	$ 1,258,348,114	$ 2,459,941,511	$ 10,858,853	$ 0	$ 0	$ 0	22
22		Total Percent Direct Distribution Plant		100.00%	0.00%	1.90%	0.00%	0.00%	0.00%	33.10%	64.71%	0.29%	0.00%	0.00%	0.00%	22
		General Plant														
23	389.00	Land & Land Rights	Dist Plant	$ 17,385,788	$ 0	$ 330,297	$ 0	$ 0	$ 0	$ 5,755,133	$ 11,250,695	$ 49,664	$ 0	$ 0	$ 0	23
24	390.10	Structures	Dist Plant	67,780,516	0	1,287,700	0	0	0	22,437,055	43,862,142	193,619	0	0	0	24
25	390.20	Structures - Leasehold Improvements	Dist Plant	91,949	0	1,747	0	0	0	30,437	59,502	263	0	0	0	25
26	391.00	Office Furniture & Equipment	Dist Plant	3,677,440	0	69,864	0	0	0	1,217,325	2,379,746	10,505	0	0	0	26
27	391.10	Computer Equipment	Dist Plant	3,425,053	0	65,069	0	0	0	1,133,779	2,216,421	9,784	0	0	0	27
28	392.11	Transportation Equipment - Light	Dist Plant	23,465,308	0	445,796	0	0	0	7,767,607	15,184,875	67,030	0	0	0	28
29	392.20	Transportation Equipment - Heavy	Dist Plant	16,208,457	0	307,930	0	0	0	5,365,407	10,488,820	46,301	0	0	0	29
30	393.00	Stores Equipment	Dist Plant	3,761,835	0	71,468	0	0	0	1,245,262	2,434,360	10,746	0	0	0	30
31	394.00	Tools, Shop & Garage Equipment	Dist Plant	12,749,334	0	242,213	0	0	0	4,220,350	8,250,352	36,419	0	0	0	31
32	395.00	Laboratory Equipment	Dist Plant	330,521	0	6,279	0	0	0	109,411	213,887	944	0	0	0	32
33	396.00	Power Operated Equipment	Dist Plant	8,447,434	0	160,485	0	0	0	2,796,313	5,466,505	24,131	0	0	0	33
34	397.10	Communication Equipment	Dist Plant	7,555,254	0	143,535	0	0	0	2,500,979	4,889,158	21,582	0	0	0	34
35	397.20	Telemetering Equipment	Dist Plant	(67,708)	0	(1,286)	0	0	0	(22,413)	(43,815)	(193)	0	0	0	35
36	398.00	Miscellaneous Equipment	Dist Plant	3,722,492	0	70,720	0	0	0	1,232,238	2,408,900	10,634	0	0	0	36
37		Total Direct General Plant		$ 168,533,673	$ 0	$ 3,201,816	$ 0	$ 0	$ 0	$ 55,788,884	$ 109,061,546	$ 481,427	$ 0	$ 0	$ 0	37
		Common - Systems Allocable														
		Intangible Plant														
38	301.00	Organization	Dist Plant	$ 34,778	$ 0	$ 661	$ 0	$ 0	$ 0	$ 11,512	$ 22,505	$ 99	$ 0	$ 0	$ 0	38
39	303.00	Miscellaneous Intangible	Dist Plant	91,469,953	0	1,737,753	0	0	0	30,278,854	59,192,055	261,290	0	0	0	39
40		Total Common Intangible Plant		$ 91,504,730	$ 0	$ 1,738,414	$ 0	$ 0	$ 0	$ 30,290,367	$ 59,214,560	$ 261,389	$ 0	$ 0	$ 0	40
		General Plant														
41	389.00	Land & Land Rights	Dist Plant	$ 2,017,129	$ 0	$ 38,322	$ 0	$ 0	$ 0	$ 667,721	$ 1,305,325	$ 5,762	$ 0	$ 0	$ 0	41
42	390.10	Structures	Dist Plant	29,391,869	0	558,389	0	0	0	9,729,448	19,020,072	83,960	0	0	0	42
43	390.20	Structures - Leasehold Improvements	Dist Plant	292,533	0	5,558	0	0	0	96,836	189,304	836	0	0	0	43
44	391.00	Office Furniture & Equipment	Dist Plant	3,972,460	0	75,469	0	0	0	1,314,984	2,570,659	11,348	0	0	0	44
45	391.10	Computer Equipment	Dist Plant	7,835,593	0	148,861	0	0	0	2,593,778	5,070,571	22,383	0	0	0	45
46	392.11	Transportation Equipment - Light	Dist Plant	429,216	0	8,154	0	0	0	142,081	277,754	1,226	0	0	0	46
47	393.11	Transportation Equipment - Light	Dist Plant	(3,729)	0	(71)	0	0	0	(1,234)	(2,413)	(11)	0	0	0	47
48	392.21	Transportation Equipment - Aircraft	Dist Plant	442,044	0	8,398	0	0	0	146,328	286,055	1,263	0	0	0	48
49	393.00	Stores Equipment	Dist Plant	15,054	0	286	0	0	0	4,983	9,741	43	0	0	0	49
50	394.00	Tools, Shop & Garage Equipment	Dist Plant	468,827	0	8,907	0	0	0	155,194	303,388	1,339	0	0	0	50
51	395.00	Laboratory Equipment	Dist Plant	643,781	0	12,231	0	0	0	213,108	416,603	1,839	0	0	0	51
52	396.00	Power Operated Equipment	Dist Plant	145,920	0	2,772	0	0	0	48,303	94,428	417	0	0	0	52
53	397.00	Communication Equipment	Dist Plant	2,446,721	0	46,483	0	0	0	809,926	1,583,322	6,989	0	0	0	53
54	397.20	Telemetering Equipment	Dist Plant	264,499	0	5,025	0	0	0	87,556	171,163	756	0	0	0	54
55	398.00	Miscellaneous Equipment	Dist Plant	2,567,448	0	48,587	0	0	0	846,580	1,654,976	7,306	0	0	0	55
56		Total Common General Plant	0	$ 50,919,363	$ 0	$ 967,370	$ 0	$ 0	$ 0	$ 16,855,590	$ 32,950,949	$ 145,454	$ 0	$ 0	$ 0	56
		Net Plant														
57		Total Direct Net Plant		$ 3,971,364,293	$ 0	$ 75,448,288	$ 0	$ 0	$ 0	$ 1,314,621,444	$ 2,569,950,100	$ 11,344,461	$ 0	$ 0	$ 0	57
58		Total Common/System Allocable Net Plant	4.90%	142,424,093	0	2,705,784	0	0	0	47,145,956	92,165,509	406,844	0	0	0	58
59		Total Net Plant		$ 4,113,788,386	$ 0	$ 78,154,072	$ 0	$ 0	$ 0	$ 1,361,767,400	$ 2,662,115,610	$ 11,751,304	$ 0	$ 0	$ 0	59
					0.0000%	1.8998%	0.0000%	0.0000%	0.0000%	33.1025%	64.7120%	0.2857%	0.0000%	0.0000%	0.0000%	
		Rate Base														
60		Cash Working Capital	Total O&M	$ (16,619,324)	$ 0	$ (234,532)	$ 0	$ 0	$ 0	$ (3,012,854)	$ (9,813,918)	$ (377,178)	$ 0	$ 0	$ (3,180,842)	60
61		Materials & Supplies	Net Plant	30,847,268	0	586,039	0	0	0	10,211,221	19,961,890	88,117	0	0	0	61
62		Prepayments	Net Plant	14,121,283	0	268,277	0	0	0	4,674,500	9,138,168	40,338	0	0	0	62
63		Other		0	0	0	0	0	0	0	0	0	0	0	0	63
64		Customer Advances	Customer	(59,445,400)	0	0	(1,129,348)	0	0	0	(58,316,051)	0	0	0	0	64
65		Customer Deposits	Customer	(33,750,043)	0	0	(641,186)	0	0	0	(33,108,857)	0	0	0	0	65
66		Deferred Taxes	Net Plant	(634,525,981)	0	(12,054,774)	0	0	0	(210,044,055)	(410,814,587)	(1,812,565)	0	0	0	66
67		Other		0	0	0	0	0	0	0	0	0	0	0	0	67
68		Total Rate Base		$ 3,414,416,189	$ 0	$ 66,719,082	$ (1,770,534)	$ 0	$ 0	$ 1,163,596,213	$ 2,179,362,255	$ 9,690,017	$ 0	$ 0	$ (3,180,842)	68

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Depreciation Expense & Amortization														
		Direct														
		Intangible Plant														
1	301.00	Organization		0	0	0	0	0	0	0	0	0	0	0	0	1
2	302.00	Franchises & Consents	Plant Acct.	84,750	0	1,610	0	0	0	28,055	54,844	242	0	0	0	2
3	303.00	Miscellaneous Intangible Plant		0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Direct Intangible Plant		$ 84,750	$ 0	$ 1,610	$ 0	$ 0	$ 0	$ 28,055	$ 54,844	$ 242	$ 0	$ 0	$ 0	4
		Storage Plant														
5	360.00	Land and Land Rights	Plant Acct.	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6	361.00	Structures and Improvements	Plant Acct.	708,097	0	708,097	0	0	0	0	0	0	0	0	0	6
7	363.10	Liquifaction Equipment	Plant Acct.	1,566,771	0	1,566,771	0	0	0	0	0	0	0	0	0	7
8	363.20	Vaporizing Equipment	Plant Acct.	432,654	0	432,654	0	0	0	0	0	0	0	0	0	8
9	363.30	Compressor Equipment	Plant Acct.	369,830	0	369,830	0	0	0	0	0	0	0	0	0	9
10	363.50	Other Equipment	Plant Acct.	493,784	0	493,784	0	0	0	0	0	0	0	0	0	10
11		Total Storage Plant		$ 3,571,136	$ 0	$ 3,571,136	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	11
		Distribution Plant														
12	374.10	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
13	374.20	Rights of Way	Plant Acct.	50,700	0	0	0	0	0	50,700	0	0	0	0	0	13
14	375.00	Structures	Plant Acct.	3,704	0	0	0	0	0	3,704	0	0	0	0	0	14
15	376.00	Mains	Plant Acct.	47,744,070	0	0	0	0	0	23,872,035	23,872,035	0	0	0	0	15
16	378.00	Measuring & Regulating Station	Plant Acct.	3,870,699	0	0	0	0	0	1,935,349	1,935,349	0	0	0	0	16
17	380.00	Services	Plant Acct.	35,893,910	0	0	0	0	0	0	35,893,910	0	0	0	0	17
18	381.00	Meters	Plant Acct.	14,097,273	0	0	0	0	0	0	14,097,273	0	0	0	0	18
19	385.00	Industrial Measuring & Regulating Station	Plant Acct.	247,463	0	0	0	0	0	0	0	247,463	0	0	0	19
20	387.00	Other Equipment	Plant Acct.	0	0	0	0	0	0	0	0	0	0	0	0	20
21		Total Direct Distribution Plant		$ 101,907,818	$ 0	$ 0	$ 0	$ 0	$ 0	$ 25,861,788	$ 75,798,567	$ 247,463	$ 0	$ 0	$ 0	21
		General Plant														
22	389.00	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23	390.10	Structures	Plant Acct.	2,287,019	0	43,449	0	0	0	757,061	1,479,976	6,533	0	0	0	23
24	390.20	Structures - Leasehold Improvements	Plant Acct.	6,879	0	131	0	0	0	2,277	4,451	20	0	0	0	24
25	391.00	Office Furniture & Equipment	Plant Acct.	445,503	0	8,464	0	0	0	147,473	288,294	1,273	0	0	0	25
26	391.10	Computer Equipment	Plant Acct.	2,431,100	0	46,186	0	0	0	804,755	1,573,214	6,945	0	0	0	26
27	392.11	Transportation Equipment - Light	Plant Acct.	5,318,385	0	101,039	0	0	0	1,760,519	3,441,634	15,192	0	0	0	27
28	392.12	Transportation Equipment - Heavy	Plant Acct.	899,402	0	17,087	0	0	0	297,725	582,021	2,569	0	0	0	28
29	393.00	Stores Equipment	Plant Acct.	154,564	0	2,936	0	0	0	51,165	100,022	442	0	0	0	29
30	394.00	Tools, Shop & Garage Equipment	Plant Acct.	2,177,517	0	41,369	0	0	0	720,813	1,409,115	6,220	0	0	0	30
31	395.00	Laboratory Equipment	Plant Acct.	29,725	0	565	0	0	0	9,840	19,235	85	0	0	0	31
32	396.00	Power Operated Equipment	Plant Acct.	349,743	0	6,644	0	0	0	115,774	226,326	999	0	0	0	32
33	397.10	Communication Equipment	Plant Acct.	(82,339)	0	(1,564)	0	0	0	(27,256)	(53,283)	(235)	0	0	0	33
34	397.20	Telemetering Equipment	Plant Acct.	2,045	0	39	0	0	0	677	1,323	6	0	0	0	34
35	398.00	Miscellaneous Equipment	Plant Acct.	308,073	0	5,853	0	0	0	101,980	199,360	880	0	0	0	35
36		Total Direct General Plant		$ 14,327,615	$ 0	$ 272,197	$ 0	$ 0	$ 0	$ 4,742,801	$ 9,271,689	$ 40,928	$ 0	$ 0	$ 0	36
		Common - Systems Allocable														
		Common - Systems Allocation	4.90%													
		Intangible Plant														
37	301.00	Organization		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	37
38	303.00	Miscellaneous Intangible	Plant Acct.	12,380,703	0	235,210	0	0	0	4,098,324	8,011,803	35,366	0	0	0	38
39		Total Common Intangible Plant		$ 12,380,703	$ 0	$ 235,210	$ 0	$ 0	$ 0	$ 4,098,324	$ 8,011,803	$ 35,366	$ 0	$ 0	$ 0	39

SCHEDULE G-6
SHEET 1 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		General Plant														
1	389.00	Land & Land Rights		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2	390.10	Structures	Plant Acct.	607,993	0	11,551	0	0	0	201,261	393,445	1,737	0	0	0	2
3	390.20	Structures - Leasehold Improvements	Plant Acct.	44,128	0	838	0	0	0	14,608	28,556	126	0	0	0	3
4	391.00	Office Furniture & Equipment	Plant Acct.	329,114	0	6,253	0	0	0	108,945	212,977	940	0	0	0	4
5	391.10	Computer Equipment	Plant Acct.	2,612,782	0	49,638	0	0	0	864,897	1,690,784	7,464	0	0	0	5
6	392.11	Transportation Equipment, Light	Plant Acct.	29,434	0	559	0	0	0	9,743	19,047	84	0	0	0	6
7	392.12	Transportation Equipment, Heavy	Plant Acct.	0	0	0	0	0	0	0	0	0	0	0	0	7
8	392.21	Transportation Equipment, Aircraft	Plant Acct.	7,755	0	147	0	0	0	2,567	5,018	22	0	0	0	8
9	393.00	Stores Equipment	Plant Acct.	1,282	0	24	0	0	0	424	830	4	0	0	0	9
10	394.00	Tools, Shop & Garage Equipment	Plant Acct.	49,435	0	939	0	0	0	16,364	31,990	141	0	0	0	10
11	395.00	Laboratory Equipment	Plant Acct.	43,333	0	823	0	0	0	14,344	28,042	124	0	0	0	11
12	396.00	Power Operated Equipment	Plant Acct.	8,276	0	157	0	0	0	2,740	5,356	24	0	0	0	12
13	397.00	Communication Equipment	Plant Acct.	293,371	0	5,573	0	0	0	97,113	189,846	838	0	0	0	13
14	397.20	Telemetering Equipment	Plant Acct.	45,825	0	871	0	0	0	15,169	29,655	131	0	0	0	14
15	398.00	Miscellaneous Equipment	Plant Acct.	200,268	0	3,805	0	0	0	66,294	129,597	572	0	0	0	15
16		Total Common General Plant		$ 4,272,997	$ 0	$ 81,179	$ 0	$ 0	$ 0	$ 1,414,469	$ 2,765,143	$ 12,206	$ 0	$ 0	$ 0	16
		System Allocable Amortization														
17	303.00	Miscellaneous Intangible Plant	Com Gen Plant	$ 12,380,703	$ 0	$ 235,210	$ 0	$ 0	$ 0	$ 4,098,324	$ 8,011,803	$ 35,366	$ 0	$ 0	$ 0	17
18	309.2-398	General Plant	Com Gen Plant	4,272,997	0	81,179	0	0	0	1,414,469	2,765,143	12,206	0	0	0	18
19		Total System Allocable Amortization		$ 16,653,700	$ 0	$ 316,388	$ 0	$ 0	$ 0	$ 5,512,793	$ 10,776,946	$ 47,572	$ 0	$ 0	$ 0	19
20	389-390.1	Total System Depreciation Expense	Com Gen Plant	$ 4,272,997	$ 0	$ 81,179	$ 0	$ 0	$ 0	$ 1,414,469	$ 2,765,143	$ 12,206	$ 0	$ 0	$ 0	20
21		Total Direct Depreciation Expense	Dir. Depr.	119,891,319	0	3,844,943	0	0	0	30,632,643	85,125,100	288,633	0	0	0	21
22		Amortization Gas Plant Acquisition	Dir. Depr.	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23		Regulatory Amortizations	Dir. Plant	$ 0	0	0	0	0	0	0	0	0	0	0	0	23
24		Total Depreciation Expense		$ 136,545,019	$ 0	$ 4,161,331	$ 0	$ 0	$ 0	$ 36,145,436	$ 95,902,046	$ 336,205	$ 0	$ 0	$ 0	24
		Operation and Maintenance Expense														
		Operation Expenses														
		Gas Supply Expenses														
25	803.00	Natural Gas Transmission Line Purchases		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	25
26	805.10	Purchased Gas Cost Adjustments		0	0	0	0	0	0	0	0	0	0	0	0	26
27	810.00	Gas Used for Compression Station Fuel		0	0	0	0	0	0	0	0	0	0	0	0	27
	813.00	Other Gas Supply Expenses														
28		Labor	Commodity	$ 815,199	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 815,199	$ 0	$ 0	$ 0	28
29		Labor Loadings	Commodity	451,314	0	0	0	0	0	0	0	451,314	0	0	0	29
30		Materials & Expenses	Commodity	68,861	0	0	0	0	0	0	0	68,861	0	0	0	30
31		Total Gas Supply Expenses		$ 1,335,375	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,335,375	$ 0	$ 0	$ 0	31

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Transmission Expenses														
	858.00	Transmission and Compression of Gas														
1		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	2
3		Materials & Expenses		0	0	0	0	0	0	0	0	0	0	0	0	3
4		Total Transmission Expenses		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
		Storage														
5	Various	Various	Storage	$ 2,001,101	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
		Distribution Expenses - Operation														
	870.00	Operation Supervision and Engineering														
6		Labor	Dist Oper Exp	$ 6,126,955	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,129,012	$ 4,830,178	$ 167,764	$ 0	$ 0	$ 0	6
7		Labor Loadings	Dist Oper Exp	3,595,392	0	0	0	0	0	662,522	2,834,424	98,447	0	0	0	7
8		Materials & Expenses	Dist Oper Exp	1,271,396	0	0	0	0	0	234,280	1,002,304	34,813	0	0	0	8
	871.00	Distribution Load Dispatching														
9		Labor	Dmd/Comm	$ 815,897	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 815,897	$ 0	$ 0	$ 0	9
10		Labor Loadings	Dmd/Comm	449,376	0	0	0	0	0	0	0	$ 449,376	0	0	0	10
11		Materials & Expenses	Dmd/Comm	51,869	0	0	0	0	0	0	0	$ 51,869	0	0	0	11
	874.00	Mains and Services Expenses														
12		Labor	Plant Acct.	$ 3,520,537	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,294,229	$ 2,226,308	$ 0	$ 0	$ 0	$ 0	12
13		Labor Loadings	Plant Acct.	2,077,778	0	0	0	0	0	$ 763,838	$ 1,313,939	0	0	0	0	13
14		Materials & Expenses	Plant Acct.	14,594,880	0	0	0	0	0	$ 5,365,409	$ 9,229,471	0	0	0	0	14
	875.00	Measuring & Regulating Exps. - General														
15		Labor	Commodity	$ 1,351,217	$ 0	$ 0	$ 0	$ 0	$ 0	$ 675,609	$ 675,609	$ 0	$ 0	$ 0	$ 0	15
16		Labor Loadings	Commodity	797,810	0	0	0	0	0	$ 398,905	$ 398,905	$ 0	0	0	0	16
17		Materials & Expenses	Commodity	732,095	0	0	0	0	0	$ 366,047	$ 366,047	$ 0	0	0	0	17
	878.00	Meter and House Regulator Expenses														
18		Labor	Plant Acct.	$ 4,537,442	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,537,442	$ 0	$ 0	$ 0	$ 0	18
19		Labor Loadings	Plant Acct.	2,661,158	0	0	0	0	0	0	2,661,158	0	0	0	0	19
20		Materials & Expenses	Plant Acct.	3,556,774	0	0	0	0	0	0	3,556,774	0	0	0	0	20
	879.00	Customer Installation Expense														
21		Labor	Dist Cust	$ 7,108,224	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,108,224	$ 0	$ 0	$ 0	$ 0	21
22		Labor Loadings	Dist Cust	4,095,971	0	0	0	0	0	0	4,095,971	0	0	0	0	22
23		Materials & Expenses	Dist Cust	1,752,586	0	0	0	0	0	0	1,752,586	0	0	0	0	23
	880.00	Other Expenses														
24		Labor	Dist Oper Exp	$ 3,767,748	$ 0	$ 0	$ 0	$ 0	$ 0	$ 694,282	$ 2,970,300	$ 103,166	$ 0	$ 0	$ 0	24
25		Labor Loadings	Dist Oper Exp	2,210,058	0	0	0	0	0	407,247	1,742,297	60,514	0	0	0	25
26		Materials & Expenses	Dist Oper Exp	4,526,461	0	0	0	0	0	834,090	3,568,431	123,941	0	0	0	26
	881.00	Rents														
27		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	27
28		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	28
29		Materials & Expenses	Dist Oper Exp	(838,690)	0	0	0	0	0	(154,545)	(661,181)	(22,964)	0	0	0	29
30		Total Distribution Operating Expenses		$ 68,762,934	$ 0	$ 0	$ 0	$ 0	$ 0	$ 12,670,925	$ 54,209,189	$ 1,882,821	$ 0	$ 0	$ 0	30
31		Total Gas Supply & Distribution Expenses		$ 72,099,410	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 12,670,925	$ 54,209,189	$ 3,218,195	$ 0	$ 0	$ 0	31

SCHEDULE G-6
SHEET 3 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Maintenance Expenses														
	885.00	Maintenance Supervision & Engineering														
1		Labor	Dist Maint Exp	$ 1,498,223	$ 0	$ 0	$ 0	$ 0	$ 0	$ 458,870	$ 1,039,353	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings	Dist Maint Exp	879,344	0	0	0	0	0	269,322	610,022	0	0	0	0	2
3		Materials & Expenses	Dist Maint Exp	249,786	0	0	0	0	0	76,504	173,283	0	0	0	0	3
	886.00	Maintenance of Structures & Improvement														
4		Labor	Plant Acct.	$ 492	$ 0	$ 0	$ 0	$ 0	$ 0	$ 492	$ 0	$ 0	$ 0	$ 0	$ 0	4
5		Labor Loadings	Plant Acct.	324	0	0	0	0	0	324	0	0	0	0	0	5
6		Materials & Expenses	Plant Acct.	6,846	0	0	0	0	0	6,846	0	0	0	0	0	6
	887.00	Maintenance of Mains														
7		Labor	Plant Acct.	$ 7,208,633	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,604,316	$ 3,604,316	$ 0	$ 0	$ 0	$ 0	7
8		Labor Loadings	Plant Acct.	4,230,923	0	0	0	0	0	2,115,461	2,115,461	0	0	0	0	8
9		Materials & Expenses	Plant Acct.	10,664,855	0	0	0	0	0	5,332,428	5,332,428	0	0	0	0	9
	889.00	Maint. of Measuring & Reg. Station Equip.														
10		Labor	Commodity	$ 921,397	$ 0	$ 0	$ 0	$ 0	$ 0	$ 460,699	$ 460,699	$ 0	$ 0	$ 0	$ 0	10
11		Labor Loadings	Commodity	536,599	0	0	0	0	0	268,300	268,300	0	0	0	0	11
12		Materials & Expenses	Commodity	697,186	0	0	0	0	0	348,593	348,593	0	0	0	0	12
	892.00	Maintenance of Services														
13		Labor	Plant Acct.	$ 3,224,003	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,224,003	$ 0	$ 0	$ 0	$ 0	13
14		Labor Loadings	Plant Acct.	1,883,756	0	0	0	0	0	0	1,883,756	0	0	0	0	14
15		Materials & Expenses	Plant Acct.	5,366,958	0	0	0	0	0	0	5,366,958	0	0	0	0	15
	893.00	Maintenance of Meter & House Regulators														
16		Labor	Plant Acct.	$ 2,309,042	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,309,042	$ 0	$ 0	$ 0	$ 0	16
17		Labor Loadings	Plant Acct.	1,331,388	0	0	0	0	0	0	1,331,388	0	0	0	0	17
18		Materials & Expenses	Plant Acct.	1,246,741	0	0	0	0	0	0	1,246,741	0	0	0	0	18
	894.00	Maintenance of Other Equipment														
19		Labor	Dist Maint Exp	$ 134,322	$ 0	$ 0	$ 0	$ 0	$ 0	$ 41,140	$ 93,183	$ 0	$ 0	$ 0	$ 0	19
20		Labor Loadings	Dist Maint Exp	77,543	0	0	0	0	0	23,750	53,793	0	0	0	0	20
21		Materials & Expenses	Dist Maint Exp	93,400	0	0	0	0	0	28,606	64,794	0	0	0	0	21
22		Total Maintenance Expenses		$ 42,561,761	$ 0	$ 0	$ 0	$ 0	$ 0	$ 13,035,649	$ 29,526,112	$ 0	$ 0	$ 0	$ 0	22
23		Total Gas Supply, Distribution & Maint. Exps		$ 114,661,171	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 25,706,573	$ 83,735,301	$ 3,218,195	$ 0	$ 0	$ 0	23
		Customer Accounts Expenses														
	901.00	Supervision Expenses														
24		Labor	Customer	$ 1,539,112	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,539,112	24
25		Labor Loadings	Customer	861,996	0	0	0	0	0	0	0	0	0	0	861,996	25
26		Materials & Expenses	Customer	54,104	0	0	0	0	0	0	0	0	0	0	54,104	26
	902.00	Meter Reading Expenses														
27		Labor	Customer	$ 767,647	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 767,647	27
28		Labor Loadings	Customer	449,828	0	0	0	0	0	0	0	0	0	0	449,828	28
29		Materials & Expenses	Customer	407,223	0	0	0	0	0	0	0	0	0	0	407,223	29

SCHEDULE G-6
SHEET 4 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
	903.00	Customer Records & Collections Expenses														
1		Labor & Loadings	KAM Direct	776,052	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 776,052	1
2		Materials & Expenses	KAM Direct	2,968	0	0	0	0	0	0	0	0	0	0	2,968	2
	903.00	Customer Records & Collections Expenses														
3		Labor & Loadings	Customer	$ 8,076,815	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,076,815	3
4		Materials & Expenses	Customer	12,265,589.29	0	0	0	0	0	0	0	0	0	0	12,265,589	4
	904.00	Uncollectible Accounts Expense														
5		Labor		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	5
6		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	6
7		Materials & Expenses	Customer	1,692,711	0	0	0	0	0	0	0	0	0	0	1,692,711	7
	905.00	Miscellaneous Customer Accounts Expenses														
8		Labor	Customer	$ 49,014	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 49,014	8
9		Labor Loadings	Customer	28,878	0	0	0	0	0	0	0	0	0	0	28,878	9
10		Materials & Expenses	Customer	237	0	0	0	0	0	0	0	0	0	0	237	10
11		Total Customer Accounts Expenses		$ 26,972,173	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 26,972,173	11
		Customer Service & Informational Expenses														
	908.00	Customer Assistance Expense														
12		Labor	Customer	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	12
13		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	13
14		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	14
	909.00	Info. & Instructional Advertising Exps.														
15		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	15
16		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	16
17		Materials & Expenses		0	0	0	0	0	0	0	0	0	0	0	0	17
	910.00	Misc. Customer Service & Info. Exp.														
18		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	18
19		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	19
20		Materials & Expenses	Customer	167,925	0	0	0	0	0	0	0	0	0	0	167,925	20
21		Total Customer Service & Informational Expenses		$ 167,925	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 167,925	21
		Sales Expense														
	911.00	Supervision														
22		Labor	Customer	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	22
23		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	23
24		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	24

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
	912.00	Demonstrating & Selling Expense														
1		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	1
2		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	2
3		Materials & Expenses	Customer	0	0	0	0	0	0	0	0	0	0	0	0	3
	913.00	Advertising Expenses														
4		Labor	Customer	0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	4
5		Labor Loadings	Customer	0	0	0	0	0	0	0	0	0	0	0	0	5
6		Materials & Expenses	Customer	(203)	0	0	0	0	0	0	0	0	0	0	(203)	6
7		Total Sales Expense		$ (203)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ (203)	7
8		Total O&M Expense		$ 141,801,067	$ 0	$ 2,001,101	$ 0	$ 0	$ 0	$ 25,706,573	$ 83,735,301	$ 3,218,195	$ 0	$ 0	$ 27,139,896	8
					0.0000%	1.4112%	0.0000%	0.0000%	0.0000%	18.1286%	59.0512%	2.2695%	0.0000%	0.0000%	19.1394%	
		Administrative & General Expense														
	920.00	Administrative & General Salaries														
9		Labor	Total O&M	$ 37,802,149	$ 0	$ 533,465	$ 0	$ 0	$ 0	$ 6,853,007	$ 22,322,641	$ 857,925	$ 0	$ 0	$ 7,235,111	9
10		Labor Loadings	Total O&M	16,922,586	0	238,812	0	0	0	3,067,831	9,992,999	384,060	0	0	3,238,884	10
11		Materials & Expenses	Total O&M	(2,276,215)	0	(32,122)	0	0	0	(412,646)	(1,344,133)	(51,659)	0	0	(435,654)	11
12		Total Admin. & General Salaries		$ 52,448,521	$ 0	$ 740,155	$ 0	$ 0	$ 0	$ 9,508,192	$ 30,971,507	$ 1,190,327	$ 0	$ 0	$ 10,038,341	12
		Other Administrative & General Expense														
13	921.00	Office Supplies	Total O&M	$ 6,386,409	$ 0	$ 90,125	$ 0	$ 0	$ 0	$ 1,157,768	$ 3,771,254	$ 144,940	$ 0	$ 0	$ 1,222,321	13
14	922.00	Administrative Expenses Transferred - Credit	Total O&M	(7,845,986)	0	(110,723)	0	0	0	(1,422,369)	(4,633,153)	(178,066)	0	0	(1,501,676)	14
15	923.00	Outside Services Employed	Total O&M	17,424,059	0	245,889	0	0	0	3,158,741	10,289,124	395,441	0	0	3,334,863	15
16	924.00	Property Insurance	Total O&M	603,187	0	8,512	0	0	0	109,349	356,189	13,689	0	0	115,446	16
17	925.00	Injuries and Damages	Total O&M	10,029,888	0	141,542	0	0	0	1,818,280	5,922,774	227,630	0	0	1,919,662	17
18	926.00	Employee Pensions and Benefits	Total O&M	8,346,693	0	117,789	0	0	0	1,513,140	4,928,827	189,429	0	0	1,597,508	18
19	928.00	Regulatory Commission Expenses	Total O&M	197,333	0	2,785	0	0	0	35,774	116,528	4,479	0	0	37,768	19
20	930.10	Safety Advertising	Total O&M	829,341	0	11,704	0	0	0	150,348	489,736	18,822	0	0	158,731	20
	930.20	Miscellaneous General Expenses														
21		Labor	Total O&M	0	0	0	0	0	0	0	0	0	0	0	0	21
22		Labor Loadings		0	0	0	0	0	0	0	0	0	0	0	0	22
23		Materials & Expenses	Total O&M	3,748,145	0	52,894	0	0	0	679,487	2,213,327	85,065	0	0	717,373	23
24	931.00	Rents	Total O&M	1,011,191	0	14,270	0	0	0	183,315	597,121	22,949	0	0	193,536	24
	935.00	Maintenance of General Plant														
25		Labor	Total O&M	471,364	0	6,652	0	0	0	85,452	278,346	10,698	0	0	90,216	25
26		Labor Loadings	Total O&M	272,410	0	3,844	0	0	0	49,384	160,862	6,182	0	0	52,138	26
27		Materials & Expenses	Total O&M	2,202,692	0	31,084	0	0	0	399,318	1,300,717	49,990	0	0	421,582	27
28		Total Other Administrative & General Expense		$ 43,676,726	$ 0	$ 616,367	$ 0	$ 0	$ 0	$ 7,917,987	$ 25,791,652	$ 991,249	$ 0	$ 0	$ 8,359,470	28
29		Total Administrative and General Expense		$ 96,125,247	$ 0	$ 1,356,523	$ 0	$ 0	$ 0	$ 17,426,178	$ 56,763,159	$ 2,181,576	$ 0	$ 0	$ 18,397,811	29
30		Total O&M and A&G Expense		$ 237,926,314	$ 0	$ 3,357,624	$ 0	$ 0	$ 0	$ 43,132,752	$ 140,498,460	$ 5,399,771	$ 0	$ 0	$ 45,537,707	30

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
1		Interest on Customer Deposits	Customer	$ 37,125											$ 37,125	1
2		Taxes Other Than Income	Net Plant	69,307,596	$ 0	$ 1,316,711	$ 0	$ 0	$ 0	$ 22,942,557	$ 44,850,346	$ 197,982	$ 0	$ 0	$ 0	2
3		Interest Expense	Total Dr. Plant	53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	3
4		ARAM Federal	Total Dr. Plant	(7,284,597)	0	(138,393)	0	0	0	(2,411,385)	(4,714,010)	(20,809)	0	0	0	4
5		Regulatory Amortizations														
6		Recorded	Net Plant	2,620,521	0	49,785	0	0	0	867,458	1,695,792	7,486	0	0	0	
7		GCU Acquisition Adjustment	Net Plant	318,752	0	6,056	0	0	0	105,515	206,271	911	0	0	0	
8		COVID-19 Late Fees Waived and Suppressed	Customer	847,717	0	0	0	0	0	0	0	0	0	0	847,717	
9		LNG Deferral Amortizaton	Plant Acct.	3,983,884	0	3,983,884	0	0	0	0	0	0	0	0	0	
10		COYL Regulatory Amortization Balance	Plant Acct.	348,902	0	0	0	0	0	0	348,902	0	0	0	0	
11		VSP Regulatory Amortization Balance	Plant Acct.	1,044,601	0	0	0	0	0	522,300	522,300	0	0	0	0	
12		TRIMP/DOT	Plant Acct.	(1,146,342)	0	0	0	0	0	(573,171)	(573,171)	0	0	0	0	
13		DSM	Net Plant	(3,702,079)	0	(70,332)	0	0	0	(1,225,481)	(2,395,690)	(10,575)	0	0	0	
14		Total Regulatory Amortizations	Various	4,315,957	0	3,969,392	0	0	0	(303,379)	(195,596)	(2,179)	0	0	847,717	14
		Rate Base														
15		Total Direct Net Plant		$ 3,971,364,293	$ 0	$ 75,448,288	$ 0	$ 0	$ 0	$ 1,314,621,444	$ 2,569,950,100	$ 11,344,461	$ 0	$ 0	$ 0	15
16		Total Common Systems Allocable Net Plant		142,424,093	0	2,705,784	0	0	0	47,145,956	92,165,509	406,844	0	0	0	16
17		Total Net Plant		$ 4,113,788,386	$ 0	$ 78,154,072	$ 0	$ 0	$ 0	$ 1,361,767,400	$ 2,662,115,610	$ 11,751,304	$ 0	$ 0	$ 0	17
18		Cash Working Capital	Total O&M	$ (16,619,324)	$ 0	$ (234,532)	$ 0	$ 0	$ 0	$ (3,012,854)	$ (9,813,918)	$ (377,178)	$ 0	$ 0	$ (3,180,842)	18
19		Materials & Supplies	Net Plant	30,847,268	0	586,039	0	0	0	10,211,221	19,961,890	88,117	0	0	0	19
20		Prepayments	Net Plant	14,121,283	0	268,277	0	0	0	4,674,500	9,138,168	40,338	0	0	0	20
21		Other		0	0	0	0	0	0	0	0	0	0	0	0	21
22		Customer Deposits	Customer	(33,750,043)	0	0	(641,186)	0	0	0	(33,108,857)	0	0	0	0	22
23		Customer Advances	Customer	(59,445,400)	0	0	(1,129,348)	0	0	0	(58,316,051)	0	0	0	0	23
24		Deferred Taxes	Net Plant	(634,525,981)	0	(12,054,774)	0	0	0	(210,044,055)	(410,614,587)	(1,812,565)	0	0	0	24
25		Other		0	0	0	0	0	0	0	0	0	0	0	0	25
26		Total Rate Base		$ 3,414,416,189	$ 0	$ 66,719,082	$ (1,770,534)	$ 0	$ 0	$ 1,163,596,212	$ 2,179,362,254	$ 9,690,017	$ 0	$ 0	$ (3,180,842)	26
		Revenue														
27		Net Operating Margin		$ 564,241,682	$ 0	$ 295,811	$ 3,190,492	$ 7,246,623	$ 0	$ 15,269,802	$ 164,693,412	$ 374,071,185	$ 0	$ 0	$ (525,643)	27
28		Special Contract & Optional Margin		6,681,133	0	3,503	37,778	85,807	0	180,808	1,950,119	4,429,342	0	0	(6,224)	28
29		Late Charges		848,431	0	0	$ 16,139	0	0	0	$ 833,082	0	0	0	(790)	29
30		Service Establishment Charges		6,845,361	0	0	$ 130,212	0	0	0	$ 6,721,527	0	0	0	(6,377)	30
31		Reconnect / Reread Charges		100	0	0	$ 2	0	0	0	$ 98	0	0	0	(0)	31
32		Other Revenue - Labor		1,050	0	1	6	13	0	28	306	696	0	0	(1)	32
33		Other Revenue - Parts & Material		68	0	0	0	1	0	2	20	45	0	0	(0)	33
34		Other Revenue - Field Collection Fee		0	0	0	0	0	0	0	0	0	0	0	0	34
35		Other Revenue - Returned Item Fee		567,609	0	0	$ 10,797	0	0	0	$ 557,341	0	0	0	(529)	35
36		Other Revenue - Rental Income & UESC Revenue		0	0	0	0	0	0	0	0	0	0	0	0	36
37		Total Revenue		$ 579,185,433	$ 0	$ 299,315	$ 3,385,426	$ 7,332,444	$ 0	$ 15,450,640	$ 174,755,905	$ 378,501,268	$ 0	$ 0	$ (539,564)	37

SCHEDULE G-6
SHEET 7 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DISTRIBUTION OF EXPENSES BY FUNCTION - DATA ENTRY AND CLASSIFICATION OF COSTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Acct No.	Description	Allocation	Amount	Storage				Distribution				Customer Accounting			Line No.
					Specific	Demand	Customer	Commodity	Specific	Demand	Customer	Commodity	Specific	Demand	Customer	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
		Operating Deductions														
1		Operations & Maintenance Expenses		$ (141,801,067)	$ 0	$ (2,001,101)	$ 0	$ 0	$ 0	$ (25,706,573)	$ (83,735,301)	$ (3,218,195)	$ 0	$ 0	$ (27,139,896)	1
2		Administrative & General Expenses		(96,125,247)	0	(1,356,523)	0	0	0	(17,426,178)	(56,763,159)	(2,181,576)	0	0	(18,397,811)	2
3		Depreciation Expenses		(136,545,019)	0	(4,161,331)	0	0	0	(36,145,436)	(95,902,046)	(336,205)	0	0	0	3
4		Interest on Customer Deposits		(37,125)	0	0	0	0	0	0	0	0	0	0	(37,125)	4
5		Regulatory Amortizations		(4,315,957)	0	3,969,392	0	0	0	(303,379)	(195,596)	(2,179)	0	0	847,717	5
6		Taxes Other Than Income		(69,307,596)	0	(1,316,711)	0	0	0	(22,942,557)	(44,850,346)	(197,982)	0	0	0	6
7		Total Operating Deductions		$ (448,132,011)	$ 0	$ (4,866,274)	$ 0	$ 0	$ 0	$ (102,524,124)	$ (281,446,448)	$ (5,936,137)	$ 0	$ 0	$ (44,727,115)	7
		State Income Tax														
8		Taxable Income before Interest Expense		$ 131,053,423	$ 0	$ (4,566,959)	$ 3,385,426	$ 7,332,444	$ 0	$ (87,073,483)	$ (106,690,543)	$ 372,565,130	$ 0	$ 0	$ (45,266,679)	8
9		Interest Expense		53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	9
10		State Taxable Income		$ 77,326,971	$ 0	$ (5,587,658)	$ 3,385,426	$ 7,332,444	$ 0	$ (104,858,290)	$ (141,458,015)	$ 372,411,657	$ 0	$ 0	$ (45,266,679)	10
11		State Income Tax	4.90%	$ 3,789,021.58	$ 0	$ (273,795)	$ 165,886	$ 359,290	$ 0	$ (5,138,056)	$ (6,931,443)	$ 18,248,171	$ 0	$ 0	$ (2,218,067)	11
12		Total State Income Tax		$ 3,789,022	$ 0	$ (273,795)	$ 165,886	$ 359,290	$ 0	$ (5,138,056)	$ (6,931,443)	$ 18,248,171	$ 0	$ 0	$ (2,218,067)	12
		Federal Income Tax														
13		Taxable Income before Interest Expense		$ 131,053,423	$ 0	$ (4,566,959)	$ 3,385,426	$ 7,332,444	$ 0	$ (87,073,483)	$ (106,690,543)	$ 372,565,130	$ 0	$ 0	$ (45,266,679)	13
14		Interest Expense		53,726,452	0	1,020,699	0	0	0	17,784,806	34,767,473	153,473	0	0	0	14
15		Federal Taxable Income		$ 77,326,971	$ 0	$ (5,587,658)	$ 3,385,426	$ 7,332,444	$ 0	$ (104,858,290)	$ (141,458,015)	$ 372,411,657	$ 0	$ 0	$ (45,266,679)	15
16		Federal Income Tax	19.97%	$ 15,442,969	$ 0	$ (1,115,911)	$ 676,103	$ 1,464,362	$ 0	$ (20,941,249)	$ (28,250,580)	$ 74,374,332	$ 0	$ 0	$ (9,040,209)	16
17		ARAM Federal		(7,284,597)	0	(138,393)	0	0	0	(2,411,385)	(4,714,010)	(20,809)	0	0	0	17
18		Total Federal Income Tax		$ 8,158,372	$ 0	$ (1,254,305)	$ 676,103	$ 1,464,362	$ 0	$ (23,352,634)	$ (32,964,590)	$ 74,353,523	$ 0	$ 0	$ (9,040,209)	18
19		Regulatory Amortization	Net Plant	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	19
20		Net Income		$ 119,106,029	$ 0	$ (3,038,859)	$ 2,543,436	$ 5,508,792	$ 0	$ (58,582,793)	$ (66,794,509)	$ 279,963,436	$ 0	$ 0	$ (34,008,403)	20
21		Rate of Return on Rate Base		3.49%	0	-4.55%	-143.65%	0	0	-5.03%	-3.06%	2889.19%	0	0	1069.16%	21

SCHEDULE G-6
SHEET 8 OF 8

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Single-Family Residential Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	68,069,077		
	Allocation Percent -	1	100.0000%	60.720117%	0.000000%	0.000000%
2	Storage Plant		145,103,366	77,867,586	0	0
	Allocation Percent -	2	100.0000%	53.663528%	0.000000%	0.000000%
3	Throughput		673,575,744			302,336,107
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	44.885243%
4	Customers		1,144,613		1,061,802	
	Allocation Percent -	4	100.0000%	0.000000%	92.765125%	0.000000%
5	Customers With Mains		1,144,613	0	1,061,802	0
	Allocation Percent -	5	100.0000%	0.000000%	92.765125%	0.000000%
6	Meters for Customers		1,817,419	0	1,061,802	0
	Allocation Percent -	6	100.0000%	0.000000%	58.423626%	0.000000%
7	Service Lines for Customers		1,260,470	0	1,061,802	
	Allocation Percent -	7	100.0000%	0.000000%	84.238549%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580	0	1,061,802	0
	Allocation Percent -	8	100.0000%	0.000000%	93.420788%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	4,344,698	0
	Allocation Percent -	9	100.0000%	0.000000%	86.446551%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		1,061,802	
	Allocation Percent -	11	100.0000%	0.000000%	92.765125%	0.000000%
12	Late Fees		2,013,823	0	1,383,964	0
	Allocation Percent -	12	100.0000%	0.000000%	68.723243%	0.000000%
13	Return Item Fees		1,068,572	0	774,828	0
	Allocation Percent -	13	100.0000%	0.000000%	72.510548%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	1,061,802	0
	Allocation Percent -	16	100.0000%	0.000000%	92.765125%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	802,825,533	2,095,904,337	4,874,022
	Allocation Percent -	1.1	100.0000%	21.119389%	55.135541%	0.128218%
18	Distribution Mains (Account 376)		2,438,675,162	740,383,206	1,131,120,036	0
	Allocation Percent -	2.2	100.0000%	30.360058%	46.382563%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	739,734,632	0
	Allocation Percent -	3.3	100.0000%	0.000000%	84.238549%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	740,383,206	1,870,854,668	0
	Allocation Percent -	4.4	100.0000%	22.322094%	56.405108%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	5,382,254	26,579,833	591,202
	Allocation Percent -	5.5	100.0000%	11.188877%	55.255376%	1.229018%
22	Allocable Distribution Maintenance Expenses		39,629,143	7,369,879	22,931,233	0
	Allocation Percent -	6.6	100.0000%	18.597118%	57.864570%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	136,840,429	264,484,254
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	24.252095%	46.874285%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	21,948,055	0
	Allocation Percent -	10.1	100.0000%	0.000000%	89.808115%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	16,682,923	87,002,187	1,444,495
	Allocation Percent -	11.2	100.0000%	11.765019%	61.355100%	1.018677%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Multi-Family Residential Demand	Multi-Family Residential Customer	Multi-Family Residential Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,156,193		
	Allocation Percent -	1	100.0000%	1.031367%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,491,024	0	0
	Allocation Percent -	2	100.0000%	1.027560%	0.000000%	0.000000%
3	Throughput		673,575,744			6,754,149
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	1.002730%
4	Customers		1,144,613		40,846	
	Allocation Percent -	4	100.0000%	0.000000%	3.568549%	0.000000%
5	Customers With Mains		1,144,613	0	40,846	0
	Allocation Percent -	5	100.0000%	0.000000%	3.568549%	0.000000%
6	Meters for Customers		1,817,419	0	40,846	0
	Allocation Percent -	6	100.0000%	0.000000%	2.247478%	0.000000%
7	Service Lines for Customers		1,260,470		46,938	
	Allocation Percent -	7	100.0000%	0.000000%	3.723859%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580	0	40,846	0
	Allocation Percent -	8	100.0000%	0.000000%	3.593771%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	509,009	0
	Allocation Percent -	9	100.0000%	0.000000%	10.127769%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		40,846	
	Allocation Percent -	11	100.0000%	0.000000%	3.568549%	0.000000%
12	Late Fees		2,013,823	0	115,682	0
	Allocation Percent -	12	100.0000%	0.000000%	5.744419%	0.000000%
13	Return Item Fees		1,068,572	0	58,450	0
	Allocation Percent -	13	100.0000%	0.000000%	5.469919%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	40,846	0
	Allocation Percent -	16	100.0000%	0.000000%	3.568549%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	13,720,273	84,870,809	108,885
	Allocation Percent -	1.1	100.0000%	0.360930%	2.232639%	0.002864%
18	Distribution Mains (Account 376)		2,438,675,162	12,575,841	43,512,658	0
	Allocation Percent -	2.2	100.0000%	0.515683%	1.784274%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	32,700,795	0
	Allocation Percent -	3.3	100.0000%	0.000000%	3.723859%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,575,841	76,213,453	0
	Allocation Percent -	4.4	100.0000%	0.379154%	2.297788%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	91,421	1,048,329	13,207
	Allocation Percent -	5.5	100.0000%	0.190050%	2.179315%	0.027456%
22	Allocable Distribution Maintenance Expenses		39,629,143	125,182	932,760	0
	Allocation Percent -	6.6	100.0000%	0.315883%	2.353721%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	4,754,484	6,582,143
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.842633%	1.166547%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	844,312	0
	Allocation Percent -	10.1	100.0000%	0.000000%	3.454797%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	285,692	3,438,165	32,270
	Allocation Percent -	11.2	100.0000%	0.201473%	2.424640%	0.022757%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Master-Metered Mobile Home Park Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	288,332		
	Allocation Percent -	1	100.0000%	0.257203%	0.000000%	0.000000%
2	Storage Plant		145,103,366	327,536	0	0
	Allocation Percent -	2	100.0000%	0.225726%	0.000000%	0.000000%
3	Throughput		673,575,744			1,255,848
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.186445%
4	Customers		1,144,613		97	
	Allocation Percent -	4	100.0000%	0.000000%	0.008474%	0.000000%
5	Customers With Mains		1,144,613	0	97	0
	Allocation Percent -	5	100.0000%	0.000000%	0.008474%	0.000000%
6	Meters for Customers		1,817,419	0	722	0
	Allocation Percent -	6	100.0000%	0.000000%	0.039749%	0.000000%
7	Service Lines for Customers		1,260,470		233	
	Allocation Percent -	7	100.0000%	0.000000%	0.018490%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		97	
	Allocation Percent -	8	100.0000%	0.000000%	0.008534%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	369	0
	Allocation Percent -	9	100.0000%	0.000000%	0.007340%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		97	
	Allocation Percent -	11	100.0000%	0.000000%	0.008474%	0.000000%
12	Late Fees		2,013,823	0	632	0
	Allocation Percent -	12	100.0000%	0.000000%	0.031396%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	97	0
	Allocation Percent -	16	100.0000%	0.000000%	0.008474%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	3,399,522	397,677	20,246
	Allocation Percent -	1.1	100.0000%	0.089429%	0.010461%	0.000533%
18	Distribution Mains (Account 376)		2,438,675,162	3,136,170	103,332	0
	Allocation Percent -	2.2	100.0000%	0.128601%	0.004237%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	162,370	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.018490%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	3,136,170	265,702	0
	Allocation Percent -	4.4	100.0000%	0.094554%	0.008011%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	22,799	11,165	2,456
	Allocation Percent -	5.5	100.0000%	0.047395%	0.023211%	0.005105%
22	Allocable Distribution Maintenance Expenses		39,629,143	31,218	4,907	0
	Allocation Percent -	6.6	100.0000%	0.078775%	0.012383%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	76,824	635,208
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.013615%	0.112577%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	2,005	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.008204%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	70,635	23,458	6,000
	Allocation Percent -	11.2	100.0000%	0.049813%	0.016543%	0.004231%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Small General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	900,396		
	Allocation Percent -	1	100.0000%	0.803186%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,000,699	0	0
	Allocation Percent -	2	100.0000%	0.689646%	0.000000%	0.000000%
3	Throughput		673,575,744			3,633,968
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.539504%
4	Customers		1,144,613		17,242	
	Allocation Percent -	4	100.0000%	0.000000%	1.506382%	0.000000%
5	Customers With Mains		1,144,613	0	17,242	0
	Allocation Percent -	5	100.0000%	0.000000%	1.506382%	0.000000%
6	Meters for Customers		1,817,419	0	17,242	0
	Allocation Percent -	6	100.0000%	0.000000%	0.948722%	0.000000%
7	Service Lines for Customers		1,260,470		35,432	
	Allocation Percent -	7	100.0000%	0.000000%	2.810982%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		17,242	
	Allocation Percent -	8	100.0000%	0.000000%	1.517029%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	64,594	0
	Allocation Percent -	9	100.0000%	0.000000%	1.285230%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		17,242	
	Allocation Percent -	11	100.0000%	0.000000%	1.506382%	0.000000%
12	Late Fees		2,013,823	0	70,176	0
	Allocation Percent -	12	100.0000%	0.000000%	3.484712%	0.000000%
13	Return Item Fees		1,068,572	0	30,855	0
	Allocation Percent -	13	100.0000%	0.000000%	2.887450%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		84	
	Allocation Percent -	15	100.0000%	0.000000%	1.346154%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	17,242	0
	Allocation Percent -	16	100.0000%	0.000000%	1.506382%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	10,604,933	46,706,825	58,584
	Allocation Percent -	1.1	100.0000%	0.278977%	1.228685%	0.001541%
18	Distribution Mains (Account 376)		2,438,675,162	9,793,552	18,367,884	0
	Allocation Percent -	2.2	100.0000%	0.401593%	0.753191%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	24,684,434	0
	Allocation Percent -	3.3	100.0000%	0.000000%	2.810982%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	9,793,552	43,052,318	0
	Allocation Percent -	4.4	100.0000%	0.295270%	1.298001%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	71,195	508,771	7,106
	Allocation Percent -	5.5	100.0000%	0.148003%	1.057656%	0.014772%
22	Allocable Distribution Maintenance Expenses		39,629,143	97,486	523,529	0
	Allocation Percent -	6.6	100.0000%	0.245997%	1.321071%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	5,711,446	4,025,121
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.012234%	0.713368%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	366,894	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.501275%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	220,272	1,696,999	17,362
	Allocation Percent -	11.2	100.0000%	0.155339%	1.196746%	0.012244%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Medium General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	7,083,993		
	Allocation Percent -	1	100.0000%	6.319182%	0.000000%	0.000000%
2	Storage Plant		145,103,366	9,411,609	0	0
	Allocation Percent -	2	100.0000%	6.486141%	0.000000%	0.000000%
3	Throughput		673,575,744			47,346,251
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	7.029091%
4	Customers		1,144,613		16,593	
	Allocation Percent -	4	100.0000%	0.000000%	1.449631%	0.000000%
5	Customers With Mains		1,144,613	0	16,593	0
	Allocation Percent -	5	100.0000%	0.000000%	1.449631%	0.000000%
6	Meters for Customers		1,817,419	0	396,421	0
	Allocation Percent -	6	100.0000%	0.000000%	21.812298%	0.000000%
7	Service Lines for Customers		1,260,470		77,363	
	Allocation Percent -	7	100.0000%	0.000000%	6.137612%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580		16,593	
	Allocation Percent -	8	100.0000%	0.000000%	1.459877%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	77,859	0
	Allocation Percent -	9	100.0000%	0.000000%	1.549167%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		16,593	
	Allocation Percent -	11	100.0000%	0.000000%	1.449631%	0.000000%
12	Late Fees		2,013,823	0	153,438	0
	Allocation Percent -	12	100.0000%	0.000000%	7.619264%	0.000000%
13	Return Item Fees		1,068,572	0	71,418	0
	Allocation Percent -	13	100.0000%	0.000000%	6.683498%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		1,092	
	Allocation Percent -	15	100.0000%	0.000000%	17.500000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	16,593	0
	Allocation Percent -	16	100.0000%	0.000000%	1.449631%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	84,201,512	142,755,746	763,279
	Allocation Percent -	1.1	100.0000%	2.215032%	3.755379%	0.020079%
18	Distribution Mains (Account 376)		2,438,675,162	77,052,161	17,675,894	0
	Allocation Percent -	2.2	100.0000%	3.159591%	0.724815%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	53,896,991	0
	Allocation Percent -	3.3	100.0000%	0.000000%	6.137612%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	77,052,161	71,572,885	0
	Allocation Percent -	4.4	100.0000%	2.323075%	2.157878%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	560,135	5,628,794	92,583
	Allocation Percent -	5.5	100.0000%	1.164434%	11.701394%	0.192466%
22	Allocable Distribution Maintenance Expenses		39,629,143	766,988	1,884,739	0
	Allocation Percent -	6.6	100.0000%	1.935414%	4.755942%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	8,659,176	23,293,621
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.534657%	4.128306%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	479,308	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.961257%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	1,754,239	10,601,860	226,210
	Allocation Percent -	11.2	100.0000%	1.237113%	7.476573%	0.159526%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Large-1 General Demand	Large-1 General Customer	Large-1 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	13,854,347		
	Allocation Percent -	1	100.0000%	12.358586%	0.000000%	0.000000%
2	Storage Plant		145,103,366	18,914,894	0	0
	Allocation Percent -	2	100.0000%	13.035462%	0.000000%	0.000000%
3	Throughput		673,575,744			100,302,070
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	14.890986%
4	Customers		1,144,613		6,790	
	Allocation Percent -	4	100.0000%	0.000000%	0.593184%	0.000000%
5	Customers With Mains		1,144,613	0	6,790	0
	Allocation Percent -	5	100.0000%	0.000000%	0.593184%	0.000000%
6	Meters for Customers		1,817,419	0	181,221	0
	Allocation Percent -	6	100.0000%	0.000000%	9.971352%	0.000000%
7	Service Lines for Customers		1,260,470		25,394	
	Allocation Percent -	7	100.0000%	0.000000%	2.014626%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	26,105	0
	Allocation Percent -	9	100.0000%	0.000000%	0.519412%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		6,790	
	Allocation Percent -	11	100.0000%	0.000000%	0.593184%	0.000000%
12	Late Fees		2,013,823	0	155,059	0
	Allocation Percent -	12	100.0000%	0.000000%	7.699753%	0.000000%
13	Return Item Fees		1,068,572	0	65,508	0
	Allocation Percent -	13	100.0000%	0.000000%	6.130408%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		2,160	
	Allocation Percent -	15	100.0000%	0.000000%	34.615385%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	6,790	0
	Allocation Percent -	16	100.0000%	0.000000%	0.593184%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	164,928,076	57,438,109	1,616,990
	Allocation Percent -	1.1	100.0000%	4.338652%	1.510986%	0.042537%
18	Distribution Mains (Account 376)		2,438,675,162	150,692,889	7,232,920	0
	Allocation Percent -	2.2	100.0000%	6.179293%	0.296592%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	17,691,293	0
	Allocation Percent -	3.3	100.0000%	0.000000%	2.014626%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	150,692,889	24,924,213	0
	Allocation Percent -	4.4	100.0000%	4.543297%	0.751450%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,095,470	2,524,709	196,135
	Allocation Percent -	5.5	100.0000%	2.277313%	5.248482%	0.407735%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,500,018	770,296	0
	Allocation Percent -	6.6	100.0000%	3.785139%	1.943760%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	6,509,416	44,543,042
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	1.153657%	7.894320%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	410,007	0
	Allocation Percent -	10.1	100.0000%	0.000000%	1.677687%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	3,437,822	4,889,812	479,221
	Allocation Percent -	11.2	100.0000%	2.424398%	3.448361%	0.337953%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Large-2 General Demand	Large-2 General Customer	Large-2 General Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	4,431,871		
	Allocation Percent -	1	100.0000%	3.953392%	0.000000%	0.000000%
2	Storage Plant		145,103,366	6,175,261	0	0
	Allocation Percent -	2	100.0000%	4.255767%	0.000000%	0.000000%
3	Throughput		673,575,744			32,948,432
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	4.891570%
4	Customers		1,144,613		398	
	Allocation Percent -	4	100.0000%	0.000000%	0.034808%	0.000000%
5	Customers With Mains		1,144,613	0	398	0
	Allocation Percent -	5	100.0000%	0.000000%	0.034808%	0.000000%
6	Meters for Customers		1,817,419	0	70,840	0
	Allocation Percent -	6	100.0000%	0.000000%	3.897841%	0.000000%
7	Service Lines for Customers		1,260,470		5,699	
	Allocation Percent -	7	100.0000%	0.000000%	0.452104%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	1,253	0
	Allocation Percent -	9	100.0000%	0.000000%	0.024937%	0.000000%
10	Industrial Meas & Reg		604	0	398	0
	Allocation Percent -	10	100.0000%	0.000000%	65.917551%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		398	
	Allocation Percent -	11	100.0000%	0.000000%	0.034808%	0.000000%
12	Late Fees		2,013,823	0	68,555	0
	Allocation Percent -	12	100.0000%	0.000000%	3.404233%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		876	
	Allocation Percent -	15	100.0000%	0.000000%	14.038462%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	398	0
	Allocation Percent -	16	100.0000%	0.000000%	0.034808%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	52,820,888	17,028,106	531,168
	Allocation Percent -	1.1	100.0000%	1.389523%	0.447947%	0.013973%
18	Distribution Mains (Account 376)		2,438,675,162	48,205,191	424,427	0
	Allocation Percent -	2.2	100.0000%	1.976696%	0.017404%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	3,970,114	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.452104%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	48,205,191	4,394,541	0
	Allocation Percent -	4.4	100.0000%	1.453357%	0.132493%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	350,430	951,518	64,429
	Allocation Percent -	5.5	100.0000%	0.728490%	1.978059%	0.133938%
22	Allocable Distribution Maintenance Expenses		39,629,143	479,841	242,073	0
	Allocation Percent -	6.6	100.0000%	1.210829%	0.610846%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	2,231,662	10,674,638
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.395515%	1.891856%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	117,598	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.481193%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	1,101,444	1,750,005	157,420
	Allocation Percent -	11.2	100.0000%	0.776753%	1.234127%	0.111015%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Transportation Eligible General		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	12,967,916		
	Allocation Percent -	1	100.0000%	11.567857%	0.000000%	0.000000%
2	Storage Plant		145,103,366	21,788,237	0	0
	Allocation Percent -	2	100.0000%	15.015666%	0.000000%	0.000000%
3	Throughput		673,575,744			128,296,499
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	19.047078%
4	Customers		1,144,613		206	
	Allocation Percent -	4	100.0000%	0.000000%	0.017997%	0.000000%
5	Customers With Mains		1,144,613	0	206	0
	Allocation Percent -	5	100.0000%	0.000000%	0.017997%	0.000000%
6	Meters for Customers		1,817,419	0	33,478	0
	Allocation Percent -	6	100.0000%	0.000000%	1.842086%	0.000000%
7	Service Lines for Customers		1,260,470		4,597	
	Allocation Percent -	7	100.0000%	0.000000%	0.364711%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	326	0
	Allocation Percent -	9	100.0000%	0.000000%	0.006490%	0.000000%
10	Industrial Meas & Reg		604	0	206	0
	Allocation Percent -	10	100.0000%	0.000000%	34.082449%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		206	
	Allocation Percent -	11	100.0000%	0.000000%	0.017997%	0.000000%
12	Late Fees		2,013,823	0	13,113	0
	Allocation Percent -	12	100.0000%	0.000000%	0.651149%	0.000000%
13	Return Item Fees		1,068,572	0	67,444	0
	Allocation Percent -	13	100.0000%	0.000000%	6.311626%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		1,728	
	Allocation Percent -	15	100.0000%	0.000000%	27.692308%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	206	0
	Allocation Percent -	16	100.0000%	0.000000%	0.017997%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	156,408,030	9,393,248	2,068,294
	Allocation Percent -	1.1	100.0000%	4.114520%	0.247102%	0.054409%
18	Distribution Mains (Account 376)		2,438,675,162	141,051,233	219,448	0
	Allocation Percent -	2.2	100.0000%	5.783929%	0.008999%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	3,202,686	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.364711%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	141,051,233	3,422,135	0
	Allocation Percent -	4.4	100.0000%	4.252607%	0.103175%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,025,379	457,892	250,877
	Allocation Percent -	5.5	100.0000%	2.131605%	0.951887%	0.521534%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,404,044	130,411	0
	Allocation Percent -	6.6	100.0000%	3.542958%	0.329080%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	15,551,126	2,348,400	15,603,421
	Allocation Percent -	Net Op Margin	100.0000%	2.756111%	0.416205%	2.765379%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	219,987	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.900152%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	3,274,178	1,037,428	612,972
	Allocation Percent -	11.2	100.0000%	2.308994%	0.731608%	0.432276%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Air Conditioning Demand	Air Conditioning Customer	Air Conditioning Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	17,829		
	Allocation Percent -	1	100.0000%	0.015904%	0.000000%	0.000000%
2	Storage Plant		145,103,366	56,897	0	0
	Allocation Percent -	2	100.0000%	0.039211%	0.000000%	0.000000%
3	Throughput		673,575,744			321,676
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.047756%
4	Customers		1,144,613		19	
	Allocation Percent -	4	100.0000%	0.000000%	0.001660%	0.000000%
5	Customers With Mains		1,144,613	0	19	0
	Allocation Percent -	5	100.0000%	0.000000%	0.001660%	0.000000%
6	Meters for Customers		1,817,419	0	19	0
	Allocation Percent -	6	100.0000%	0.000000%	0.001045%	0.000000%
7	Service Lines for Customers		1,260,470		25	
	Allocation Percent -	7	100.0000%	0.000000%	0.002011%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	0	0
	Allocation Percent -	9	100.0000%	0.000000%	0.000000%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		19	
	Allocation Percent -	11	100.0000%	0.000000%	0.001660%	0.000000%
12	Late Fees		2,013,823	0	51	0
	Allocation Percent -	12	100.0000%	0.000000%	0.002515%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		12	
	Allocation Percent -	15	100.0000%	0.000000%	0.192308%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	19	0
	Allocation Percent -	16	100.0000%	0.000000%	0.001660%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	228,447	41,926	5,186
	Allocation Percent -	1.1	100.0000%	0.006010%	0.001103%	0.000136%
18	Distribution Mains (Account 376)		2,438,675,162	193,925	20,240	0
	Allocation Percent -	2.2	100.0000%	0.007952%	0.000830%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	17,658	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.002011%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	193,925	37,899	0
	Allocation Percent -	4.4	100.0000%	0.005847%	0.001143%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	1,410	503	629
	Allocation Percent -	5.5	100.0000%	0.002931%	0.001045%	0.001308%
22	Allocable Distribution Maintenance Expenses		39,629,143	1,930	463	0
	Allocation Percent -	6.6	100.0000%	0.004871%	0.001169%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	5,370	47,869
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.000952%	0.008484%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	1,891	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.007737%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	4,873	3,305	1,537
	Allocation Percent -	11.2	100.0000%	0.003437%	0.002331%	0.001084%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Street Lighting Demand	Street Lighting Customer	Street Lighting Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	820		
	Allocation Percent -	1	100.0000%	0.000731%	0.000000%	0.000000%
2	Storage Plant		145,103,366	1,630	0	0
	Allocation Percent -	2	100.0000%	0.001123%	0.000000%	0.000000%
3	Throughput		673,575,744			9,324
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.001384%
4	Customers		1,144,613		48	
	Allocation Percent -	4	100.0000%	0.000000%	0.004194%	0.000000%
5	Customers With Mains		1,144,613	0	48	0
	Allocation Percent -	5	100.0000%	0.000000%	0.004194%	0.000000%
6	Meters for Customers		1,817,419	0	0	0
	Allocation Percent -	6	100.0000%	0.000000%	0.000000%	0.000000%
7	Service Lines for Customers		1,260,470		64	
	Allocation Percent -	7	100.0000%	0.000000%	0.005091%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	65	0
	Allocation Percent -	9	100.0000%	0.000000%	0.001299%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		48	
	Allocation Percent -	11	100.0000%	0.000000%	0.004194%	0.000000%
12	Late Fees		2,013,823	0	2	0
	Allocation Percent -	12	100.0000%	0.000000%	0.000120%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	48	0
	Allocation Percent -	16	100.0000%	0.000000%	0.004194%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	10,016	97,464	150
	Allocation Percent -	1.1	100.0000%	0.000263%	0.002564%	0.000004%
18	Distribution Mains (Account 376)		2,438,675,162	8,919	51,134	0
	Allocation Percent -	2.2	100.0000%	0.000366%	0.002097%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	44,708	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.005091%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	8,919	95,842	0
	Allocation Percent -	4.4	100.0000%	0.000269%	0.002890%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	65	644	18
	Allocation Percent -	5.5	100.0000%	0.000135%	0.001339%	0.000038%
22	Allocable Distribution Maintenance Expenses		39,629,143	89	1,042	0
	Allocation Percent -	6.6	100.0000%	0.000224%	0.002629%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	0	7,725
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.000000%	0.001369%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	992	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.004060%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	211	3,142	45
	Allocation Percent -	11.2	100.0000%	0.000148%	0.002215%	0.000031%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Compression on Customer's Premises		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,145,766		
	Allocation Percent -	1	100.0000%	1.022065%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,181,612	0	0
	Allocation Percent -	2	100.0000%	1.503488%	0.000000%	0.000000%
3	Throughput		673,575,744			14,126,783
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.097282%
4	Customers		1,144,613		61	
	Allocation Percent -	4	100.0000%	0.000000%	0.005329%	0.000000%
5	Customers With Mains		1,144,613	0	61	0
	Allocation Percent -	5	100.0000%	0.000000%	0.005329%	0.000000%
6	Meters for Customers		1,817,419	0	5,887	0
	Allocation Percent -	6	100.0000%	0.000000%	0.323922%	0.000000%
7	Service Lines for Customers		1,260,470		1,939	
	Allocation Percent -	7	100.0000%	0.000000%	0.153819%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	67	0
	Allocation Percent -	9	100.0000%	0.000000%	0.001328%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		61	
	Allocation Percent -	11	100.0000%	0.000000%	0.005329%	0.000000%
12	Late Fees		2,013,823	0	6,308	0
	Allocation Percent -	12	100.0000%	0.000000%	0.313247%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		132	
	Allocation Percent -	15	100.0000%	0.000000%	2.115385%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	61	0
	Allocation Percent -	16	100.0000%	0.000000%	0.005329%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	13,946,939	2,466,560	227,741
	Allocation Percent -	1.1	100.0000%	0.366893%	0.064886%	0.005991%
18	Distribution Mains (Account 376)		2,438,675,162	12,462,427	64,982	0
	Allocation Percent -	2.2	100.0000%	0.511033%	0.002665%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	1,350,748	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.153819%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,462,427	1,415,730	0
	Allocation Percent -	4.4	100.0000%	0.375734%	0.042683%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	90,596	85,505	27,624
	Allocation Percent -	5.5	100.0000%	0.188336%	0.177751%	0.057426%
22	Allocable Distribution Maintenance Expenses		39,629,143	124,053	32,589	0
	Allocation Percent -	6.6	100.0000%	0.313034%	0.082235%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	78,565	3,289,421
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.013924%	0.582981%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	17,740	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.072590%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	292,824	176,816	67,495
	Allocation Percent -	11.2	100.0000%	0.206504%	0.124693%	0.047598%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Electric Generation		
				Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	1,170,432		
	Allocation Percent -	1	100.0000%	1.044068%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,444,746	0	0
	Allocation Percent -	2	100.0000%	1.684831%	0.000000%	0.000000%
3	Throughput		673,575,744			14,250,039
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.115581%
4	Customers		1,144,613		25	
	Allocation Percent -	4	100.0000%	0.000000%	0.002184%	0.000000%
5	Customers With Mains		1,144,613	0	25	0
	Allocation Percent -	5	100.0000%	0.000000%	0.002184%	0.000000%
6	Meters for Customers		1,817,419	0	1,750	0
	Allocation Percent -	6	100.0000%	0.000000%	0.096279%	0.000000%
7	Service Lines for Customers		1,260,470		151	
	Allocation Percent -	7	100.0000%	0.000000%	0.011974%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	0	0
	Allocation Percent -	9	100.0000%	0.000000%	0.000000%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		25	
	Allocation Percent -	11	100.0000%	0.000000%	0.002184%	0.000000%
12	Late Fees		2,013,823	0	1,533	0
	Allocation Percent -	12	100.0000%	0.000000%	0.076130%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		84	
	Allocation Percent -	15	100.0000%	0.000000%	1.346154%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	25	0
	Allocation Percent -	16	100.0000%	0.000000%	0.002184%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	14,354,776	444,347	229,728
	Allocation Percent -	1.1	100.0000%	0.377621%	0.011689%	0.006043%
18	Distribution Mains (Account 376)		2,438,675,162	12,730,718	26,632	0
	Allocation Percent -	2.2	100.0000%	0.522034%	0.001092%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	105,145	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.011974%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	12,730,718	131,777	0
	Allocation Percent -	4.4	100.0000%	0.383823%	0.003973%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	92,547	23,664	27,865
	Allocation Percent -	5.5	100.0000%	0.192390%	0.049193%	0.057927%
22	Allocable Distribution Maintenance Expenses		39,629,143	126,723	6,224	0
	Allocation Percent -	6.6	100.0000%	0.319773%	0.015707%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	101,208	2,399,564
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.017937%	0.425272%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	11,004	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.045025%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	302,109	52,660	68,084
	Allocation Percent -	11.2	100.0000%	0.213052%	0.037136%	0.048013%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Small Essential Agricultural User Demand	Customer	Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	441,953		
	Allocation Percent -	1	100.0000%	0.394238%	0.000000%	0.000000%
2	Storage Plant		145,103,366	840,974	0	0
	Allocation Percent -	2	100.0000%	0.579569%	0.000000%	0.000000%
3	Throughput		673,575,744			4,663,085
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	0.692288%
4	Customers		1,144,613		67	
	Allocation Percent -	4	100.0000%	0.000000%	0.005854%	0.000000%
5	Customers With Mains		1,144,613	0	67	0
	Allocation Percent -	5	100.0000%	0.000000%	0.005854%	0.000000%
6	Meters for Customers		1,817,419	0	991	0
	Allocation Percent -	6	100.0000%	0.000000%	0.054510%	0.000000%
7	Service Lines for Customers		1,260,470		89	
	Allocation Percent -	7	100.0000%	0.000000%	0.007061%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	384	0
	Allocation Percent -	9	100.0000%	0.000000%	0.007649%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		67	
	Allocation Percent -	11	100.0000%	0.000000%	0.005854%	0.000000%
12	Late Fees		2,013,823	0	2,067	0
	Allocation Percent -	12	100.0000%	0.000000%	0.102622%	0.000000%
13	Return Item Fees		1,068,572	0	70	0
	Allocation Percent -	13	100.0000%	0.000000%	0.006551%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240		72	
	Allocation Percent -	15	100.0000%	0.000000%	1.153846%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	67	0
	Allocation Percent -	16	100.0000%	0.000000%	0.005854%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	5,379,447	312,130	75,175
	Allocation Percent -	1.1	100.0000%	0.141513%	0.008211%	0.001978%
18	Distribution Mains (Account 376)		2,438,675,162	4,807,096	71,374	0
	Allocation Percent -	2.2	100.0000%	0.197119%	0.002927%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	62,004	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.007061%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	4,807,096	133,378	0
	Allocation Percent -	4.4	100.0000%	0.144931%	0.004021%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	34,945	13,822	9,118
	Allocation Percent -	5.5	100.0000%	0.072646%	0.028733%	0.018956%
22	Allocable Distribution Maintenance Expenses		39,629,143	47,851	4,114	0
	Allocation Percent -	6.6	100.0000%	0.120746%	0.010380%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	96,480	1,396,687
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.017099%	0.247533%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	10,374	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.042447%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	112,943	35,635	22,279
	Allocation Percent -	11.2	100.0000%	0.079649%	0.025130%	0.015712%

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
DEVELOPMENT OF ALLOCATION FACTORS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Allocation Factor No.	Total	Natural Gas Engine Demand	Natural Gas Engine Customer	Natural Gas Engine Commodity
	(a)	(b)	(c)	(d)	(e)	(f)
	Allocation Factors					
1	Coincident Peak (CP) Monthly Demand		112,103,007	574,082		
	Allocation Percent -	1	100.0000%	0.512102%	0.000000%	0.000000%
2	Storage Plant		145,103,366	2,600,661	0	0
	Allocation Percent -	2	100.0000%	1.792282%	0.000000%	0.000000%
3	Throughput		673,575,744			17,331,513
	Allocation Percent -	3	100.0000%	0.000000%	0.000000%	2.573061%
4	Customers		1,144,613		419	
	Allocation Percent -	4	100.0000%	0.000000%	0.036628%	0.000000%
5	Customers With Mains		1,144,613	0	419	0
	Allocation Percent -	5	100.0000%	0.000000%	0.036628%	0.000000%
6	Meters for Customers		1,817,419	0	6,199	0
	Allocation Percent -	6	100.0000%	0.000000%	0.341092%	0.000000%
7	Service Lines for Customers		1,260,470		745	
	Allocation Percent -	7	100.0000%	0.000000%	0.059111%	0.000000%
8	Residential, MMMHP, Small & Medium		1,136,580			
	Allocation Percent -	8	100.0000%	0.000000%	0.000000%	0.000000%
9	Service Establishment & Reconnect Charges		5,025,878	0	1,147	0
	Allocation Percent -	9	100.0000%	0.000000%	0.022828%	0.000000%
10	Industrial Meas & Reg		604	0	0	0
	Allocation Percent -	10	100.0000%	0.000000%	0.000000%	0.000000%
11	Meter Reading (Bills with Meters)		1,144,613		419	
	Allocation Percent -	11	100.0000%	0.000000%	0.036628%	0.000000%
12	Late Fees		2,013,823	0	43,241	0
	Allocation Percent -	12	100.0000%	0.000000%	2.147198%	0.000000%
13	Return Item Fees		1,068,572	0	0	0
	Allocation Percent -	13	100.0000%	0.000000%	0.000000%	0.000000%
14	Extra		0	0	0	0
	Allocation Percent -	14	0.0000%	0.000000%	0.000000%	0.000000%
15	KAM Direct Allocation		6,240			
	Allocation Percent -	15	100.0000%	0.000000%	0.000000%	0.000000%
16	Customers with Gas Light Count		1,144,613	0	419	0
	Allocation Percent -	16	100.0000%	0.000000%	0.036628%	0.000000%
	Internally Generated Allocation Factors					
17	Net Distribution Plant		3,801,367,146	7,738,391	2,084,227	279,405
	Allocation Percent -	1.1	100.0000%	0.203569%	0.054828%	0.007350%
18	Distribution Mains (Account 376)		2,438,675,162	6,244,255	446,620	0
	Allocation Percent -	2.2	100.0000%	0.256051%	0.018314%	0.000000%
19	Distribution Services (Account 380)		878,142,657	0	519,079	0
	Allocation Percent -	3.3	100.0000%	0.000000%	0.059111%	0.000000%
20	Distribution Mains & Services (Accounts 376, 380)		3,316,817,819	6,244,255	965,699	0
	Allocation Percent -	4.4	100.0000%	0.188260%	0.029115%	0.000000%
21	Allocable Distribution Operating Expenses		48,103,614	45,393	87,287	33,891
	Allocation Percent -	5.5	100.0000%	0.094365%	0.181456%	0.070454%
22	Allocable Distribution Maintenance Expenses		39,629,143	62,156	27,304	0
	Allocation Percent -	6.6	100.0000%	0.156845%	0.068900%	0.000000%
23	Extra		0		0	
	Allocation Percent -	7.7	0.0000%	0.000000%	0.000000%	0.000000%
24	Net Operating Margin w/o SPECC and Optional		564,241,682	0	314,190	3,980,193
	Allocation Percent -	Net Op Margin	100.0000%	0.000000%	0.055684%	0.705406%
25	Customer Accounting Expense (Accounts 902-904)		24,438,833	0	8,666	0
	Allocation Percent -	10.1	100.0000%	0.000000%	0.035461%	0.000000%
26	Total Operations and Maintenance Expense		141,801,067	167,509	163,726	82,806
	Allocation Percent -	11.2	100.0000%	0.118130%	0.115461%	0.058396%

SCHEDULE H

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Revenues: Present Rates [1]	Revenues: Proposed Rates [2]	Increase/(Decrease) [3]: Dollars	Increase/(Decrease) [3]: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 496,439,665	$ 562,093,455	$ 65,653,790	13.22%	1
2	Multi-Family Residential Gas Service	G-6	12,725,065	14,780,585	2,055,520	16.15%	2
3	Single-Family Low Income Residential Gas Service	G-10	19,372,131	21,792,039	2,419,908	12.49%	3
4	Multi-Family Low Income Residential Gas Service	G-11	1,167,062	1,350,385	183,323	15.71%	4
5	Special Residential Gas Service for Air Conditioning	G-15	65,316	74,512	9,196	14.08%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	1,187,195	1,268,775	81,580	6.87%	6
	General Gas Service	G-25					
7	Small		11,113,694	12,454,200	1,340,506	12.06%	7
8	Medium		49,740,465	56,332,102	6,591,637	13.25%	8
9	Large-1		87,870,155	93,390,870	5,520,715	6.28%	9
10	Large-2		22,881,170	24,660,715	1,779,545	7.78%	10
11	Transportation Eligible		42,264,478	46,005,928	3,741,450	8.85%	11
12	Optional Gas Service	G-30	6,028,363	6,028,363	0	0.00%	12
13	Air Conditioning Gas Service	G-40	141,732	148,393	6,661	4.70%	13
14	Street Lighting Gas Service	G-45	11,253	13,393	2,140	19.02%	14
	Gas Service for Compression on Customer's Premises	G-55					
15	Residential		10,126	10,419	293	2.89%	15
16	Small		9,175	9,453	278	3.03%	16
17	Large		6,815,904	7,202,125	386,221	5.67%	17
18	Electric Generation Gas Service	G-60	3,093,592	3,426,473	332,881	10.76%	18
19	Biogas and Renewable Natural Gas Service	G-65	68,400	68,400	0	0.00%	19
20	Small Essential Agriculture User Gas Service	G-75	2,552,122	2,681,243	129,121	5.06%	20
21	Natural Gas Engine Gas Service	G-80	11,799,584	12,059,583	259,999	2.20%	21
22	Total Gas Sales		$ 775,356,648	$ 865,851,411	$ 90,494,764	11.67%	22
23	Special Contract Service	B-1	5,344,383	5,344,383	0	0.00%	23
24	Other Operating Revenue		8,262,618	8,262,618	0	0.00%	24
25	Total Arizona Revenue		$ 788,963,649	$ 879,458,412	$ 90,494,764	11.47%	25
26	Total Requirement			$ 879,458,033			26
27	Over/(Under) Requirement			$ 379			27

[1] Schedule H-2, Sheets 1-4, column (l).
[2] Schedule H-2, Sheets 1-4, column (k).
[3] Includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUE AT PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Revenues Present Rates [1]	Revenues Proposed Rates [2]	Increase/(Decrease) [3] Dollars	Increase/(Decrease) [3] Percent	Line No.
	(a)	(b)	(c)	(g)	(h)	(i)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 2,653,409	$ 3,267,741	$ 614,332	23.15%	1
	General Gas Service	G-25					
2	Small		86,146	93,087	6,941	8.06%	2
3	Medium		278,341	321,621	43,280	15.55%	3
4	Large-1		231,344	247,450	16,106	6.96%	4
5	Large-2		237,907	227,567	(10,340)	-4.35%	5
6	Natural Gas Engine Gas Service	G-80	7,079	8,792	1,713	24.20%	6
7	Total Sales and Full Margin Transportation		$ 3,494,226	$ 4,166,258	$ 672,032	19.23%	7
8	Other Operating Revenue		38,576	38,576	0	0.00%	8
9	Total Graham County Utilities Margin		$ 3,532,802	$ 4,204,834	$ 672,032	19.02%	9

[1] Schedule H-2, Sheet 5, column (l).
[2] Schedule H-2, Sheet 5, column (k).
[3] Includes decrease in gas cost of $235,615 for Graham County Utility customers.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF MARGIN AT PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Southwest Gas Margin: Margin at Present Rates [1]	Southwest Gas Margin: DCA Adjustment [2]	Southwest Gas Margin: Revenue at Present Rates [3]	GCU Margin at Present Rates [4]	Total Margin at Present Rates	Margin at Proposed Rates [5]	Increase/(Decrease): Dollars	Increase/(Decrease): Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)		(g) (e) + (f)	(h)	(i)	
	Residential Service										
1	Single-Family Residential Gas Service	G-5	$ 385,618,735	$ (1,347,014)	$ 384,271,721	$ 1,824,201	$ 386,095,922	$ 451,910,252	$ 65,814,330	17.05%	1
2	Multi-Family Residential Gas Service	G-6	10,411,804	(22,864)	10,388,940		10,388,940	12,444,460	2,055,520	19.79%	2
3	Single-Family Low Income Residential Gas Service	G-10	15,168,886	15,587	15,184,473		15,184,473	17,604,382	2,419,909	15.94%	3
4	Multi-Family Low Income Residential Gas Service	G-11	940,133	7,554	947,687		947,687	1,131,010	183,323	19.34%	4
5	Special Residential Gas Service for Air Conditioning	G-15	44,287	0	44,287		44,287	53,483	9,196	20.76%	5
6	Master-Metered Mobile Home Park Gas Service	G-20	712,032	0	712,032		712,032	793,612	81,580	11.46%	6
	General Gas Service	G-25									
7	Small		9,072,825	590,780	9,663,605	72,962	9,736,567	11,079,626	1,343,059	13.79%	7
8	Medium		29,973,176	1,821,104	31,794,280	158,517	31,952,797	38,567,632	6,614,835	20.70%	8
9	Large-1		49,080,249	1,863,405	50,943,654	108,804	51,052,458	56,596,898	5,544,440	10.86%	9
10	Large-2		12,497,690	301,325	12,799,015	107,285	12,906,300	14,711,133	1,804,833	13.98%	10
11	Transportation Eligible		33,502,947	0	33,502,947		33,502,947	37,244,397	3,741,450	11.17%	11
12	Optional Gas Service	G-30	1,268,350	0	1,268,350		1,268,350	1,268,350	0	0.00%	12
13	Air Conditioning Gas Service	G-40	53,239	0	53,239		53,239	59,900	6,661	12.51%	13
14	Street Lighting Gas Service	G-45	7,725	0	7,725		7,725	9,865	2,140	27.70%	14
	Gas Service for Compression on Customer's Premises	G-55									
15	Residential		6,083	0	6,083		6,083	6,376	293	4.82%	15
16	Small		5,334	0	5,334		5,334	5,612	278	5.21%	16
17	Large		3,356,569	0	3,356,569		3,356,569	3,742,790	386,221	11.51%	17
18	Electric Generation Gas Service	G-60	2,500,772	0	2,500,772		2,500,772	2,833,653	332,881	13.31%	18
19	Biogas and Renewable Natural Gas Service	G-65	68,400	0	68,400		68,400	68,400	0	0.00%	19
20	Small Essential Agriculture User Gas Service	G-75	1,493,167	0	1,493,167		1,493,167	1,622,288	129,121	8.65%	20
21	Natural Gas Engine Gas Service	G-80	4,291,315	0	4,291,315	3,068	4,294,383	4,554,691	260,308	6.06%	21
22	Total Sales and Full Margin Transportation		$ 560,073,718	$ 3,229,877	$ 563,303,595	$ 2,274,837	$ 565,578,432	$ 656,308,810	$ 90,730,378	16.11%	22
23	Special Contract Service	B-1	5,344,383	0	5,344,383	0	5,344,383	5,344,383	0	0.00%	23
24	Other Operating Revenue		8,224,042	0	8,224,042	38,576	8,262,618	8,262,618	0	0.00%	24
25	Total Arizona Margin		$ 573,642,142	$ 3,229,877	$ 576,872,020	$ 2,313,413	$ 579,185,433	$ 669,915,811	$ 90,730,378	15.73%	25
26	Total Margin Requirement							$ 669,915,432			26
27	Over/(Under) Requirement							$ 379			27

[1] Schedule H-2, Sheets 6-9 column (i).
[2] Adjustment to authorized margin per customer for test period volumes.
[3] Test period margin at authorized margin per customer from 2019 Arizona General Rate Case.
[4] Schedule H-2, Sheet 10 column (i).
[5] Schedule H-2, Sheets 1-4 column (i).

SCHEDULE H-1
SHEET 3 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF MARGIN AT PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Margin Present Rates [1]	Margin Proposed Rates [2]	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(g)	(h)	(i)	
	Residential Service						
1	Single-Family Residential Gas Service	G-5	$ 1,824,201	$ 2,599,073	$ 774,872	42.48%	1
	General Gas Service	G-25					
2	Small		72,962	82,456	9,494	13.01%	2
3	Medium		158,517	224,995	66,478	41.94%	3
4	Large-1		108,804	148,635	39,831	36.61%	4
5	Large-2		107,285	122,234	14,949	13.93%	5
6	Natural Gas Engine Gas Service	G-80	3,068	5,091	2,023	65.94%	6
7	Total Sales and Full Margin Transportation		$ 2,274,837	$ 3,182,484	$ 907,647	39.90%	7
8	Other Operating Revenue		38,576	38,576	0	0.00%	8
9	Total Graham County Utilities Margin		$ 2,313,413	$ 3,221,060	$ 907,647	39.23%	9

[1] Schedule H-2, Sheet 10, column (il).
[2] Schedule H-2, Sheet 5, column (i).

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Delivery Charge [1]	Basic Service Charge	Delivery Charge	Total Margin	Gas Cost [2]	Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Single-Family Residential Gas Service	G-5													
1	Basic Service Charge per Month		12,235,894		$ 10.70		$ 130,924,066		$ 130,924,066		$ 130,924,066	$ 131,429,129	$ (505,063)	-0.38%	1
	Commodity Charge per Therm														
2	All Usage			291,212,609		$ 1.10224		$ 320,986,186	320,986,186	$ 110,183,203	431,169,389	365,010,536	66,158,853	18.13%	2
3	Total Single-Family Residential		12,235,894	291,212,609			$ 130,924,066	$ 320,986,186	$ 451,910,252	$ 110,183,203	$ 562,093,455	$ 496,439,665	$ 65,653,790	13.22%	3
	Multi-Family Residential Gas Service	G-6													
4	Basic Service Charge per Month		451,619		$ 9.70		$ 4,380,704		$ 4,380,704		$ 4,380,704	$ 4,380,704	$ 0	0.00%	4
	Commodity Charge per Therm														
5	All Usage			6,174,345		$ 1.30601		$ 8,063,756	8,063,756	$ 2,336,125	10,399,881	8,344,361	2,055,520	24.63%	5
6	Total Multi-Family Residential		451,619	6,174,345			$ 4,380,704	$ 8,063,756	$ 12,444,460	$ 2,336,125	$ 14,780,585	$ 12,725,065	$ 2,055,520	16.15%	6
	Single-Family Low Income Residential Gas Service	G-10													
7	Basic Service Charge		505,129		$ 10.70		$ 5,404,880		$ 5,404,880		$ 5,404,880	$ 5,404,880	$ 0	0.00%	7
	Commodity Charge per Therm														
8	All Usage			11,067,918		$ 1.10224		$ 12,199,502	12,199,502	$ 4,187,657	16,387,159	13,967,251	2,419,908	17.33%	8
9	Total Single-Family Low-Income		505,129	11,067,918			$ 5,404,880	$ 12,199,502	$ 17,604,382	$ 4,187,657	$ 21,792,039	$ 19,372,131	$ 2,419,908	12.49%	9
	Multi-Family Low Income Residential Gas Service	G-11													
10	Basic Service Charge per Month		38,534		$ 9.70		$ 373,780		$ 373,780		$ 373,780	$ 373,780	$ 0	0.00%	10
	Commodity Charge per Therm														
11	All Usage			579,804		$ 1.30601		$ 757,230	757,230	$ 219,375	976,605	793,282	183,323	23.11%	11
12	Total Multi-Family Low-Income		38,534	579,804			$ 373,780	$ 757,230	$ 1,131,010	$ 219,375	$ 1,350,385	$ 1,167,062	$ 183,323	15.71%	12
	Special Residential Gas Service for Air Conditioning	G-15													
13	Basic Service Charge per Month		600		$ 10.70		$ 6,420		$ 6,420		$ 6,420	$ 6,420	$ 0	0.00%	13
	Commodity Charge per Therm														
	Summer (May - October)														
14	First 15 Therms			4,500		$ 1.10224		$ 4,960	4,960	$ 1,703	6,663	5,673	990	17.45%	14
15	Over 15 Therms			15,224		0.16952		2,581	2,581	5,760	8,341	8,025	316	3.94%	15
	Winter (November - April)														
16	All Usage			35,856		1.10224		39,522	39,522	13,566	53,088	45,198	7,890	17.46%	16
17	Total Special Residential AC		600	55,580			$ 6,420	$ 47,063	$ 53,483	$ 21,029	$ 74,512	$ 65,316	$ 9,196	14.08%	17
18	Total Residential Gas Service		13,231,776	309,090,256			$ 141,089,850	$ 342,053,737	$ 483,143,587	$ 116,947,389	$ 600,090,976	$ 529,769,239	$ 70,321,737	13.27%	18
	Master-Metered Mobile Home Park Gas Service	G-20													
19	Basic Service Charge per Month		1,164		$ 66.00		$ 76,824		$ 76,824		$ 76,824	$ 76,824	$ 0	0.00%	19
	Commodity Charge per Therm All Usage														
20	All Usage			1,255,848		$ 0.57076		$ 716,788	716,788	$ 475,163	1,191,951	1,110,371	81,580	7.35%	20
21	Total MMMHP		1,164	1,255,848			$ 76,824	$ 716,788	$ 793,612	$ 475,163	$ 1,268,775	$ 1,187,195	$ 81,580	6.87%	21

SCHEDULE H-2
SHEET 1 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	General Gas Service - Small	G-25(S)													
	Basic Service Charge Per Month														
1	Sales Customers		206,823		$ 27.50		$ 5,687,633		$ 5,687,633		$ 5,687,633	$ 5,709,136	$ (21,503)	-0.38%	1
2	Transportation Customers		84		27.50		2,310		2,310		2,310	2,310	0	0.00%	2
	Commodity Charge per Therm All Usage														
3	Sales Customers			3,632,980		$ 1.48314		$ 5,388,218	5,388,218	$ 1,374,574	6,762,792	5,401,195	1,361,597	25.21%	3
4	Transportation Customers			988		1.48314		1,465	1,465	0	1,465	1,054	411	39.03%	4
5	Total Small General		206,907	3,633,968			$ 5,689,943	$ 5,389,683	$ 11,079,626	$ 1,374,574	$ 12,454,200	$ 11,113,694	$ 1,340,506	12.06%	5
	General Gas Service - Medium	G-25(M)													
	Basic Service Charge Per Month														
6	Sales Customers		198,020		$ 43.50		$ 8,613,870		$ 8,613,870		$ 8,613,870	$ 8,611,674	$ 2,196	0.03%	6
7	Transportation Customers		1,092		43.50		47,502		47,502		47,502	47,502	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			46,951,237		$ 0.63165		$ 29,656,749	29,656,749	$ 17,764,470	47,421,219	40,893,621	6,527,598	15.96%	8
9	Transportation Customers			395,014		0.63165		249,511	249,511	0	249,511	187,668	61,843	32.95%	9
10	Total Medium General		199,112	47,346,251			$ 8,661,372	$ 29,906,260	$ 38,567,632	$ 17,764,470	$ 56,332,102	$ 49,740,465	$ 6,591,637	13.25%	10
	General Gas Service - Large-1	G-25(L1)													
	Basic Service Charge Per Month														
11	Sales Customers		79,316		$ 80.00		$ 6,345,280		$ 6,345,280		$ 6,345,280	$ 6,336,616	$ 8,664	0.14%	11
12	Transportation Customers		2,160		80.00		172,800		172,800		172,800	172,800	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			97,245,936		$ 0.49928		$ 48,552,951	48,552,951	$ 36,793,972	85,346,923	80,029,381	5,317,542	6.64%	13
14	Transportation Customers			3,056,134		0.49928		1,525,867	1,525,867	0	1,525,867	1,331,357	194,510	14.61%	14
15	Total Large-1 General		81,476	100,302,070			$ 6,518,080	$ 50,078,818	$ 56,596,898	$ 36,793,972	$ 93,390,870	$ 87,870,155	$ 5,520,715	6.28%	15
	General Gas Service - Large-2	G-25(L2)													
	Basic Service Charge Per Month														
16	Sales Customers		3,905		$ 470.00		$ 1,835,350		$ 1,835,350		$ 1,835,350	$ 1,819,942	$ 15,408	0.85%	16
17	Transportation Customers		876		470.00		411,720		411,720		411,720	411,720	0	0.00%	17
	Commodity Charge per Therm All Usage														
18	Sales Customers			26,296,600		$ 0.37829		$ 9,947,741	9,947,741	$ 9,949,582	19,897,323	18,527,649	1,369,674	7.39%	18
19	Transportation Customers			6,651,832		0.37829		2,516,322	2,516,322	0	2,516,322	2,121,860	394,462	18.59%	19
20	Total Large-2 General		4,781	32,948,432			$ 2,247,070	$ 12,464,063	$ 14,711,133	$ 9,949,582	$ 24,660,715	$ 22,881,170	$ 1,779,545	7.78%	20
	General Gas Service -Transportation Eligible	G-25(TE)													
	Basic Service Charge Per Month														
21	Sales Customers		744		$ 950.00		$ 706,800		$ 706,800		$ 706,800	$ 706,800	$ 0	0.00%	21
22	Transportation Customers		1,728		950.00		1,641,600		1,641,600		1,641,600	1,641,600	0	0.00%	22
	Demand Charge per Month														
23	Sales Customers			2,745,362	0.102445			$ 3,374,983	3,374,983		3,374,983	2,835,684	539,299	19.02%	23
24	Transportation Customers			12,310,429	0.102445			15,133,703	15,133,703		15,133,703	12,715,442	2,418,261	19.02%	24
	Commodity Charge per Therm (All Usage)														
25	Sales Customers			23,156,600		$ 0.12773		2,957,792	2,957,792	$ 8,761,531	11,719,323	11,577,837	141,486	1.22%	25
26	Transportation Customers			105,139,899		0.12773		13,429,519	13,429,519	0	13,429,519	12,787,115	642,404	5.02%	26
27	Total Transportation Eligible General		2,472	128,296,499			$ 2,348,400	$ 34,895,997	$ 37,244,397	$ 8,761,531	$ 46,005,928	$ 42,264,478	$ 3,741,450	8.85%	27
28	Total General Gas Service		494,748	312,527,220			$ 25,464,865	$ 132,734,821	$ 158,199,686	$ 74,644,129	$ 232,843,815	$ 213,869,962	$ 18,973,853	8.87%	28

SCHEDULE H-2
SHEET 2 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Air Conditioning Gas Service	G-40													
	Basic Service Charge														
1	Sales - With Other Service - No BSC		96		$ 0.00		$ 0		$ 0		$ 0	$ 0	$ 0	0.00%	1
2	General Service - Small		48		27.50		1,320		1,320		1,320	1,320	0	0.00%	2
3	General Service - Medium		60		43.50		2,610		2,610		2,610	2,610	0	0.00%	3
4	General Service - Large		0		80.00		0		0		0	0	0	0.00%	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	1,440	0	0.00%	5
6	Transportation - With Other Service - No BSC		12		0.00										6
	Commodity Charge per Therm All Usage														
7	Sales Customers			233,886		$ 0.16952		$ 39,648	39,648	$ 88,493	128,141	123,298	4,843	3.93%	7
8	Transportation Customers			87,790		0.16952		14,882	14,882	0	14,882	13,064	1,818	13.92%	8
9	Total Air Conditioning		228	321,676			$ 5,370	$ 54,530	$ 59,900	$ 88,493	$ 148,393	$ 141,732	$ 6,661	4.70%	9
	Street Lighting Gas Service	G-45													
	Commodity Charge per Therm of Rated Capacity														
10	All Usage		48	9,324		$ 1.05805		$ 9,865	$ 9,865	$ 3,528	$ 13,393	$ 11,253	$ 2,140	19.02%	10
11	Total Street Lighting		48	9,324			$ 0	$ 9,865	$ 9,865	$ 3,528	$ 13,393	$ 11,253	$ 2,140	19.02%	11
	Gas Service for Compression on Customer's Premises	G-55													
	Basic Service Charge														
12	Small		108		$ 27.50		$ 2,970		$ 2,970		$ 2,970	$ 2,970	$ 0	0.00%	12
13	Large		156		250.00		39,000		39,000		39,000	39,000	0	0.00%	13
14	Residential		336		10.70		3,595		3,595		3,595	3,595	0	0.00%	14
15	Transportation Customers		132		250.00		33,000		33,000		33,000	33,000	0	0.00%	15
	Commodity Charge per Therm All Usage														
	Sales Customers														
16	Small			10,153		$ 0.26023		$ 2,642	2,642	$ 3,841	6,483	6,205	278	4.48%	16
17	Large			9,142,972		0.26023		2,379,276	2,379,276	3,459,335	5,838,611	5,588,276	250,335	4.48%	17
18	Residential			10,686		0.26023		2,781	2,781	4,043	6,824	6,531	293	4.49%	18
19	Transportation Customers			4,962,972		0.26023		1,291,514	1,291,514	0	1,291,514	1,155,628	135,886	11.76%	19
20	Total CNG		732	14,126,783			$ 78,565	$ 3,676,213	$ 3,754,778	$ 3,467,219	$ 7,221,997	$ 6,835,205	$ 386,792	5.66%	20
	Electric Generation Gas Service	G-60													
	Basic Service Charge														
1	General Service - Small		84		$ 27.50		$ 2,310		$ 2,310		$ 2,310	$ 2,310	$ 0	0.00%	1
2	General Service - Medium		48		43.50		2,088		2,088		2,088	2,088	0	0.00%	2
3	General Service - Large		48		80.00		3,840		3,840		3,840	3,840	0	0.00%	3
4	General Service - TE		24		950.00		22,800		22,800		22,800	22,800	0	0.00%	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	1,440	0	0.00%	5
6	Transportation - General Service - Small		12		27.50		330		330		330	330	0	0.00%	6
7	Transportation - General Service - TE		72		950.00		68,400		68,400		68,400	68,400	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			1,566,814		$ 0.19175		$ 300,437	300,437	$ 592,820	893,257	856,656	36,601	4.27%	8
9	Transportation Customers			12,683,225		0.19175		2,432,008	2,432,008	0	2,432,008	2,135,728	296,280	13.87%	9
10	Total Electric Generation		300	14,250,039			$ 101,208	$ 2,732,445	$ 2,833,653	$ 592,820	$ 3,426,473	$ 3,093,592	$ 332,881	10.76%	10
	Small Essential Agriculture User Gas Service	G-75													
	Basic Service Charge Per Month														
11	Sales Customers		732		$ 120.00		$ 87,840		$ 87,840		$ 87,840	$ 87,840	$ 0	0.00%	11
12	Transportation Customers		72		120.00		8,640		8,640		8,640	8,640	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			2,798,803		$ 0.32721		$ 915,796	915,796	$ 1,058,955	1,974,751	1,897,252	77,499	4.08%	13
14	Transportation Customers			1,864,282		0.32721		610,012	610,012	0	610,012	558,390	51,622	9.24%	14
15	Total Small Essential Agricultural		804	4,663,085			$ 96,480	$ 1,525,808	$ 1,622,288	$ 1,058,955	$ 2,681,243	$ 2,552,122	$ 129,121	5.06%	15

SCHEDULE H-2
SHEET 3 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Delivery Charge [1]	Basic Service Charge	Delivery Charge	Total Margin	Gas Cost [2]	Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Natural Gas Engine Gas Service	G-80													
	Basic Service Charge														
1	Off-Peak Season (October - March)		2,505		$ 0.00		$ 0		$ 0		$ 0	$ 720	$ (720)	-100.00%	1
2	Peak Season (April - September)		2,526		125.00		315,750		315,750		315,750	313,470	2,280	0.73%	2
3	Transportation Customers - Off-Peak		0		0.00		0		0		0	0	0	0.00%	3
4	Transportation Customers - Peak		0		125.00		0		0		0	0	0	0.00%	4
	Commodity Charge per Therm All Usage														
5	Sales Customers			17,331,513		$ 0.24458		$ 4,238,941	4,238,941	$ 7,504,892	11,743,833	11,485,394	258,439	2.25%	5
6	Transportation Customers			0		0.24458		0	0	0	0	0	0	0.00%	6
7	Total Natural Gas Engine		5,031	17,331,513			$ 315,750	$ 4,238,941	$ 4,554,691	$ 7,504,892	$ 12,059,583	$ 11,799,584	$ 259,999	2.20%	7
8	Total Tariff Sales		13,734,831	673,575,744			$ 167,228,912	$ 487,743,148	$ 654,972,060	$ 204,782,588	$ 859,754,648	$ 769,259,884	$ 90,494,764	11.76%	8
9	Optional Gas Service	G-30	24	12,580,646					1,268,350	4,760,013	6,028,363	6,028,363	0	0.00%	9
10	Biogas and Renewable Natural Gas Service	G-65	12	380,867					68,400	0	68,400	68,400	0	0.00%	10
11	Potential Bypass/Standby Gas Service	B-1	264	39,840,288					5,344,383		5,344,383	5,344,383	0	0.00%	11
12	Other Operating Revenues						8,262,618		8,262,618		8,262,618	8,262,618	0	0.00%	12
13	Total		13,735,131	726,377,545			$ 175,491,530	$ 487,743,148	$ 669,915,811	$ 209,542,601	$ 879,458,412	$ 788,963,649	$ 90,494,764	11.47%	13
14	Total Revenue Requirement								669,915,432						14
15	Over/(Under)								$ 379						15

[1] Rates calculated to recover proposed Margin Schedule H-2, Sheet 11, Line 9.
[2] Gas Cost rate effective November 1, 2021.
[3] Schedule H-2, Sheets 6-10 column (k) and DCA Adjustment Schedule H-1, Sheet 2.

SCHEDULE H-2
SHEET 4 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED REVENUES BY RATE COMPONENT - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge [1]	Revenue at Proposed Rates: Basic Service Charge	Revenue at Proposed Rates: Delivery Charge	Revenue at Proposed Rates: Total Margin	Revenue at Proposed Rates: Gas Cost [2]	Revenue at Proposed Rates: Total Revenue	Revenue at Present Rates [3]	Increase / Decrease: Dollars	Increase / Decrease: Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Single-Family Residential Gas Service	G-5													
1	Basic Service Charge per Month		60,851		$ 10.70		$ 651,106		$ 651,106		$ 651,106	$ 1,156,169	$ (505,063)	-43.68%	1
	Commodity Charge per Therm														
2	All Usage			1,767,280		$ 1.10224		$ 1,947,967	1,947,967	$ 668,668	2,616,635	1,497,240	1,119,395	74.76%	2
3	Total Single-Family Residential		60,851	1,767,280			$ 651,106	$ 1,947,967	$ 2,599,073	$ 668,668	$ 3,267,741	$ 2,653,409	$ 614,332	23.15%	3
	General Gas Service - Small	G-25(S)													
	Basic Service Charge Per Month														
1	Sales Customers		1,483		$ 27.50		$ 40,783		$ 40,783		$ 40,783	$ 62,286	$ (21,503)	-34.52%	1
2	Transportation Customers		0		27.50		0		0		0	0	0	0.00%	2
	Commodity Charge per Therm All Usage														
3	Sales Customers			28,098		$ 1.48314		$ 41,673	41,673	$ 10,631	52,304	23,860	28,444	119.21%	3
4	Transportation Customers			0		1.48314		0	0	0	0	0	0	0.00%	4
5	Total Small General		1,483	28,098			$ 40,783	$ 41,673	$ 82,456	$ 10,631	$ 93,087	$ 86,146	$ 6,941	8.06%	5
	General Gas Service - Medium	G-25(M)													
	Basic Service Charge Per Month														
6	Sales Customers		1,464		$ 43.50		$ 63,684		$ 63,684		$ 63,684	$ 61,488	$ 2,196	3.57%	6
7	Transportation Customers		0		43.50		0		0		0	0	0	0.00%	7
	Commodity Charge per Therm All Usage														
8	Sales Customers			255,380		$ 0.63165		$ 161,311	161,311	$ 96,626	257,937	216,853	41,084	18.95%	8
9	Transportation Customers			0		0.63165		0	0	0	0	0	0	0.00%	9
10	Total Medium General		1,464	255,380			$ 63,684	$ 161,311	$ 224,995	$ 96,626	$ 321,621	$ 278,341	$ 43,280	15.55%	10
	General Gas Service - Large-1	G-25(L1)													
	Basic Service Charge Per Month														
11	Sales Customers		228		$ 80.00		$ 18,240		$ 18,240		$ 18,240	$ 9,576	$ 8,664	90.48%	11
12	Transportation Customers		0		80.00		0		0		0	0	0	0.00%	12
	Commodity Charge per Therm All Usage														
13	Sales Customers			261,167		$ 0.49928		$ 130,395	130,395	$ 98,815	229,210	221,768	7,442	3.36%	13
14	Transportation Customers			0		0.49928		0	0	0	0	0	0	0.00%	14
15	Total Large-1 General		228	261,167			$ 18,240	$ 130,395	$ 148,635	$ 98,815	$ 247,450	$ 231,344	$ 16,106	6.96%	15
	General Gas Service - Large-2	G-25(L2)													
	Basic Service Charge Per Month														
16	Sales Customers		36		$ 470.00		$ 16,920		$ 16,920		$ 16,920	$ 1,512	$ 15,408	1019.05%	16
17	Transportation Customers		0		470.00		0		0		0	0	0	0.00%	17
	Commodity Charge per Therm All Usage														
18	Sales Customers			278,394		$ 0.37829		$ 105,314	105,314	$ 105,333	210,647	236,395	(25,748)	-10.89%	18
19	Transportation Customers			0		0.37829		0	0	0	0	0	0	0.00%	19
20	Total Large-2 General		36	278,394			$ 16,920	$ 105,314	$ 122,234	$ 105,333	$ 227,567	$ 237,907	$ (10,340)	-4.35%	20
	Natural Gas Engine Gas Service	G-80													
	Basic Service Charge														
21	Off-Peak Season (October - March)		24		$ 0.00		$ 0		$ 0		$ 0	$ 720	$ (720)	-100.00%	21
22	Peak Season (April - September)		24		125.00		3,000		3,000		3,000	720	2,280	316.67%	22
	Commodity Charge per Therm All Usage														
23	Sales Customers			8,548		$ 0.24458		$ 2,091	2,091	$ 3,701	5,792	5,639	153	2.71%	23
23	Total Natural Gas Engine		48	8,548			$ 3,000	$ 2,091	$ 5,091	$ 3,701	$ 8,792	$ 7,079	$ 1,713	24.20%	23
24	Total Tariff Sales		64,110	2,598,867			$ 793,733	$ 2,388,751	$ 3,182,484	$ 983,774	$ 4,166,258	$ 3,494,226	$ 672,032	19.23%	24
25	Other Operating Revenues						38,576		38,576		38,576	38,576	0	0.00%	25
26	Total		64,110	2,598,867			$ 832,309	$ 2,388,751	$ 3,221,060	$ 983,774	$ 4,204,834	$ 3,532,802	$ 672,032	19.02%	26

[1] Rates calculated to recover proposed Margin Schedule H-2, Sheet 11, Line 9.
[2] Southwest Gas Cost rate effective November 1, 2021.
[3] Schedule H-2, Sheet 9 column (k).

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Single-Family Residential Gas Service	G-5										
1	Basic Service Charge per Month		12,175,043		$ 10.70		$ 130,272,960		$ 130,272,960		$ 130,272,960	1
	Commodity Charge per Therm											
2	All Usage			289,445,329		$ 0.88219		$ 255,345,775	255,345,775	$ 109,514,535	364,860,310	2
3	Total Single-Family Residential		12,175,043	289,445,329			$ 130,272,960	$ 255,345,775	$ 385,618,735	$ 109,514,535	$ 495,133,270	3
	Multi-Family Residential Gas Service	G-6										
4	Basic Service Charge per Month		451,619		$ 9.70		$ 4,380,704		$ 4,380,704		$ 4,380,704	4
	Commodity Charge per Therm											
5	All Usage			6,174,345		$ 0.97680		$ 6,031,100	6,031,100	$ 2,336,125	8,367,225	5
6	Total Multi-Family Residential		451,619	6,174,345			$ 4,380,704	$ 6,031,100	$ 10,411,804	$ 2,336,125	$ 12,747,929	6
	Single-Family Low Income Residential Gas Service	G-10										
7	Basic Service Charge		505,129		$ 10.70		$ 5,404,880		$ 5,404,880		$ 5,404,880	7
	Commodity Charge per Therm											
	Summer (May - October)											
8	All Usage			2,504,802		$ 0.88219		$ 2,209,711	2,209,711	$ 947,717	3,157,428	8
	Winter (November - April)											
9	First 150 Therms			8,147,719	395,214	0.88219		7,187,836	7,187,836	3,082,771	10,270,607	9
10	Over 150 Therms			415,397		0.88219		366,459	366,459	157,170	523,629	10
11	Total Single-Family Low-Income		505,129	11,067,918	579,804		$ 5,404,880	$ 9,764,006	$ 15,168,886	$ 4,187,658	$ 19,356,544	11
	Multi-Family Low Income Residential Gas Service	G-11										
12	Basic Service Charge per Month		38,534		$ 9.70		$ 373,780		$ 373,780		$ 373,780	12
	Commodity Charge per Therm											
	Summer (May - October)											
13	All Usage			184,590		$ 0.97680		$ 180,308	180,308	$ 69,841	250,149	13
	Winter (November - April)											
14	First 150 Therms			391,953		0.97680		382,860	382,860	148,300	531,160	14
15	Over 150 Therms			3,261		0.97680		3,185	3,185	1,234	4,419	15
16	Total Multi-Family Low-Income		38,534	579,804			$ 373,780	$ 566,353	$ 940,133	$ 219,375	$ 1,159,508	16
	Special Residential Gas Service for Air Conditioning	G-15										
17	Basic Service Charge per Month		600		$ 10.70		$ 6,420		$ 6,420		$ 6,420	17
	Commodity Charge per Therm											
	Summer (May - October)											
18	First 15 Therms			4,500		$ 0.88219		$ 3,970	3,970	$ 1,703	5,673	18
19	Over 15 Therms			15,224		0.14881		2,265	2,265	5,760	8,025	19
	Winter (November - April)											
20	All Usage			35,856		0.88219		31,632	31,632	13,566	45,198	20
21	Total Special Residential AC		600	55,580			$ 6,420	$ 37,867	$ 44,287	$ 21,029	$ 65,316	21
22	Total Residential Gas Service		13,170,925	307,322,976			$ 140,438,744	$ 271,745,101	$ 412,183,845	$ 116,278,722	$ 528,462,567	22
	Master-Metered Mobile Home Park Gas Service	G-20										
23	Basic Service Charge per Month		1,164		$ 66.00		$ 76,824		$ 76,824		$ 76,824	23
	Commodity Charge per Therm All Usage											
24	All Usage			1,255,848		$ 0.50580		$ 635,208	635,208	$ 475,163	1,110,371	24
25	Total MMMHP		1,164	1,255,848			$ 76,824	$ 635,208	$ 712,032	$ 475,163	$ 1,187,195	25

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	General Gas Service - Small	G-25(S)										
	Basic Service Charge Per Month											
1	Sales Customers		205,340		$ 27.50		$ 5,646,850		$ 5,646,850		$ 5,646,850	1
2	Transportation Customers		84		27.50		2,310		2,310		2,310	2
	Commodity Charge per Therm All Usage											
3	Sales Customers			3,604,882		$ 0.94947		$ 3,422,727	3,422,727	$ 1,363,943	4,786,670	3
4	Transportation Customers			988		0.94947		938	938	0	938	4
5	Total Small General		205,424	3,605,870			$ 5,649,160	$ 3,423,665	$ 9,072,825	$ 1,363,943	$ 10,436,768	5
	General Gas Service - Medium	G-25(M)										
	Basic Service Charge Per Month											
6	Sales Customers		196,556		$ 43.50		$ 8,550,186		$ 8,550,186		$ 8,550,186	6
7	Transportation Customers		1,092		43.50		47,502		47,502		47,502	7
	Commodity Charge per Therm All Usage											
8	Sales Customers			46,695,857		$ 0.45392		$ 21,196,183	21,196,183	$ 17,667,844	38,864,027	8
9	Transportation Customers			395,014		0.45392		179,305	179,305	0	179,305	9
10	Total Medium General		197,648	47,090,871			$ 8,597,688	$ 21,375,488	$ 29,973,176	$ 17,667,844	$ 47,641,020	10
	General Gas Service - Large-1	G-25(L1)										
	Basic Service Charge Per Month											
11	Sales Customers		79,088		$ 80.00		$ 6,327,040		$ 6,327,040		$ 6,327,040	11
12	Transportation Customers		2,160		80.00		172,800		172,800		172,800	12
	Commodity Charge per Therm All Usage											
13	Sales Customers			96,984,769		$ 0.42563		$ 41,279,627	41,279,627	$ 36,695,157	77,974,784	13
14	Transportation Customers			3,056,134		0.42563		1,300,782	1,300,782	0	1,300,782	14
15	Total Large-1 General		81,248	100,040,903			$ 6,499,840	$ 42,580,409	$ 49,080,249	$ 36,695,157	$ 85,775,406	15
	General Gas Service - Large-2	G-25(L2)										
	Basic Service Charge Per Month											
16	Sales Customers		3,869		$ 470.00		$ 1,818,430		$ 1,818,430		$ 1,818,430	16
17	Transportation Customers		876		470.00		411,720		411,720		411,720	17
	Commodity Charge per Therm All Usage											
18	Sales Customers			26,018,206		$ 0.31428		$ 8,177,002	8,177,002	$ 9,844,248	18,021,250	18
19	Transportation Customers			6,651,832		0.31428		2,090,538	2,090,538	0	2,090,538	19
20	Total Large-2 General		4,745	32,670,038			$ 2,230,150	$ 10,267,540	$ 12,497,690	$ 9,844,248	$ 22,341,938	20
	General Gas Service - Transportation Eligible	G-25(TE)										
	Basic Service Charge Per Month											
21	Sales Customers		744		$ 950.00		$ 706,800		$ 706,800		$ 706,800	21
22	Transportation Customers		1,728		950.00		1,641,600		1,641,600		1,641,600	22
	Demand Charge per Month											
23	Sales Customers			2,745,362	0.086075			$ 2,835,684	2,835,684		2,835,684	23
24	Transportation Customers			12,310,429	0.086075			12,715,442	12,715,442		12,715,442	24
	Commodity Charge per Therm (All Usage)											
25	Sales Customers			23,156,600		$ 0.12162		$ 2,816,306	2,816,306	$ 8,761,531	11,577,837	25
26	Transportation Customers			105,139,899		0.12162		12,787,115	12,787,115	0	12,787,115	26
27	Total Transportation Eligible General		2,472	128,296,499			$ 2,348,400	$ 31,154,547	$ 33,502,947	$ 8,761,531	$ 42,264,478	27
28	Total General Gas Service		491,537	311,704,181			$ 25,325,238	$ 108,801,649	$ 134,126,887	$ 74,332,723	$ 208,459,610	28

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Air Conditioning Gas Service	G-40										
	Basic Service Charge											
1	Sales - With Other Service - No BSC		96		$ 0.00		$ 0		$ 0		$ 0	1
2	General Service - Small		48		27.50		1,320		1,320		1,320	2
3	General Service - Medium		60		43.50		2,610		2,610		2,610	3
4	General Service - L1		0		80.00		0		0		0	4
5	Essential Agricultural		12		120.00		1,440		1,440		1,440	5
6	Transportation - With Other Service - No BSC		12		0.00		0		0		0	6
	Commodity Charge per Therm All Usage											
7	Sales Customers			233,886		$ 0.14881		$ 34,805	34,805	$ 88,493	123,298	7
8	Transportation Customers			87,790		0.14881		13,064	13,064	0	13,064	8
9	Total Air Conditioning		228	321,676			$ 5,370	$ 47,869	$ 53,239	$ 88,493	$ 141,732	9
	Street Lighting Gas Service	G-45										
	Commodity Charge per Therm of Rated Capacity											
10	All Usage		48	9,324		$ 0.82846		$ 7,725	$ 7,725	$ 3,528	$ 11,253	10
11	Total Street Lighting		48	9,324			$ 0	$ 7,725	$ 7,725	$ 3,528	$ 11,253	11
	Gas Service for Compression on Customer's Premises	G-55										
	Basic Service Charge											
12	Small		108		$ 27.50		$ 2,970		$ 2,970		$ 2,970	12
13	Large		156		250.00		39,000		39,000		39,000	13
14	Residential		336		10.70		3,595		3,595		3,595	14
15	Transportation Customers		132		250.00		33,000		33,000		33,000	15
	Commodity Charge per Therm All Usage											
	Sales Customers											
16	Small			10,153		$ 0.23285		$ 2,364	2,364	$ 3,841	6,205	16
17	Large			9,142,972		0.23285		2,128,941	2,128,941	3,459,335	5,588,276	17
18	Residential			10,686		0.23285		2,488	2,488	4,043	6,531	18
19	Transportation Customers			4,962,972		0.23285		1,155,628	1,155,628	0	1,155,628	19
20	Total CNG		732	14,126,783			$ 78,565	$ 3,289,421	$ 3,367,986	$ 3,467,219	$ 6,835,205	20
	Electric Generation Gas Service	G-60										
	Basic Service Charge											
21	General Service - Small		84		$ 27.50		$ 2,310		$ 2,310		$ 2,310	21
22	General Service - Medium		48		43.50		2,088		2,088		2,088	22
23	General Service - L1		48		80.00		3,840		3,840		3,840	23
24	General Service - TE		24		950.00		22,800		22,800		22,800	24
25	Essential Agricultural		12		120.00		1,440		1,440		1,440	25
26	Transportation - General Service - Small		12		27.50		330		330		330	26
27	Transportation - General Service - TE		72		950.00		68,400		68,400		68,400	27
	Commodity Charge per Therm All Usage											
28	Sales Customers			1,566,814		$ 0.16839		$ 263,836	263,836	$ 592,820	856,656	28
29	Transportation Customers			12,683,225		0.16839		2,135,728	2,135,728	0	2,135,728	29
30	Total Electric Generation		300	14,250,039			$ 101,208	$ 2,399,564	$ 2,500,772	$ 592,820	$ 3,093,592	30

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Proposed Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Small Essential Agriculture User Gas Service	G-75										
	Basic Service Charge Per Month											
1	Sales Customers		732		$ 120.00		$ 87,840		$ 87,840		$ 87,840	1
2	Transportation Customers		72		120.00		8,640		8,640		8,640	2
	Commodity Charge per Therm All Usage											
3	Sales Customers			2,798,803		$ 0.29952		$ 838,297	838,297	$ 1,058,955	1,897,252	3
4	Transportation Customers			1,864,282		0.29952		558,390	558,390	0	558,390	4
5	Total Small Essential Agricultural		804	4,663,085			$ 96,480	$ 1,396,687	$ 1,493,167	$ 1,058,955	$ 2,552,122	5
	Natural Gas Engine Gas Service	G-80										
	Basic Service Charge											
6	Off-Peak Season (October - March)		2,481		$ 0.00		$ 0		$ 0		$ 0	6
7	Peak Season (April - September)		2,502		125.00		312,750		312,750		312,750	7
8	Transportation Customers - Off-Peak		0		0.00		0		0		0	8
9	Transportation Customers - Peak		0		125.00		0		0		0	9
	Commodity Charge per Therm All Usage											
10	Sales Customers			17,322,965		$ 0.22967		$ 3,978,565	3,978,565	$ 7,501,190	11,479,755	10
11	Transportation Customers			0		0.22967		0	0	0	0	11
12	Total Natural Gas Engine		4,983	17,322,965			$ 312,750	$ 3,978,565	$ 4,291,315	$ 7,501,190	$ 11,792,505	12
13	Total Tariff Sales		13,670,721	670,976,877			$ 166,435,179	$ 392,301,789	$ 558,736,968	$ 203,798,813	$ 762,535,781	13
14	Optional Gas Service	G-30	24	12,580,646					1,268,350	4,760,013	6,028,363	14
15	Biogas and Renewable Natural Gas Service	G-65	12	380,867					68,400	0	68,400	15
16	Potential Bypass/Standby Gas Service	B-1	264	39,840,288					5,344,383		5,344,383	16
17	Other Operating Revenues						8,224,042		8,224,042		8,224,042	17
18	Total		13,671,021	723,778,678			$ 174,659,221	$ 392,301,789	$ 573,642,142	$ 208,558,826	$ 782,200,969	18
19	DCA Adjustment								3,229,877			19
20	Margin at Present Rates with EEP Adjustment								$ 576,872,020			20
21	Total Revenue Requirement								669,915,432			21
22	Deficiency								$ (93,043,412)			22

[1] Present Margin rates effective January 1, 2021.
[2] Gas Cost rate effective November 1, 2021.

SCHEDULE H-2
SHEET 9 OF 12

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF REVENUES AT PRESENT RATES BEFORE DCA ADJUSTMENT - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Billing Determinants: Number of Bills	Billing Determinants: Sales (Therms)	Present Margin Rates [1]: Basic Service Charge	Present Margin Rates [1]: Delivery Charge	Margin at Present Rates: Basic Service Charge	Margin at Present Rates: Delivery Charge	Margin at Present Rates: Total Margin	Revenue at Present Rates: Gas Cost [2]	Revenue at Present Rates: Total Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
	Residential Gas Service	G-5										
1	Basic Service Charge per Month		60,851		$ 19.00		$ 1,156,169		$ 1,156,169		$ 1,156,169	1
	Commodity Charge per Therm											
2	All Usage			1,767,280		$ 0.37800		$ 668,032	668,032	$ 829,208	1,497,240	2
3	Total Single-Family Residential		60,851	1,767,280			$ 1,156,169	$ 668,032	$ 1,824,201	$ 829,208	$ 2,653,409	3
	Commercial Gas Service - Small General Gas Service	G-25S										
	Basic Service Charge Per Month											
4	Sales Customers		1,483		$ 42.00		$ 62,286		$ 62,286		$ 62,286	4
5	Transportation Customers		0		42.00		0		0		0	5
	Commodity Charge per Therm All Usage											
6	Sales Customers			28,098		$ 0.37994		$ 10,676	10,676	$ 13,184	23,860	6
7	Transportation Customers			0		0.37994		0	0	0	0	7
8	Total Small General		1,483	28,098			$ 62,286	$ 10,676	$ 72,962	$ 13,184	$ 86,146	8
	Commercial Gas Service - Medium General Gas Service	G-25M										
	Basic Service Charge Per Month											
9	Sales Customers		1,464		$ 42.00		$ 61,488		$ 61,488		$ 61,488	9
10	Transportation Customers		0		42.00		0		0		0	10
	Commodity Charge per Therm All Usage											
11	Sales Customers			255,380		$ 0.37994		$ 97,029	97,029	$ 119,824	216,853	11
12	Transportation Customers			0		0.37994		0	0	0	0	12
13	Total Small General		1,464	255,380			$ 61,488	$ 97,029	$ 158,517	$ 119,824	$ 278,341	13
	Commercial Gas Service - L1 General Gas Service	G-25L1										
	Basic Service Charge Per Month											
14	Sales Customers		228		$ 42.00		$ 9,576		$ 9,576		$ 9,576	14
15	Transportation Customers		0		42.00		0		0		0	15
	Commodity Charge per Therm All Usage											
16	Sales Customers			261,167		$ 0.37994		$ 99,228	99,228	$ 122,540	221,768	16
17	Transportation Customers			0		0.37994		0	0	0	0	17
18	Total Small General		228	261,167			$ 9,576	$ 99,228	$ 108,804	$ 122,540	$ 231,344	18
	Commercial Gas Service - L2 General Gas Service	G-25L2										
	Basic Service Charge Per Month											
19	Sales Customers		36		$ 42.00		$ 1,512		$ 1,512		$ 1,512	19
20	Transportation Customers		0		42.00		0		0		0	20
	Commodity Charge per Therm All Usage											
21	Sales Customers			278,394		$ 0.37994		$ 105,773	105,773	$ 130,622	236,395	21
22	Transportation Customers			0		0.37994		0	0	0	0	22
23	Total Small General		36	278,394			$ 1,512	$ 105,773	$ 107,285	$ 130,622	$ 237,907	23
	Irrigation Gas Service	G-80										
	Basic Service Charge											
24	Off-Peak Season (October - March)		24		$ 30.00		$ 720		$ 720		$ 720	24
25	Peak Season (April - September)		24		30.00		720		720		720	25
	Commodity Charge per Therm All Usage											
26	Sales Customers			8,548		$ 0.19050		$ 1,628	1,628	$ 4,011	5,639	26
27	Total Natural Gas Engine		48	8,548			$ 1,440	$ 1,628	$ 3,068	$ 4,011	$ 7,079	27
28	Total Tariff Sales		64,110	2,598,867			$ 1,292,471	$ 982,366	$ 2,274,837	$ 1,219,389	$ 3,494,226	28
29	Other Operating Revenues						38,576		38,576		38,576	29
30	Total		64,110	2,598,867			$ 1,331,047	$ 982,366	$ 2,313,413	$ 1,219,389	$ 3,532,802	30

[1] Present Margin rates effective April 1, 2017.
[2] Gas Cost rate effective on January 31, 2019.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
MARGIN ALLOCATION SPREAD TO CUSTOMER CLASSES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Total	Single-Family Residential	Multi-Family Residential	MMMHP	General Gas Service: Small	Medium	Large-1	Large-2	Transportation Eligible	Air Conditioning	Street Lighting	CNG	Electric Generation	Small Essential Agriculture	Natural Gas Engines	G-30, G-65 & Bypass Transp.	Other Revenue	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	
1	Margin at Requested System Rate of Return [1]	$ 669,915,432	$ 492,641,786	$ 16,161,937	$ 588,896	$ 9,695,313	$ 47,751,195	$ 40,026,270	$ 13,029,455	$ 27,005,097	$ 48,077	$ 17,877	$ 2,791,944	$ 2,402,775	$ 932,242	$ 1,878,818	$ 6,681,133	$ 8,262,618	1
2	Margin at Present Rates [2]	$ 579,185,433	$ 401,324,683	$ 11,336,627	$ 712,032	$ 9,736,567	$ 31,952,797	$ 51,052,458	$ 12,906,300	$ 33,502,947	$ 53,239	$ 7,725	$ 3,367,986	$ 2,500,772	$ 1,493,167	$ 4,294,383	$ 6,681,133	$ 8,262,618	2
3	Difference	$ 90,729,998																	3
4	System Average Increase (Excluding B-1, G-30 & Other Revenues)	16.08%																	4
5	% Difference in Present & System ROR Margin Req.		1.2275	1.4256	0.8271	0.9958	1.4944	0.7840	1.0095	0.8061	0.9030	2.3142	0.8290	0.9608	0.6243	0.4375			5
6	Maximum Margin Increase Capped at 2.00 [3]	32.16%	19.74%	22.92%	13.30%	16.01%	24.03%	12.61%	16.23%	12.96%	14.52%	32.16%	13.33%	15.45%	10.04%	7.04%			6
7	Calculated Proposed Increase To Classes Not at System ROR	$ 105,318,982	$ 79,216,743.14	$ 2,598,837.60	$ 94,694	$ 1,559,005	$ 7,678,367	$ 6,436,220	$ 2,095,135	$ 4,342,416	$ 7,731	$ 2,484	$ 448,944	$ 386,366	$ 149,904	$ 302,114			7
8	Remaining Allocation of Margin Change [4]	$ (14,588,983)	$ (10,973,252)	$ (359,996)	$ (13,117)	$ (215,956)	$ (1,063,625)	$ (891,557)	$ (290,222)	$ (601,520)	$ (1,071)	$ (344)	$ (62,189)	$ (53,520)	$ (20,765)	$ (41,849)			8
9	Proposed Margin Requirement	$ 669,915,432	$ 469,568,174	$ 13,575,468	$ 793,609	$ 11,079,616	$ 38,567,559	$ 56,597,120	$ 14,711,213	$ 37,243,844	$ 59,899	$ 9,865	$ 3,754,742	$ 2,833,618	$ 1,622,306	$ 4,554,647	$ 6,681,133	$ 8,262,618	9
10	Proposed Percentage Increase in Margin	15.67%	17.00%	19.75%	11.46%	13.79%	20.70%	10.86%	13.98%	11.17%	12.51%	27.71%	11.48%	13.31%	8.65%	6.06%	0.00%	0.00%	10
11	Rate of Return on Rate Base at Present Rates	3.49%	2.84%	1.02%	8.16%	5.57%	(0.26%)	9.57%	5.36%	8.69%	7.05%	(2.35%)	8.35%	6.04%	13.52%	25.26%	N/A	N/A	11
12	Rate of Return on Rate Base at Proposed Rates	5.48%	4.81%	3.10%	9.85%	7.49%	2.17%	11.52%	7.43%	10.44%	8.97%	(0.65%)	10.19%	7.81%	15.23%	27.11%	N/A	N/A	12

[1] Class margin required to earn proposed overall system rate of return on rate base. Schedule G-2, Sheet 1.
[2] Schedule H-1, Sheet 2.
[3] Percentage increase in margin capped at 2 times the system average percent increase in margin.
[4] Remaining deficiency spread to classes on percentage of proposed increases on Line 7.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF BILLS AND VOLUMES WITH POST TEST YEAR ADJUSTMENTS
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule Number	Annual Number of Bills: Test Period as Adjusted at 08/31/2021	Annual Number of Bills: Graham County Adjustment [1]	Annual Number of Bills: Post Test Period	Annual Sales Volumes (Therms): 12 Months Ended 08/31/2021	Annual Sales Volumes (Therms): Graham County Adjustment [1]	Annual Sales Volumes (Therms): Post Test Period	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
	Residential Service								
1	Single-Family Residential Gas Service	G-5	12,175,043	60,851	12,235,894	289,445,329	1,767,280	291,212,609	1
2	Multi-Family Residential Gas Service	G-6	451,619		451,619	6,174,345		6,174,345	2
3	Single-Family Low Income Residential Gas Service	G-10	505,129		505,129	11,067,918		11,067,918	3
4	Multi-Family Low Income Residential Gas Service	G-11	38,534		38,534	579,804		579,804	4
5	Special Residential Gas Service for Air Conditioning	G-15	600		600	55,580		55,580	5
6	Master-Metered Mobile Home Park Gas Service	G-20	1,164		1,164	1,255,848		1,255,848	6
	General Gas Service	G-25							
7	Small		205,424	1,483	206,907	3,605,870	28,098	3,633,968	7
8	Medium		197,648	1,464	199,112	47,090,871	255,380	47,346,251	8
9	Large-1		81,248	228	81,476	100,040,903	261,167	100,302,070	9
10	Large-2		4,745	36	4,781	32,670,038	278,394	32,948,432	10
11	Transportation Eligible		2,472	0	2,472	128,296,499	0	128,296,499	11
12	Optional Gas Service	G-30	24		24	12,580,646		12,580,646	12
13	Air Conditioning Gas Service	G-40	228		228	321,676		321,676	13
14	Street Lighting Gas Service	G-45	48		48	9,324		9,324	14
	Gas Service for Compression on Customer's Premises	G-55							
15	Residential		336		336	10,686		10,686	15
16	Small		108		108	10,153		10,153	16
17	Large		288		288	14,105,944		14,105,944	17
18	Electric Generation Gas Service	G-60	300		300	14,250,039		14,250,039	18
19	Biogas and Renewable Natural Gas Service	G-65	12		12	380,867		380,867	19
20	Small Essential Agriculture User Gas Service	G-75	804		804	4,663,085		4,663,085	20
21	Natural Gas Engine Gas Service	G-80	4,983	48	5,031	17,322,965	8,548	17,331,513	21
22	Total Gas Sales		13,670,757	64,110	13,734,867	683,938,390	2,598,867	686,537,257	22
23	Transportation of Customer-Secured Natural Gas	T-1	0		0	0		0	23
24	Potential Bypass/Standby Gas Service	B-1	264		264	39,840,288		39,840,288	24
25	Other Operating Revenue								25
26	Total Arizona		13,671,021	64,110	13,735,131	723,778,678	2,598,867	726,377,545	26

[1] Addtion of Graham County Utilities bills and volumes.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Single-Family Residential Gas Service	G-5						Single-Family Residential Gas Service	G-5					
1	Basic Service Charge per Month		$ 10.70				$ 10.70	Basic Service Charge per Month		$ 10.70			$ 10.70	1
	Commodity Charge per Therm							Commodity Charge per Therm						
2	All Usage		$ 0.88219	$ 0.13191	$ 0.37836	$ 0.00658	$ 1.39904	All Usage		$ 1.10224	$ 0.13191	$ 0.37836	$ 1.61251	2
	Multi-Family Residential Gas Service	G-6						Multi-Family Residential Gas Service	G-6					
3	Basic Service Charge per Month		$ 9.70				$ 9.70	Basic Service Charge per Month		$ 9.70			$ 9.70	3
	Commodity Charge per Therm							Commodity Charge per Therm						
4	All Usage		$ 0.97680	$ 0.13191	$ 0.37836	$ 0.00658	$ 1.49365	All Usage		$ 1.30601	$ 0.13191	$ 0.37836	$ 1.81628	4
	Single-Family Low Income Residential Gas Service	G-10						Single-Family Low Income Residential Gas Service	G-10					
5	Basic Service Charge per Month		$ 7.50				$ 7.50	Basic Service Charge per Month		$ 7.50			$ 7.50	5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	Summer (May - October)							All Usage		$ 0.61007	$ 0.11512	$ 0.37836	$ 1.10355	6
7	All Usage		$ 0.88219	$ 0.11512	$ 0.37836	$ 0.00658	$ 1.38225							7
	Winter (November - April)													
8	First 150 Therms		$ 0.46811	$ 0.11512	$ 0.37836	$ 0.00658	$ 0.96818							8
9	Over 150 Therms		0.88219	$ 0.11512	$ 0.37836	$ 0.00658	1.38225							9
	Multi-Family Low Income Residential Gas Service	G-11						Multi-Family Low Income Residential Gas Service	G-11					
10	Basic Service Charge per Month		$ 7.50				$ 7.50	Basic Service Charge per Month		$ 7.50			$ 7.50	10
	Commodity Charge per Therm							Commodity Charge per Therm						
11	Summer (May - October)							All Usage		$ 0.59832	$ 0.11512	$ 0.37836	$ 1.09180	11
12	All Usage		$ 0.97680	$ 0.11512	$ 0.37836	$ 0.00658	$ 1.47686							12
	Winter (November - April)													
13	First 150 Therms		$ 0.53434	$ 0.11512	$ 0.37836	$ 0.00658	1.03440							13
14	Over 150 Therms		0.97680	$ 0.11512	$ 0.37836	$ 0.00658	1.47686							14
	Special Residential Gas Service for Air Conditioning	G-15						Special Residential Gas Service for Air Conditioning	G-15					
15	Basic Service Charge per Month		$ 10.70				$ 10.70	Basic Service Charge per Month		$ 10.70			$ 10.70	15
	Commodity Charge per Therm							Commodity Charge per Therm						
	Summer (May - October)							Summer (May - October)						
16	First 15 Therms		$ 0.88219	$ 0.11853	$ 0.37836		$ 1.37908	First 15 Therms		$ 1.10224	$ 0.11853	$ 0.37836	$ 1.59913	16
17	Over 15 Therms		0.14881	$ 0.11853	$ 0.37836		0.64570	Over 15 Therms		0.16952	$ 0.11853	$ 0.37836	0.66641	17
	Winter (November - April)							Winter (November - April)						
18	All Usage		$ 0.88219	$ 0.11853	$ 0.37836		$ 1.37908	All Usage		$ 1.10224	$ 0.11853	$ 0.37836	$ 1.59913	18
	Master-Metered Mobile Home Park Gas Service	G-20						Master-Metered Mobile Home Park Gas Service	G-20					
19	Basic Service Charge per Month		$ 66.00				$ 66.00	Basic Service Charge per Month		$ 66.00			$ 66.00	19
	Commodity Charge per Therm							Commodity Charge per Therm						
20	All Usage		$ 0.50580	$ 0.13191	$ 0.37836		$ 1.01607	All Usage		$ 0.57076	$ 0.13191	$ 0.37836	$ 1.08103	20

SCHEDULE H-3
SHEET 1 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	General Gas Service	G-25						General Gas Service	G-25					
	Basic Service Charge per Month							Basic Service Charge per Month						
1	Small		$ 27.50				$ 27.50	Small		$ 27.50			$ 27.50	1
2	Medium		43.50				43.50	Medium		43.50			43.50	2
3	Large-1		80.00				80.00	Large-1		80.00			80.00	3
4	Large-2		470.00				470.00	Large-2		470.00			470.00	4
5	Transportation Eligible		950.00				950.00	Transportation Eligible		950.00			950.00	5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	Small, All Usage		$ 0.94947	$ 0.11853	$ 0.37836	$ 0.00658	$ 1.44636	Small, All Usage		$ 1.48314	$ 0.11853	$ 0.37836	$ 1.98003	6
7	Medium, All Usage		0.45392	$ 0.11853	$ 0.37836	$ 0.00658	0.95081	Medium, All Usage		0.63165	$ 0.11853	$ 0.37836	1.12854	7
8	Large-1, All Usage		0.42563	$ 0.11853	$ 0.37836	$ 0.00658	0.92252	Large-1, All Usage		0.49928	$ 0.11853	$ 0.37836	0.99617	8
9	Large-2, All Usage		0.31428	$ 0.11853	$ 0.37836	$ 0.00658	0.81117	Large-2, All Usage		0.37829	$ 0.11853	$ 0.37836	0.87518	9
10	Transportation Eligible, All Usage		0.12162	$ 0.11853	$ 0.37836		0.61851	Transportation Eligible, All Usage		0.12773	$ 0.11853	$ 0.37836	0.62462	10
	Demand Charge per Month							Demand Charge per Month						
11	Transportation Eligible		$ 0.086075				$ 0.086075	Transportation Eligible		$ 0.102445			$ 0.102445	11
	Optional Gas Service	G-30						Optional Gas Service	G-30					
12	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.				12
	Commodity Charge per Therm							Commodity Charge per Therm						
13	All Usage		As Specified on A.C.C. Sheet No. 28.					All Usage		As Specified on A.C.C. Sheet No. 28.				13
	Air Conditioning Gas Service	G-40						Air Conditioning Gas Service	G-40					
14	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 32.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 32.				14
	Commodity Charge per Therm							Commodity Charge per Therm						
15	All Usage		$ 0.14881	$ 0.11853	$ 0.37836		$ 0.64570	All Usage		$ 0.16952	$ 0.11853	$ 0.37836	$ 0.66641	15
	Street Lighting Gas Service	G-45						Street Lighting Gas Service	G-45					
	Commodity Charge per Therm of Rated Capacity							Commodity Charge per Therm of Rated Capacity						
16	All Usage		$ 0.82846	$ 0.11853	$ 0.37836		$ 1.32535	All Usage		$ 1.05805	$ 0.11853	$ 0.37836	$ 1.55494	16
	Compression Gas Service	G-50						Compression Gas Service	G-50					
17	Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 27.					Basic Service Charge per Month		As Specified on A.C.C. Sheet No. 36.				17
	Commodity Charge per Therm							Commodity Charge per Therm						
18	All Usage		As Specified on A.C.C. Sheet No. 28.					All Usage		As Specified on A.C.C. Sheet No. 36.				18

SCHEDULE H-3
SHEET 2 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Schedule	Present Rates: Delivery Charge [1]	Present Rates: Rate Adjustment [2]	Present Rates: Gas Cost [2]	Present Rates: Test Year DCA Adjustment	Present Rates: Currently Effective Tariff Rate	Description	Schedule	Proposed Rates: Delivery Charge [3]	Proposed Rates: Rate Adjustment [4]	Proposed Rates: Gas Cost [4]	Proposed Rates: Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Gas Service for Compression on Customer's Premises	G-55						Gas Service for Compression on Customer's Premis	G-55					
	Basic Service Charge per Month							Basic Service Charge per Month						
1	Small		$ 27.50				$ 27.50	Small		$ 27.50			$ 27.50	1
2	Large		250.00				250.00	Large		250.00			250.00	2
3	Residential		10.70				10.70	Residential		10.70			10.70	3
	Commodity Charge per Therm							Commodity Charge per Therm						
4	All Usage		$ 0.23285	$ 0.11853	$ 0.37836		$ 0.72974	All Usage		$ 0.26023	$ 0.11853	$ 0.37836	$ 0.75712	4
	Electric Generation Gas Service	G-60						Electric Generation Gas Service	G-60					
5	Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 40.				Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 40.			5
	Commodity Charge per Therm							Commodity Charge per Therm						
6	All Usage		$ 0.16839	$ 0.11853	$ 0.37836		$ 0.66528	All Usage		$ 0.19175	$ 0.11853	$ 0.37836	$ 0.68864	6
	Biogas and Renewable Natural Gas Service	G-65						Biogas and Renewable Natural Gas Service	G-65					
7	Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 41A.				Basic Service Charge per Month			As Specified on A.C.C. Sheet No. 41A.			7
	Commodity Charge per Therm							Commodity Charge per Therm						
8	All Usage			As Specified on A.C.C. Sheet No. 41A.				All Usage			As Specified on A.C.C. Sheet No. 41A.			8
	Small Essential Agriculture User Gas Service	G-75						Small Essential Agriculture User Gas Service	G-75					
9	Basic Service Charge per Month		$ 120.00				$ 120.00	Basic Service Charge per Month		$ 120.00			$ 120.00	9
	Commodity Charge per Therm							Commodity Charge per Therm						
10	All Usage		$ 0.29952	$ 0.11853	$ 0.37836		$ 0.79641	All Usage		$ 0.32721	$ 0.11853	$ 0.37836	$ 0.82410	10
	Natural Gas Engine Gas Service	G-80						Natural Gas Engine Gas Service	G-80					
	Basic Service Charge per Month							Basic Service Charge per Month						
11	Off-Peak Season (October - March)		$ 0.00				$ 0.00	Off-Peak Season (October - March)		$ 0.00			$ 0.00	11
12	Peak Season (April - September)		125.00				125.00	Peak Season (April - September)		125.00			125.00	12
	Commodity Charge per Therm							Commodity Charge per Therm						
13	All Usage		$ 0.22967	$ 0.02853	$ 0.43302		$ 0.69122	All Usage		$ 0.24458	$ 0.02853	$ 0.43302	$ 0.70613	13
	Service Establishment Charge							Service Establishment Charge						
14	Normal						$ 35.00	Normal					$ 35.00	14
15	Expedited						$ 50.00	Expedited					$ 50.00	15

[1] Present Margin rates effective January 1, 2021.
[2] Present Rate Adjustment, including DOT of $.00304, and Gas Cost rates effective November 1, 2021.
[3] Calculated rates to recover proposed Margin per Schedule H-1, Sheet 3 of 4.
[4] Rate Adjustment and Gas Cost rates effective November 1, 2021.

SCHEDULE H-3
SHEET 3 OF 4

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
SUMMARY OF PRESENT AND PROPOSED RATES - GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

			Present Rates							Proposed Rates				
Line No.	Description	Schedule	Delivery Charge [1]	Rate Adjustment [2]	Gas Cost [2]	Test Year DCA Adjustment	Currently Effective Tariff Rate	Description	Schedule	Delivery Charge [3]	Rate Adjustment [4]	Gas Cost [4]	Effective Tariff Rate	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
	Residential Gas Service	GCU						Single-Family Residential Gas Service	G-5					
1	Basic Service Charge per Month		$ 19.00				$ 19.00	Basic Service Charge per Month		$ 10.70			$ 10.70	1
	Commodity Charge per Therm							Commodity Charge per Therm						
2	All Usage		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720	All Usage		$ 1.10224	$ 0.13191	$ 0.37836	$ 1.61251	2
	Low Income Residential Gas Service	GCU						Single-Family Low Income Residential Gas Service	G-10					
3	Basic Service Charge per Month		$ 13.30				$ 13.30	Basic Service Charge per Month		$ 7.50			$ 7.50	3
	Commodity Charge per Therm							Commodity Charge per Therm						
	Summer (May - October)							All Usage		$ 0.61007	$ 0.11512	$ 0.37836	$ 1.10355	
4	All Usage		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720							4
	Winter (November - April)													
5	First 150 Therms		$ 0.12384	$ -	$ 0.46920	$ 0.00000	$ 0.59304							5
6	Over 150 Therms		$ 0.37800	$ -	$ 0.46920	$ 0.00000	$ 0.84720							6
	Commercial Gas Service	GCU						General Gas Service	G-25					
	Basic Service Charge per Month							Basic Service Charge per Month						
7	All Customers		$ 42.00				$ 42.00	Small		$ 27.50			$ 27.50	7
8								Medium		43.50			43.50	8
9								Large-1		80.00			80.00	9
10								Large-2		470.00			470.00	10
	Commodity Charge per Therm							Commodity Charge per Therm						
11	All Customers		$ 0.37994	$ -	$ 0.46920	$ 0.00000	$ 0.84914	Small, All Usage		$ 1.48314	$ 0.11853	$ 0.37836	$ 1.98003	11
12								Medium, All Usage		0.63165	$ 0.11853	$ 0.37836	1.12854	12
13								Large-1, All Usage		0.49928	$ 0.11853	$ 0.37836	0.99617	13
14								Large-2, All Usage		0.37829	$ 0.11853	$ 0.37836	0.87518	14
	Natural Gas Engine Gas Service	GCU						Natural Gas Engine Gas Service	G-80					
	Basic Service Charge per Month							Basic Service Charge per Month						
15	Off-Peak Season (October - March)		$ 30.00				$ 30.00	Off-Peak Season (October - March)		$ 0.00			$ 0.00	15
16	Peak Season (April - September)		30.00				30.00	Peak Season (April - September)		125.00			125.00	16
	Commodity Charge per Therm							Commodity Charge per Therm						
17	All Usage		$ 0.19050	$ -	$ 0.46920		$ 0.65970	All Usage		$ 0.24458	$ 0.02853	$ 0.43302	$ 0.70613	17
								Service Establishment Charge						
18								Normal					$ 35.00	18
19								Expedited					$ 50.00	19

[1] Present Margin rates effective April 1, 2017.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
SINGLE-FAMILY RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 21.89	$ 23.60	$ 1.71	7.81%	1
2	Average Summer Use [1]	11	26.09	28.44	2.35	9.01%	2
3	125 Percent Average Use	14	30.29	33.28	2.99	9.87%	3
	Winter Season Bills						
4	75 Percent Average Use	27	$ 48.47	$ 54.24	$ 5.77	11.90%	4
5	Average Winter Use [1]	36	61.07	68.75	7.68	12.58%	5
6	125 Percent Average Use	45	73.66	83.26	9.60	13.03%	6
7	Annual Average Use	24	44.28	49.40	5.12	11.56%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 10.70
Commodity Charge	
All Usage	$ 1.39904

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 10.70
Commodity Charge	
All Usage	$ 1.61251

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MULTI-FAMILY RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	7	$ 20.16	$ 22.41	$ 2.25	11.16%	1
2	Average Summer Use [1]	9	23.14	26.05	2.91	12.58%	2
3	125 Percent Average Use	11	26.13	29.68	3.55	13.59%	3
	Winter Season Bills						
4	75 Percent Average Use	14	$ 30.61	$ 35.13	$ 4.52	14.77%	4
5	Average Winter Use [1]	18	36.59	42.39	5.80	15.85%	5
6	125 Percent Average Use	23	44.05	51.47	7.42	16.84%	6
7	Annual Average Use	14	30.12	34.53	4.41	14.64%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 9.70
Commodity Charge	
All Usage	$ 1.49365

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 9.70
Commodity Charge	
All Usage	$ 1.81628

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
SINGLE-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 18.56	$ 16.33	$(2.23)	-12.02%	1
2	Average Summer Use [1]	10	21.32	18.54	(2.78)	-13.04%	2
3	125 Percent Average Use	13	25.47	21.85	(3.62)	-14.21%	3
	Winter Season Bills						
4	75 Percent Average Use	26	$ 32.67	$ 36.19	$ 3.52	10.77%	4
5	Average Winter Use [1]	34	40.42	45.02	4.60	11.38%	5
6	125 Percent Average Use	43	49.13	54.95	5.82	11.85%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 7.50
Commodity Charge	
Summer (May-October)	
All Usage	$ 1.38225
Winter (November-April)	
First 150 Therms	$ 0.96818
Over 150 Therms	1.38225

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 7.50
Commodity Charge	
All Usage	$ 1.10355

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MULTI-FAMILY LOW INCOME RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	At Currently Effective Rates	At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 19.31	$ 16.23	$(3.08)	-15.95%	1
2	Average Summer Use [1]	10	22.27	18.42	(3.85)	-17.29%	2
3	125 Percent Average Use	13	26.70	21.69	(5.01)	-18.76%	3
	Winter Season Bills						
4	75 Percent Average Use	15	$ 23.02	$ 23.88	$ 0.86	3.74%	4
5	Average Winter Use [1]	20	28.19	29.34	1.15	4.08%	5
6	125 Percent Average Use	25	33.36	34.79	1.43	4.29%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 7.50
Commodity Charge	
Summer (May-October)	
All Usage	$ 1.47686
Winter (November-April)	
First 150 Therms	$ 1.03440
Over 150 Therms	1.47686

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 7.50
Commodity Charge	
All Usage	$ 1.09180

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
MASTER-METERED MOBILE HOME PARK GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	211	$ 280.39	$ 294.10	$ 13.71	4.89%	1
2	Average Summer Use [1]	281	351.52	369.77	18.25	5.19%	2
3	125 Percent Average Use	351	422.64	445.44	22.80	5.39%	3
	Winter Season Bills						
4	75 Percent Average Use	678	$ 754.90	$ 798.94	$ 44.04	5.83%	4
5	Average Winter Use [1]	904	984.53	1,043.25	58.72	5.96%	5
6	125 Percent Average Use	1,130	1,214.16	1,287.56	73.40	6.05%	6
7	Annual Average Use	592	667.51	705.97	38.46	5.76%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 66.00
Commodity Charge	
All Usage	$ 1.01607

Proposed Tariff Rates [3]	
Basic Service Charge	$ 66.00
Commodity Charge	
All Usage	$ 1.08103

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - SMALL

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	6	$ 36.18	$ 39.38	$ 3.20	8.84%	1
2	Average Summer Use [1]	8	39.07	43.34	4.27	10.93%	2
3	125 Percent Average Use	10	41.96	47.30	5.34	12.73%	3
	Winter Season Bills						
4	75 Percent Average Use	20	$ 56.43	$ 67.10	$ 10.67	18.91%	4
5	Average Winter Use [1]	27	66.55	80.96	14.41	21.65%	5
6	125 Percent Average Use	34	76.68	94.82	18.14	23.66%	6
7	Annual Average Use	18	53.53	63.14	9.61	17.95%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 1.44636

Proposed Tariff Rates [3]	
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 1.98003

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - MEDIUM

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	129	$ 166.15	$ 189.08	$ 22.93	13.80%	1
2	Average Summer Use [1]	172	207.04	237.61	30.57	14.77%	2
3	125 Percent Average Use	215	247.92	286.14	38.22	15.42%	3
	Winter Season Bills						
4	75 Percent Average Use	227	$ 259.33	$ 299.68	$ 40.35	15.56%	4
5	Average Winter Use [1]	302	330.64	384.32	53.68	16.24%	5
6	125 Percent Average Use	378	402.91	470.09	67.18	16.67%	6
7	Annual Average Use	238	269.79	312.09	42.30	15.68%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 43.50
Commodity Charge	
All Usage	$ 0.95081
Proposed Tariff Rates [3]	
Basic Service Charge	$ 43.50
Commodity Charge	
All Usage	$ 1.12854

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - LARGE-1

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	675	$ 702.70	$ 752.41	$ 49.71	7.07%	1
2	Average Summer Use [1]	900	910.27	976.55	66.28	7.28%	2
3	125 Percent Average Use	1,125	1,117.84	1,200.69	82.85	7.41%	3
	Winter Season Bills						
4	75 Percent Average Use	1,167	$ 1,156.58	$ 1,242.53	$ 85.95	7.43%	4
5	Average Winter Use [1]	1,556	1,515.44	1,630.04	114.60	7.56%	5
6	125 Percent Average Use	1,945	1,874.30	2,017.55	143.25	7.64%	6
7	Annual Average Use	1,226	1,211.01	1,301.30	90.29	7.46%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 80.00
Commodity Charge	
All Usage	$ 0.92252

Proposed Tariff Rates [3]	
Basic Service Charge	$ 80.00
Commodity Charge	
All Usage	$ 0.99617

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - LARGE-2

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	3,902	$ 3,635.19	$ 3,884.95	$ 249.76	6.87%	1
2	Average Summer Use [1]	5,203	4,690.52	5,023.56	333.04	7.10%	2
3	125 Percent Average Use	6,504	5,745.85	6,162.17	416.32	7.25%	3
	Winter Season Bills						
4	75 Percent Average Use	6,230	$ 5,523.59	$ 5,922.37	$ 398.78	7.22%	4
5	Average Winter Use [1]	8,307	7,208.39	7,740.12	531.73	7.38%	5
6	125 Percent Average Use	10,384	8,893.19	9,557.87	664.68	7.47%	6
7	Annual Average Use	6,725	5,925.12	6,355.59	430.47	7.27%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 470.00
Commodity Charge	
All Usage	$ 0.81117

Proposed Tariff Rates [3]	
Basic Service Charge	$ 470.00
Commodity Charge	
All Usage	$ 0.87518

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GAS SERVICE FOR COMPRESSION ON CUSTOMER'S PREMISES - SMALL

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	74	$ 81.50	$ 83.53	$ 2.03	2.49%	1
2	Average Summer Use [1]	98	99.01	101.70	2.69	2.72%	2
3	125 Percent Average Use	123	117.26	120.63	3.37	2.87%	3
	Winter Season Bills						
4	75 Percent Average Use	68	$ 77.12	$ 78.98	$ 1.86	2.41%	4
5	Average Winter Use [1]	90	93.18	95.64	2.46	2.64%	5
6	125 Percent Average Use	113	109.96	113.05	3.09	2.81%	6
7	Annual Average Use	94	96.10	98.67	2.57	2.67%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 0.72974

Proposed Tariff Rates [3]	
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 0.75712

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GAS SERVICE FOR COMPRESSION ON CUSTOMER'S PREMISES - LARGE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	42,170	$ 31,023.14	$ 32,177.75	$ 1,154.61	3.72%	1
2	Average Summer Use [1]	56,226	41,280.36	42,819.83	1,539.47	3.73%	2
3	125 Percent Average Use	70,283	51,538.32	53,462.66	1,924.34	3.73%	3
	Winter Season Bills						
4	75 Percent Average Use	45,744	$ 33,631.23	$ 34,883.70	$ 1,252.47	3.72%	4
5	Average Winter Use [1]	60,992	44,758.30	46,428.26	1,669.96	3.73%	5
6	125 Percent Average Use	76,240	55,885.38	57,972.83	2,087.45	3.74%	6
7	Annual Average Use	58,609	43,019.33	44,624.05	1,604.72	3.73%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 250.00
Commodity Charge	
All Usage	$ 0.72974
Proposed Tariff Rates [3]	
Basic Service Charge	$ 250.00
Commodity Charge	
All Usage	$ 0.75712

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GAS SERVICE FOR COMPRESSION ON CUSTOMER'S PREMISES - RESIDENTIAL

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	23	$ 27.48	$ 28.11	$ 0.63	2.29%	1
2	Average Summer Use [1]	31	33.32	34.17	0.85	2.55%	2
3	125 Percent Average Use	39	39.16	40.23	1.07	2.73%	3
	Winter Season Bills						
4	75 Percent Average Use	25	$ 28.94	$ 29.63	$ 0.69	2.38%	4
5	Average Winter Use [1]	33	34.78	35.68	0.90	2.59%	5
6	125 Percent Average Use	41	40.62	41.74	1.12	2.76%	6
7	Annual Average Use	32	34.05	34.93	0.88	2.58%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 10.70
Commodity Charge	
All Usage	$ 0.72974

Proposed Tariff Rates [3]	
Basic Service Charge	$ 10.70
Commodity Charge	
All Usage	$ 0.75712

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
SMALL ESSENTIAL AGRICULTURE USER GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	2,567	$ 2,164.38	$ 2,235.46	$ 71.08	3.28%	1
2	Average Summer Use [1]	3,423	2,846.11	2,940.89	94.78	3.33%	2
3	125 Percent Average Use	4,279	3,527.84	3,646.32	118.48	3.36%	3
	Winter Season Bills						
4	75 Percent Average Use	3,168	$ 2,643.03	$ 2,730.75	$ 87.72	3.32%	4
5	Average Winter Use [1]	4,224	3,484.04	3,601.00	116.96	3.36%	5
6	125 Percent Average Use	5,280	4,325.04	4,471.25	146.21	3.38%	6
7	Annual Average Use	3,824	3,165.47	3,271.36	105.89	3.35%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 120.00
Commodity Charge	
All Usage	$ 0.79641

Proposed Tariff Rates [3]	
Basic Service Charge	$ 120.00
Commodity Charge	
All Usage	$ 0.82410

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
NATURAL GAS ENGINE GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Peak Season Bills						
1	75 Percent Average	3,581	$ 2,600.26	$ 2,653.65	$ 53.39	2.05%	1
2	Average	4,775	3,425.58	3,496.77	71.19	2.08%	2
3	125 Percent Average	5,969	4,250.89	4,339.89	89.00	2.09%	3
	Off-Peak Season Bills						
4	75 Percent Average	1,626	$ 1,123.92	$ 1,148.17	24.25	2.16%	4
5	Average	2,168	1,498.56	1,530.89	32.33	2.16%	5
6	125 Percent Average	2,710	1,873.21	1,913.61	40.40	2.16%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge	
Peak Season	$ 125.00
Off-Peak Season	0.00
Commodity Charge	
All Usage	$ 0.69122

Proposed Tariff Rates [3]	
Basic Service Charge	
Peak Season	$ 125.00
Off-Peak Season	0.00
Commodity Charge	
All Usage	$ 0.70613

[1] Company Record.
[2] Rates effective November 1, 2021 including Test Year DCA Adjustment.
[3] Schedule H-3, Sheets 1-3.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill: At Currently Effective Rates	Monthly Bill: At Proposed Tariff Rates	Increase/(Decrease): Dollars	Increase/(Decrease): Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 25.78	$ 23.60	$(2.18)	-8.46%	1
2	Average Summer Use [1]	11	28.32	28.44	0.12	0.42%	2
3	125 Percent Average Use	14	30.86	33.28	2.42	7.84%	3
	Winter Season Bills						
4	75 Percent Average Use	35	$ 48.65	$ 67.14	$ 18.49	38.01%	4
5	Average Winter Use [1]	47	58.82	86.49	27.67	47.04%	5
6	125 Percent Average Use	59	68.98	105.84	36.86	53.44%	6
7	Annual Average Use	29	43.61	57.53	13.92	31.92%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 19.00
Commodity Charge	
All Usage	$ 0.84720

Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 10.70
Commodity Charge	
All Usage	$ 1.61251

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
LOW INCOME RESIDENTIAL GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	8	$ 25.78	$ 18.04	$(7.74)	-30.02%	1
2	Average Summer Use [1]	11	28.32	19.82	(8.50)	-30.01%	2
3	125 Percent Average Use	14	30.86	21.60	(9.26)	-30.01%	3
	Winter Season Bills						
4	75 Percent Average Use	35	$ 48.65	$ 46.12	$(2.53)	-5.20%	4
5	Average Winter Use [1]	47	58.82	$ 59.37	0.55	0.94%	5
6	125 Percent Average Use	59	68.98	$ 72.61	3.63	5.26%	6
7	Annual Average Use	29	43.61	$ 39.55	(4.06)	-9.31%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge per Month	$ 13.30
Commodity Charge	
All Usage	$ 0.59304
Proposed Tariff Rates [3]	
Basic Service Charge per Month	$ 7.50
Commodity Charge	
All Usage	$ 1.10355

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
GRAHAM COUNTY UTILITIES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - SMALL

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	5	$ 46.25	$ 37.40	$(8.85)	-19.14%	1
2	Average Summer Use [1]	6	47.09	39.38	(7.71)	-16.37%	2
3	125 Percent Average Use	8	48.79	43.34	(5.45)	-11.17%	3
	Winter Season Bills						
4	75 Percent Average Use	24	$ 62.38	$ 75.02	$ 12.64	20.26%	4
5	Average Winter Use [1]	32	69.17	90.86	21.69	31.36%	5
6	125 Percent Average Use	40	75.97	106.70	30.73	40.45%	6
7	Annual Average Use	19	58.13	65.12	6.99	12.02%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 42.00
Commodity Charge	
All Usage	$ 0.84914
Proposed Tariff Rates [3]	
Basic Service Charge	$ 27.50
Commodity Charge	
All Usage	$ 1.98003

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
GRAHAM COUNTY UTILITIES
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - MEDIUM

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	46	$ 81.06	$ 95.41	$ 14.35	17.70%	1
2	Average Summer Use [1]	61	93.80	112.34	18.54	19.77%	2
3	125 Percent Average Use	76	106.53	129.27	22.74	21.35%	3
	Winter Season Bills						
4	75 Percent Average Use	216	$ 225.41	$ 287.26	$ 61.85	27.44%	4
5	Average Winter Use [1]	288	286.55	368.52	81.97	28.61%	5
6	125 Percent Average Use	360	347.69	449.77	102.08	29.36%	6
7	Annual Average Use	174	189.75	239.87	50.12	26.41%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 42.00
Commodity Charge	
All Usage	$ 0.84914

Proposed Tariff Rates [3]	
Basic Service Charge	$ 43.50
Commodity Charge	
All Usage	$ 1.12854

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
GRAHAM COUNTY UTILITIES
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - LARGE-1

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	483	$ 452.13	$ 561.15	$ 109.02	24.11%	1
2	Average Summer Use [1]	644	588.85	721.53	132.68	22.53%	2
3	125 Percent Average Use	805	725.56	881.92	156.36	21.55%	3
	Winter Season Bills						
4	75 Percent Average Use	1,235	$ 1,090.69	$ 1,310.27	$ 219.58	20.13%	4
5	Average Winter Use [1]	1,647	1,440.53	1,720.69	280.16	19.45%	5
6	125 Percent Average Use	2,059	1,790.38	2,131.11	340.73	19.03%	6
7	Annual Average Use	1,145	1,014.27	1,220.61	206.34	20.34%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 42.00
Commodity Charge	
All Usage	$ 0.84914

Proposed Tariff Rates [3]	
Basic Service Charge	$ 80.00
Commodity Charge	
All Usage	$ 0.99617

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
GRAHAM COUNTY UTILITIES
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
GENERAL GAS SERVICE - LARGE-2

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Summer Season Bills						
1	75 Percent Average Use	2,675	$ 2,313.45	$ 2,811.11	$ 497.66	21.51%	1
2	Average Summer Use [1]	3,567	3,070.88	3,591.77	520.89	16.96%	2
3	125 Percent Average Use	4,459	3,828.32	4,372.43	544.11	14.21%	3
	Winter Season Bills						
4	75 Percent Average Use	8,924	$ 7,619.73	$ 8,280.11	$ 660.38	8.67%	4
5	Average Winter Use [1]	11,899	10,145.92	10,883.77	737.85	7.27%	5
6	125 Percent Average Use	14,874	12,672.11	13,487.43	815.32	6.43%	6
7	Annual Average Use	7,733	6,608.40	7,237.77	629.37	9.52%	7

Effective Tariff Rates [2]	Amount
Basic Service Charge	$ 42.00
Commodity Charge	
All Usage	$ 0.84914

Proposed Tariff Rates [3]	
Basic Service Charge	$ 470.00
Commodity Charge	
All Usage	$ 0.87518

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
GRAHAM COUNTY UTILITIES
TYPICAL BILL COMPARISON - PROPOSED VS. CURRENTLY EFFECTIVE RATES
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021
NATURAL GAS ENGINE GAS SERVICE

Line No.	Description	Monthly Consumption (Therms)	Monthly Bill At Currently Effective Rates	Monthly Bill At Proposed Tariff Rates	Increase/(Decrease) Dollars	Increase/(Decrease) Percent	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	
	Peak Season Bills						
1	75 Percent Average	98	$ 94.65	$ 194.20	$ 99.55	105.18%	1
2	Average	131	116.42	217.50	101.08	86.82%	2
3	125 Percent Average	164	138.19	240.81	102.62	74.26%	3
	Off-Peak Season Bills						
4	75 Percent Average	192	$ 156.66	$ 135.58	(21.08)	-13.46%	4
5	Average	256	198.88	180.77	(18.11)	-9.11%	5
6	125 Percent Average	320	241.10	225.96	(15.14)	-6.28%	6

Effective Tariff Rates [2]	Amount
Basic Service Charge	
Peak Season	$ 30.00
Off-Peak Season	30.00
Commodity Charge	
All Usage	$ 0.65970
Proposed Tariff Rates [3]	
Basic Service Charge	
Peak Season	$ 125.00
Off-Peak Season	0.00
Commodity Charge	
All Usage	$ 0.70613

[1] GCU company Record.
[2] Margin rate effective April 1, 2017; Gas Cost rates effective on January 31, 2019.
[3] Schedule H-3, Sheet 4.

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-5 CLASS =RESIDENTIAL GAS SERVICE AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	107,935	107,935	0.00	1.78	5,965,425	0	0	0.00
1	120,408	120,408	120,608	228,543	0.18	3.76	5,844,817	5,844,817	5,965,225	8.83
2	316,528	436,936	158,264	386,807	0.65	6.37	5,686,553	11,373,106	11,810,042	17.47
3	328,298	765,234	156,993	543,800	1.13	8.95	5,529,560	16,588,680	17,353,914	25.68
4	1,143,068	1,908,302	375,739	919,539	2.82	15.14	5,153,821	20,615,284	22,523,586	33.33
5	2,245,210	4,153,512	543,410	1,462,949	6.15	24.09	4,610,411	23,052,055	27,205,567	40.25
6	2,771,765	6,925,277	534,615	1,997,564	10.25	32.89	4,075,796	24,454,776	31,380,053	46.43
7	3,162,255	10,087,532	487,287	2,484,851	14.93	40.91	3,588,509	25,119,563	35,207,095	52.09
8	3,468,617	13,556,149	476,356	2,961,207	20.06	48.76	3,112,153	24,897,224	38,453,373	56.90
9	3,608,907	17,165,056	432,038	3,393,245	25.40	55.87	2,680,115	24,121,035	41,286,091	61.09
10	3,587,104	20,752,160	381,712	3,774,957	30.71	62.16	2,298,403	22,984,030	43,736,190	64.71
11	3,413,802	24,165,962	328,115	4,103,072	35.76	67.56	1,970,288	21,673,168	45,839,130	67.82
12	3,286,610	27,452,572	287,290	4,390,362	40.62	72.29	1,682,998	20,195,976	47,648,548	70.50
13	3,015,143	30,467,715	241,180	4,631,542	45.08	76.26	1,441,818	18,743,634	49,211,349	72.81
14	2,735,489	33,203,204	202,203	4,833,745	49.13	79.59	1,239,615	17,354,610	50,557,814	74.81
15	2,505,841	35,709,045	172,186	5,005,931	52.84	82.42	1,067,429	16,011,435	51,720,480	76.53
16	2,236,583	37,945,628	143,664	5,149,595	56.15	84.79	923,765	14,780,240	52,725,868	78.01
17	2,054,171	39,999,799	123,664	5,273,259	59.18	86.83	800,101	13,601,717	53,601,516	79.31
18	1,803,277	41,803,076	101,945	5,375,204	61.85	88.50	698,156	12,566,808	54,369,884	80.45
19	1,594,296	43,397,372	85,259	5,460,463	64.21	89.91	612,897	11,645,043	55,042,415	81.44
20	1,372,762	44,770,134	69,701	5,530,164	66.24	91.06	543,196	10,863,920	55,634,054	82.32
25	1,227,851	45,997,985	59,337	5,589,501	68.06	92.03	483,859	12,096,475	58,094,460	85.96
30	5,843,473	51,841,458	194,783	5,784,284	76.71	95.24	289,076	8,672,280	60,513,738	89.54
35	2,833,789	54,675,247	90,383	5,874,667	80.90	96.73	198,693	6,954,255	61,629,502	91.19
40	1,847,602	56,522,849	51,018	5,925,685	83.63	97.57	147,675	5,907,000	62,429,849	92.37
45	1,343,827	57,866,676	32,447	5,958,132	85.62	98.10	115,228	5,185,260	63,051,936	93.29
50	1,046,952	58,913,628	22,322	5,980,454	87.17	98.47	92,906	4,645,300	63,558,928	94.04
55	852,205	59,765,833	16,392	5,996,846	88.43	98.74	76,514	4,208,270	63,974,103	94.66
60	700,841	60,466,674	12,117	6,008,963	89.47	98.94	64,397	3,863,820	64,330,494	95.18
65	581,381	61,048,055	9,217	6,018,180	90.33	99.09	55,180	3,586,700	64,634,755	95.64
70	565,838	61,613,893	8,365	6,026,545	91.17	99.23	46,815	3,277,050	64,890,943	96.01
75	445,395	62,059,288	6,056	6,032,601	91.82	99.33	40,759	3,056,925	65,116,213	96.35
80	381,046	62,440,334	4,837	6,037,438	92.39	99.41	35,922	2,873,760	65,314,094	96.64
85	337,083	62,777,417	4,013	6,041,451	92.89	99.47	31,909	2,712,265	65,489,682	96.90
90	294,577	63,071,994	3,302	6,044,753	93.32	99.53	28,607	2,574,630	65,646,624	97.13
95	252,735	63,324,729	2,677	6,047,430	93.70	99.57	25,930	2,463,350	65,788,079	97.34
100	239,980	63,564,709	2,409	6,049,839	94.05	99.61	23,521	2,352,100	65,916,809	97.53
105	214,459	63,779,168	2,046	6,051,885	94.37	99.65	21,475	2,254,875	66,034,043	97.71
110	183,378	63,962,546	1,668	6,053,553	94.64	99.67	19,807	2,178,770	66,141,316	97.86
115	176,035	64,138,581	1,550	6,055,103	94.90	99.70	18,257	2,099,555	66,238,136	98.01
120	210,600	64,349,181	1,755	6,056,858	95.21	99.73	16,502	1,980,240	66,329,421	98.14
125	154,086	64,503,267	1,281	6,058,139	95.44	99.75	15,221	1,902,625	66,405,892	98.26
130	139,100	64,642,367	1,109	6,059,248	95.65	99.77	14,112	1,834,560	66,476,927	98.36
135	131,607	64,773,974	1,001	6,060,249	95.84	99.78	13,111	1,769,985	66,543,959	98.46
140	124,203	64,898,177	911	6,061,160	96.02	99.80	12,200	1,708,000	66,606,177	98.55
145	118,007	65,016,184	834	6,061,994	96.20	99.81	11,366	1,648,070	66,664,254	98.64
150	107,826	65,124,010	734	6,062,728	96.36	99.82	10,632	1,594,800	66,718,810	98.72
155	97,715	65,221,725	642	6,063,370	96.50	99.84	9,990	1,548,450	66,770,175	98.79
160	90,002	65,311,727	572	6,063,942	96.64	99.84	9,418	1,506,880	66,818,607	98.87
165	88,666	65,400,393	543	6,064,485	96.77	99.85	8,875	1,464,375	66,864,768	98.93
170	86,578	65,486,971	513	6,064,998	96.90	99.86	8,362	1,421,540	66,908,511	99.00
175	74,525	65,561,496	428	6,065,426	97.01	99.87	7,934	1,388,450	66,949,946	99.06
180	75,093	65,636,589	419	6,065,845	97.12	99.88	7,515	1,352,700	66,989,289	99.12
185	71,504	65,708,093	387	6,066,232	97.22	99.88	7,128	1,318,680	67,026,773	99.17
190	64,404	65,772,497	339	6,066,571	97.32	99.89	6,789	1,289,910	67,062,407	99.23
195	57,838	65,830,335	301	6,066,872	97.40	99.89	6,488	1,265,160	67,095,495	99.28
200	62,536	65,892,871	313	6,067,185	97.50	99.90	6,175	1,235,000	67,127,871	99.32
999,999	1,691,921	67,584,792	6,175	6,073,360	100.00	100.00	0	0	67,584,792	100.00

TOTAL	67,584,792	6,073,360
AVG. USE	11.1	

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-5 CLASS =RESIDENTIAL GAS SERVICE AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	99,176	99,176	0.00	1.63	6,002,507	0	0	0.00
1	43,450	43,450	44,928	144,104	0.02	2.36	5,957,579	5,957,579	6,001,029	2.70
2	87,828	131,278	46,825	190,929	0.06	3.13	5,910,754	11,821,508	11,952,786	5.39
3	201,995	333,273	70,369	261,298	0.15	4.28	5,840,385	17,521,155	17,854,428	8.05
4	361,136	694,409	94,262	355,560	0.31	5.83	5,746,123	22,984,492	23,678,901	10.67
5	492,772	1,187,181	101,990	457,550	0.54	7.50	5,644,133	28,220,665	29,407,846	13.26
6	678,887	1,866,068	116,812	574,362	0.84	9.41	5,527,321	33,163,926	35,029,994	15.79
7	924,983	2,791,051	134,428	708,790	1.26	11.62	5,392,893	37,750,251	40,541,302	18.27
8	1,139,042	3,930,093	144,942	853,732	1.77	13.99	5,247,951	41,983,608	45,913,701	20.69
9	1,339,211	5,269,304	151,438	1,005,170	2.38	16.47	5,096,513	45,868,617	51,137,921	23.05
10	1,526,027	6,795,331	155,273	1,160,443	3.06	19.02	4,941,240	49,412,400	56,207,731	25.33
11	1,654,377	8,449,708	154,474	1,314,917	3.81	21.55	4,786,766	52,654,426	61,104,134	27.54
12	1,815,060	10,264,768	155,448	1,470,365	4.63	24.10	4,631,318	55,575,816	65,840,584	29.68
13	1,898,061	12,162,829	149,682	1,620,047	5.48	26.55	4,481,636	58,261,268	70,424,097	31.74
14	1,982,954	14,145,783	144,403	1,764,450	6.38	28.92	4,337,233	60,721,262	74,867,045	33.75
15	2,049,957	16,195,740	139,637	1,904,087	7.30	31.21	4,197,596	62,963,940	79,159,680	35.68
16	2,116,777	18,312,517	135,456	2,039,543	8.25	33.43	4,062,140	64,994,240	83,306,757	37.55
17	2,133,738	20,446,255	128,416	2,167,959	9.22	35.53	3,933,724	66,873,308	87,319,563	39.36
18	2,132,985	22,579,240	121,594	2,289,553	10.18	37.52	3,812,130	68,618,340	91,197,580	41.11
19	4,644,406	27,223,646	249,703	2,539,256	12.27	41.62	3,562,427	67,686,113	94,909,759	42.78
20	5,545,892	32,769,538	285,016	2,824,272	14.77	46.29	3,277,411	65,548,220	98,317,758	44.32
25	9,229,495	41,999,033	388,205	3,212,477	18.93	52.65	2,889,206	72,230,150	114,229,183	51.49
30	11,328,136	53,327,169	395,052	3,607,529	24.04	59.12	2,494,154	74,824,620	128,151,789	57.76
35	10,754,414	64,081,583	323,457	3,930,986	28.88	64.42	2,170,697	75,974,395	140,055,978	63.13
40	11,806,857	75,888,440	306,959	4,237,945	34.21	69.46	1,863,738	74,549,520	150,437,960	67.81
45	11,547,072	87,435,512	266,609	4,504,554	39.41	73.82	1,597,129	71,870,805	159,306,317	71.80
50	10,948,507	98,384,019	226,207	4,730,761	44.34	77.53	1,370,922	68,546,100	166,930,119	75.24
55	11,005,281	109,389,300	208,001	4,938,762	49.31	80.94	1,162,921	63,960,655	173,349,955	78.13
60	9,184,440	118,573,740	159,760	5,098,522	53.45	83.56	1,003,161	60,189,660	178,763,400	80.57
65	8,937,042	127,510,782	143,452	5,241,974	57.47	85.91	859,709	55,881,085	183,391,867	82.66
70	8,235,589	135,746,371	121,371	5,363,345	61.19	87.90	738,338	51,683,660	187,430,031	84.48
75	7,546,851	143,293,222	103,917	5,467,262	64.59	89.60	634,421	47,581,575	190,874,797	86.03
80	6,889,388	150,182,610	89,210	5,556,472	67.69	91.06	545,211	43,616,880	193,799,490	87.35
85	6,391,177	156,573,787	77,900	5,634,372	70.57	92.34	467,311	39,721,435	196,295,222	88.48
90	5,104,377	161,678,164	58,315	5,692,687	72.87	93.30	408,996	36,809,640	198,487,804	89.47
95	4,179,595	165,857,759	44,711	5,737,398	74.76	94.03	364,285	34,607,075	200,464,834	90.36
100	3,741,233	169,598,992	38,842	5,776,240	76.44	94.67	325,443	32,544,300	202,143,292	91.11
105	3,589,614	173,188,606	34,826	5,811,066	78.06	95.24	290,617	30,514,785	203,703,391	91.82
110	3,304,637	176,493,243	30,613	5,841,679	79.55	95.74	260,004	28,600,440	205,093,683	92.44
115	3,167,301	179,660,544	28,097	5,869,776	80.98	96.20	231,907	26,669,305	206,329,849	93.00
120	2,919,093	182,579,637	24,902	5,894,678	82.29	96.61	207,005	24,840,600	207,420,237	93.49
125	2,387,303	184,966,940	19,496	5,914,174	83.37	96.93	187,509	23,438,625	208,405,565	93.94
130	2,332,259	187,299,199	18,570	5,932,744	84.42	97.23	168,939	21,962,070	209,261,269	94.32
135	2,050,563	189,349,762	15,600	5,948,344	85.35	97.49	153,339	20,700,765	210,050,527	94.68
140	1,804,232	191,153,994	13,273	5,961,617	86.16	97.70	140,066	19,609,240	210,763,234	95.00
145	1,548,057	192,702,051	10,816	5,972,433	86.86	97.88	129,250	18,741,250	211,443,301	95.30
150	1,180,461	193,882,512	7,985	5,980,418	87.39	98.01	121,265	18,189,750	212,072,262	95.59
155	1,273,019	195,155,531	8,332	5,988,750	87.96	98.15	112,933	17,504,615	212,660,146	95.85
160	1,052,152	196,207,683	6,658	5,995,408	88.44	98.26	106,275	17,004,000	213,211,683	96.10
165	987,463	197,195,146	6,071	6,001,479	88.88	98.36	100,204	16,533,660	213,728,806	96.33
170	887,005	198,082,151	5,301	6,006,780	89.28	98.44	94,903	16,133,510	214,215,661	96.55
175	836,907	198,919,058	4,869	6,011,649	89.66	98.52	90,034	15,755,950	214,675,008	96.76
180	801,963	199,721,021	4,535	6,016,184	90.02	98.60	85,499	15,389,820	215,110,841	96.96
185	682,730	200,403,751	3,759	6,019,943	90.33	98.66	81,740	15,121,900	215,525,651	97.14
190	649,728	201,053,479	3,457	6,023,400	90.62	98.72	78,283	14,873,770	215,927,249	97.33
195	748,093	201,801,572	3,871	6,027,271	90.96	98.78	74,412	14,510,340	216,311,912	97.50
200	494,887	202,296,459	2,496	6,029,767	91.18	98.82	71,916	14,383,200	216,679,659	97.66
999,999	19,564,078	221,860,537	71,916	6,101,683	100.00	100.00	0	0	221,860,537	100.00
TOTAL	221,860,537		6,101,683							
AVG. USE	36.4									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-6 CLASS =MULTI-FAMILY RESIDENTIAL GAS SERVICE AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	15,673	15,673	0.00	6.97	209.203	0	0	0.00
1	8,623	8,623	8,613	24,286	0.42	10.80	200,590	200,590	209,213	10.24
2	14,548	23,171	7,274	31,560	1.13	14.03	193,316	386,632	409,803	20.05
3	43,287	66,458	14,429	45,989	3.25	20.45	178,887	536,661	603,119	29.51
4	75,752	142,210	18,938	64,927	6.96	28.87	159,949	639,796	782,006	38.27
5	93,245	235,455	18,649	83,576	11.52	37.17	141,300	706,500	941,955	46.09
6	107,454	342,909	17,909	101,485	16.78	45.13	123,391	740,346	1,083,255	53.01
7	117,201	460,110	16,743	118,228	22.51	52.57	106,648	746,536	1,206,646	59.05
8	115,680	575,790	14,460	132,688	28.18	59.00	92,188	737,504	1,313,294	64.26
9	112,536	688,326	12,504	145,192	33.68	64.57	79,684	717,156	1,405,482	68.77
10	106,410	794,736	10,641	155,833	38.89	69.30	69,043	690,430	1,485,166	72.67
11	102,190	896,926	9,290	165,123	43.89	73.43	59,753	657,283	1,554,209	76.05
12	94,248	991,174	7,854	172,977	48.50	76.92	51,899	622,788	1,613,962	78.98
13	85,683	1,076,857	6,591	179,568	52.69	79.85	45,308	589,004	1,665,861	81.52
14	77,910	1,154,767	5,565	185,133	56.51	82.33	39,743	556,402	1,711,169	83.73
15	70,575	1,225,342	4,705	189,838	59.96	84.42	35,038	525,570	1,750,912	85.68
16	64,346	1,289,688	4,021	193,859	63.11	86.21	31,017	496,272	1,785,960	87.39
17	56,798	1,346,486	3,341	197,200	65.89	87.69	27,676	470,492	1,816,978	88.91
18	192,209	1,538,695	10,795	207,995	75.29	92.49	16,881	303,858	1,842,553	90.16
19	42,887	1,581,582	2,257	210,252	77.39	93.50	14,624	277,856	1,859,438	90.99
20	36,390	1,617,972	1,819	212,071	79.17	94.31	12,805	256,100	1,874,072	91.70
25	159,042	1,777,014	6,322	218,393	86.96	97.12	6,483	162,075	1,939,089	94.89
30	83,150	1,860,164	2,755	221,148	91.02	98.34	3,728	111,840	1,972,004	96.50
35	49,630	1,909,794	1,418	222,566	93.45	98.97	2,310	80,850	1,990,644	97.41
40	30,240	1,940,034	756	223,322	94.93	99.31	1,554	62,160	2,002,194	97.97
45	20,205	1,960,239	449	223,771	95.92	99.51	1,105	49,725	2,009,964	98.35
50	15,800	1,976,039	316	224,087	96.69	99.65	789	39,450	2,015,489	98.62
55	10,065	1,986,104	183	224,270	97.19	99.73	606	33,330	2,019,434	98.82
60	7,380	1,993,484	123	224,393	97.55	99.79	483	28,980	2,022,464	98.97
65	6,500	1,999,984	100	224,493	97.87	99.83	383	24,895	2,024,879	99.08
70	3,780	2,003,764	54	224,547	98.05	99.85	329	23,030	2,026,794	99.18
75	3,075	2,006,839	41	224,588	98.20	99.87	288	21,600	2,028,439	99.26
80	3,280	2,010,119	41	224,629	98.36	99.89	247	19,760	2,029,879	99.33
85	3,060	2,013,179	36	224,665	98.51	99.91	211	17,935	2,031,114	99.39
90	3,240	2,016,419	36	224,701	98.67	99.92	175	15,750	2,032,169	99.44
95	1,615	2,018,034	17	224,718	98.75	99.93	158	15,010	2,033,044	99.48
100	1,400	2,019,434	14	224,732	98.82	99.94	144	14,400	2,033,834	99.52
105	1,575	2,021,009	15	224,747	98.89	99.94	129	13,545	2,034,554	99.56
110	1,210	2,022,219	11	224,758	98.95	99.95	118	12,980	2,035,199	99.59
115	1,265	2,023,484	11	224,769	99.02	99.95	107	12,305	2,035,789	99.62
120	720	2,024,204	6	224,775	99.05	99.96	101	12,120	2,036,324	99.64
125	1,000	2,025,204	8	224,783	99.10	99.96	93	11,625	2,036,829	99.67
130	1,170	2,026,374	9	224,792	99.16	99.96	84	10,920	2,037,294	99.69
135	941	2,027,315	7	224,799	99.20	99.97	77	10,395	2,037,710	99.71
140	1,120	2,028,435	8	224,807	99.26	99.97	69	9,660	2,038,095	99.73
145	290	2,028,725	2	224,809	99.27	99.97	67	9,715	2,038,440	99.75
150	300	2,029,025	2	224,811	99.29	99.97	65	9,750	2,038,775	99.76
155	465	2,029,490	3	224,814	99.31	99.97	62	9,610	2,039,100	99.78
160	160	2,029,650	1	224,815	99.32	99.97	61	9,760	2,039,410	99.79
165	165	2,029,815	1	224,816	99.33	99.97	60	9,900	2,039,715	99.81
170	0	2,029,815	0	224,816	99.33	99.97	60	10,200	2,040,015	99.82
175	350	2,030,165	2	224,818	99.34	99.97	58	10,150	2,040,315	99.84
180	180	2,030,345	1	224,819	99.35	99.97	57	10,260	2,040,605	99.85
185	1,110	2,031,455	6	224,825	99.41	99.98	51	9,435	2,040,890	99.87
190	190	2,031,645	1	224,826	99.41	99.98	50	9,500	2,041,145	99.88
195	390	2,032,035	2	224,828	99.43	99.98	48	9,360	2,041,395	99.89
200	2,593	2,034,628	13	224,841	99.56	99.98	35	7,000	2,041,628	99.90
999,999	8,973	2,043,601	35	224,876	100.00	100.00	0	0	2,043,601	100.00
TOTAL	2,043,601		224,876							
AVG. USE	9.1									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-6 CLASS =MULTI-FAMILY RESIDENTIAL GAS SERVICE AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	13,133	13,133	0.00	5.79	213,610	0	0	0.00
1	5,628	5,628	5,755	18,888	0.14	8.33	207,855	207,855	213,483	5.17
2	8,370	13,998	4,545	23,433	0.34	10.33	203,310	406,620	420,618	10.18
3	13,967	27,965	4,850	28,283	0.68	12.47	198,460	595,380	623,345	15.09
4	22,065	50,030	5,698	33,981	1.21	14.99	192,762	771,048	821,078	19.88
5	31,694	81,724	6,380	40,361	1.98	17.80	186,382	931,910	1,013,634	24.54
6	47,219	128,943	7,910	48,271	3.12	21.29	178,472	1,070,832	1,199,775	29.05
7	55,302	184,245	8,036	56,307	4.46	24.83	170,436	1,193,052	1,377,297	33.34
8	67,805	252,050	8,588	64,895	6.10	28.62	161,848	1,294,784	1,546,834	37.45
9	79,290	331,340	8,942	73,837	8.02	32.56	152,906	1,376,154	1,707,494	41.34
10	90,021	421,361	9,094	82,931	10.20	36.57	143,812	1,438,120	1,859,481	45.02
11	92,152	513,513	8,468	91,399	12.43	40.31	135,344	1,488,784	2,002,297	48.47
12	97,617	611,130	8,177	99,576	14.79	43.92	127,167	1,526,004	2,137,134	51.74
13	107,291	718,421	8,291	107,867	17.39	47.57	118,876	1,545,388	2,263,809	54.80
14	106,708	825,129	7,685	115,552	19.98	50.96	111,191	1,556,674	2,381,803	57.66
15	108,339	933,468	7,248	122,800	22.60	54.16	103,943	1,559,145	2,492,613	60.34
16	112,117	1,045,585	7,083	129,883	25.31	57.28	96,860	1,549,760	2,595,345	62.83
17	101,053	1,146,638	6,020	135,903	27.76	59.94	90,840	1,544,280	2,690,918	65.14
18	103,924	1,250,562	5,774	141,677	30.27	62.48	85,066	1,531,188	2,781,750	67.34
19	209,419	1,459,981	11,106	152,783	35.34	67.38	73,960	1,405,240	2,865,221	69.36
20	239,491	1,699,472	12,046	164,829	41.14	72.69	61,914	1,238,280	2,937,752	71.12
25	281,881	1,981,353	13,426	178,255	47.97	78.62	48,488	1,212,200	3,193,553	77.31
30	310,852	2,292,205	11,956	190,211	55.49	83.89	36,532	1,095,960	3,388,165	82.02
35	329,529	2,621,734	9,754	199,965	63.47	88.19	26,778	937,230	3,558,964	86.16
40	223,834	2,845,568	5,681	205,646	68.89	90.70	21,097	843,880	3,689,448	89.32
45	208,220	3,053,788	4,773	210,419	73.93	92.80	16,324	734,580	3,788,368	91.71
50	279,846	3,333,634	5,615	216,034	80.70	95.28	10,709	535,450	3,869,084	93.67
55	144,647	3,478,281	2,638	218,672	84.20	96.44	8,071	443,905	3,922,186	94.95
60	111,928	3,590,209	1,957	220,629	86.91	97.30	6,114	366,840	3,957,049	95.80
65	82,556	3,672,765	1,356	221,985	88.91	97.90	4,758	309,270	3,982,035	96.40
70	67,459	3,740,224	1,000	222,985	90.55	98.34	3,758	263,060	4,003,284	96.91
75	60,289	3,800,513	808	223,793	92.01	98.70	2,950	221,250	4,021,763	97.36
80	49,303	3,849,816	620	224,413	93.20	98.97	2,330	186,400	4,036,216	97.71
85	38,341	3,888,157	454	224,867	94.13	99.17	1,876	159,460	4,047,617	97.99
90	28,660	3,916,817	322	225,189	94.82	99.31	1,554	139,860	4,056,677	98.21
95	25,114	3,941,931	265	225,454	95.43	99.43	1,289	122,455	4,064,386	98.39
100	19,165	3,961,096	192	225,646	95.89	99.52	1,097	109,700	4,070,796	98.55
105	18,238	3,979,334	176	225,822	96.33	99.59	921	96,705	4,076,039	98.68
110	12,397	3,991,731	114	225,936	96.63	99.64	807	88,770	4,080,501	98.78
115	12,519	4,004,250	109	226,045	96.94	99.69	698	80,270	4,084,520	98.88
120	6,933	4,011,183	58	226,103	97.11	99.72	640	76,800	4,087,983	98.96
125	7,157	4,018,340	59	226,162	97.28	99.74	581	72,625	4,090,965	99.04
130	6,816	4,025,156	54	226,216	97.44	99.77	527	68,510	4,093,666	99.10
135	6,541	4,031,697	50	226,266	97.60	99.79	477	64,395	4,096,092	99.16
140	2,939	4,034,636	21	226,287	97.67	99.80	456	63,840	4,098,476	99.22
145	3,045	4,037,681	21	226,308	97.75	99.81	435	63,075	4,100,756	99.27
150	3,450	4,041,131	23	226,331	97.83	99.82	412	61,800	4,102,931	99.33
155	3,255	4,044,386	21	226,352	97.91	99.83	391	60,605	4,104,991	99.38
160	2,880	4,047,266	18	226,370	97.98	99.84	373	59,680	4,106,946	99.42
165	1,485	4,048,751	9	226,379	98.02	99.84	364	60,060	4,108,811	99.47
170	3,740	4,052,491	22	226,401	98.11	99.85	342	58,140	4,110,631	99.51
175	1,925	4,054,416	11	226,412	98.15	99.85	331	57,925	4,112,341	99.55
180	900	4,055,316	5	226,417	98.17	99.86	326	58,680	4,113,996	99.59
185	1,480	4,056,796	8	226,425	98.21	99.86	318	58,830	4,115,626	99.63
190	760	4,057,556	4	226,429	98.23	99.86	314	59,660	4,117,216	99.67
195	780	4,058,336	4	226,433	98.25	99.86	310	60,450	4,118,786	99.71
200	600	4,058,936	3	226,436	98.26	99.86	307	61,400	4,120,336	99.75
999,999	71,808	4,130,744	307	226,743	100.00	100.00	0	0	4,130,744	100.00
TOTAL	4,130,744		226,743							
AVG. USE	18.2									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-10 CLASS = LOW INCOME RESIDENTIAL AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	3,957	3,957	0.00	1.58	246,091	0	0	0.00
1	3,729	3,729	3,765	7,722	0.15	3.09	242,326	242,326	246,055	9.82
2	8,912	12,641	5,292	13,014	0.50	5.20	237,034	474,068	486,709	19.43
3	28,873	41,514	10,357	23,371	1.66	9.35	226,677	680,031	721,545	28.81
4	65,089	106,603	17,621	40,992	4.26	16.39	209,056	836,224	942,827	37.64
5	106,992	213,595	22,949	63,941	8.53	25.57	186,107	930,535	1,144,130	45.68
6	130,387	343,982	22,983	86,924	13.73	34.76	163,124	978,744	1,322,726	52.81
7	137,532	481,514	20,530	107,454	19.22	42.97	142,594	998,158	1,479,672	59.07
8	146,089	627,603	18,937	126,391	25.06	50.55	123,657	989,256	1,616,859	64.55
9	149,404	777,007	17,093	143,484	31.02	57.38	106,564	959,076	1,736,083	69.31
10	155,234	932,241	15,677	159,161	37.22	63.65	90,887	908,870	1,841,111	73.50
11	138,059	1,070,300	12,812	171,973	42.73	68.78	78,075	858,825	1,929,125	77.02
12	135,476	1,205,776	11,485	183,458	48.14	73.37	66,590	799,080	2,004,856	80.04
13	125,449	1,331,225	9,792	193,250	53.15	77.29	56,798	738,374	2,069,599	82.63
14	116,107	1,447,332	8,392	201,642	57.78	80.64	48,406	677,684	2,125,016	84.84
15	107,913	1,555,245	7,269	208,911	62.09	83.55	41,137	617,055	2,172,300	86.73
16	96,817	1,652,062	6,107	215,018	65.96	85.99	35,030	560,480	2,212,542	88.33
17	87,903	1,739,965	5,214	220,232	69.47	88.08	29,816	506,872	2,246,837	89.70
18	82,683	1,822,648	4,621	224,853	72.77	89.92	25,195	453,510	2,276,158	90.87
19	74,629	1,897,277	3,928	228,781	75.75	91.49	21,267	404,073	2,301,350	91.88
20	60,657	1,957,934	3,046	231,827	78.17	92.71	18,221	364,420	2,322,354	92.72
25	209,850	2,167,784	8,830	240,657	86.55	96.24	9,391	234,775	2,402,559	95.92
30	153,641	2,321,425	5,242	245,899	92.68	98.34	4,149	124,470	2,445,895	97.65
35	57,833	2,379,258	1,703	247,602	94.99	99.02	2,446	85,610	2,464,868	98.41
40	31,418	2,410,676	805	248,407	96.24	99.34	1,641	65,640	2,476,316	98.86
45	26,733	2,437,409	652	249,059	97.31	99.60	989	44,505	2,481,914	99.09
50	12,596	2,450,005	256	249,315	97.81	99.71	733	36,650	2,486,655	99.28
55	10,705	2,460,710	210	249,525	98.24	99.79	523	28,765	2,489,475	99.39
60	8,473	2,469,183	151	249,676	98.58	99.85	372	22,320	2,491,503	99.47
65	7,907	2,477,090	130	249,806	98.89	99.90	242	15,730	2,492,820	99.52
70	3,450	2,480,540	52	249,858	99.03	99.92	190	13,300	2,493,840	99.56
75	2,382	2,482,922	34	249,892	99.13	99.94	156	11,700	2,494,622	99.59
80	1,377	2,484,299	18	249,910	99.18	99.94	138	11,040	2,495,339	99.62
85	834	2,485,133	10	249,920	99.21	99.95	128	10,880	2,496,013	99.65
90	1,197	2,486,330	14	249,934	99.26	99.95	114	10,260	2,496,590	99.67
95	843	2,487,173	9	249,943	99.30	99.96	105	9,975	2,497,148	99.69
100	887	2,488,060	9	249,952	99.33	99.96	96	9,600	2,497,660	99.71
105	731	2,488,791	7	249,959	99.36	99.96	89	9,345	2,498,136	99.73
110	1,082	2,489,873	10	249,969	99.40	99.97	79	8,690	2,498,563	99.75
115	0	2,489,873	0	249,969	99.40	99.97	79	9,085	2,498,958	99.77
120	1,162	2,491,035	10	249,979	99.45	99.97	69	8,280	2,499,315	99.78
125	613	2,491,648	5	249,984	99.47	99.97	64	8,000	2,499,648	99.79
130	0	2,491,648	0	249,984	99.47	99.97	64	8,320	2,499,968	99.81
135	525	2,492,173	4	249,988	99.50	99.98	60	8,100	2,500,273	99.82
140	0	2,492,173	0	249,988	99.50	99.98	60	8,400	2,500,573	99.83
145	142	2,492,315	1	249,989	99.50	99.98	59	8,555	2,500,870	99.84
150	298	2,492,613	2	249,991	99.51	99.98	57	8,550	2,501,163	99.85
155	920	2,493,533	6	249,997	99.55	99.98	51	7,905	2,501,438	99.87
160	479	2,494,012	3	250,000	99.57	99.98	48	7,680	2,501,692	99.88
165	494	2,494,506	3	250,003	99.59	99.98	45	7,425	2,501,931	99.89
170	504	2,495,010	3	250,006	99.61	99.98	42	7,140	2,502,150	99.89
175	0	2,495,010	0	250,006	99.61	99.98	42	7,350	2,502,360	99.90
180	1,232	2,496,242	7	250,013	99.66	99.99	35	6,300	2,502,542	99.91
185	0	2,496,242	0	250,013	99.66	99.99	35	6,475	2,502,717	99.92
190	0	2,496,242	0	250,013	99.66	99.99	35	6,650	2,502,892	99.92
195	0	2,496,242	0	250,013	99.66	99.99	35	6,825	2,503,067	99.93
200	198	2,496,440	1	250,014	99.67	99.99	34	6,800	2,503,240	99.94
999,999	8,362	2,504,802	34	250,048	100.00	100.00	0	0	2,504,802	100.00
TOTAL	2,504,802		250,048							
AVG. USE	10.0									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-10 CLASS = LOW INCOME RESIDENTIAL AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	12,389	12,389	0.00	4.86	242,692	0	0	0.00
1	997	997	1,098	13,487	0.01	5.29	241,594	241,594	242,591	2.83
2	2,572	3,569	1,452	14,939	0.04	5.86	240,142	480,284	483,853	5.65
3	5,115	8,684	1,911	16,850	0.10	6.61	238,231	714,693	723,377	8.45
4	10,880	19,564	3,008	19,858	0.23	7.78	235,223	940,892	960,456	11.22
5	20,308	39,872	4,212	24,070	0.47	9.44	231,011	1,155,055	1,194,927	13.95
6	22,387	62,259	3,978	28,048	0.73	11.00	227,033	1,362,198	1,424,457	16.63
7	30,337	92,596	4,625	32,673	1.08	12.81	222,408	1,556,856	1,649,452	19.26
8	43,827	136,423	5,759	38,432	1.59	15.07	216,649	1,733,192	1,869,615	21.83
9	52,263	188,686	5,967	44,399	2.20	17.41	210,682	1,896,138	2,084,824	24.35
10	60,436	249,122	6,224	50,623	2.91	19.85	204,458	2,044,580	2,293,702	26.79
11	66,487	315,609	6,285	56,908	3.69	22.31	198,173	2,179,903	2,495,512	29.14
12	72,290	387,899	6,288	63,196	4.53	24.77	191,885	2,302,620	2,690,519	31.42
13	79,156	467,055	6,188	69,384	5.45	27.20	185,697	2,414,061	2,881,116	33.65
14	83,977	551,032	6,234	75,618	6.43	29.64	179,463	2,512,482	3,063,514	35.78
15	91,797	642,829	6,369	81,987	7.51	32.14	173,094	2,596,410	3,239,239	37.83
16	97,691	740,520	6,301	88,288	8.65	34.61	166,793	2,668,688	3,409,208	39.81
17	98,814	839,334	6,016	94,304	9.80	36.97	160,777	2,733,209	3,572,543	41.72
18	96,800	936,134	5,526	99,830	10.93	39.14	155,251	2,794,518	3,730,652	43.57
19	192,460	1,128,594	10,386	110,216	13.18	43.21	144,865	2,752,435	3,881,029	45.32
20	256,119	1,384,713	12,806	123,022	16.17	48.23	132,059	2,641,180	4,025,893	47.01
25	301,950	1,686,663	12,629	135,651	19.70	53.18	119,430	2,985,750	4,672,413	54.56
30	323,968	2,010,631	11,474	147,125	23.48	57.68	107,956	3,238,680	5,249,311	61.30
35	437,171	2,447,802	13,329	160,454	28.59	62.90	94,627	3,311,945	5,759,747	67.26
40	486,906	2,934,708	12,927	173,381	34.27	67.97	81,700	3,268,000	6,202,708	72.44
45	560,916	3,495,624	13,392	186,773	40.82	73.22	68,308	3,073,860	6,569,484	76.72
50	490,053	3,985,677	10,546	197,319	46.54	77.36	57,762	2,888,100	6,873,777	80.27
55	456,863	4,442,540	8,787	206,106	51.88	80.80	48,975	2,693,625	7,136,165	83.34
60	450,441	4,892,981	7,904	214,010	57.14	83.90	41,071	2,464,260	7,357,241	85.92
65	452,481	5,345,462	7,286	221,296	62.42	86.76	33,785	2,196,025	7,541,487	88.07
70	350,536	5,695,998	5,222	226,518	66.52	88.80	28,563	1,999,410	7,695,408	89.87
75	313,203	6,009,201	4,288	230,806	70.18	90.48	24,275	1,820,625	7,829,826	91.44
80	302,530	6,311,731	3,890	234,696	73.71	92.01	20,385	1,630,800	7,942,531	92.75
85	277,903	6,589,634	3,324	238,020	76.95	93.31	17,061	1,450,185	8,039,819	93.89
90	243,170	6,832,804	2,752	240,772	79.79	94.39	14,309	1,287,810	8,120,614	94.83
95	218,752	7,051,556	2,376	243,148	82.35	95.32	11,933	1,133,635	8,185,191	95.59
100	199,024	7,250,580	2,084	245,232	84.67	96.14	9,849	984,900	8,235,480	96.17
105	179,582	7,430,162	1,741	246,973	86.77	96.82	8,108	851,340	8,281,502	96.71
110	147,861	7,578,023	1,381	248,354	88.50	97.36	6,727	739,970	8,317,993	97.14
115	108,943	7,686,966	951	249,305	89.77	97.74	5,776	664,240	8,351,206	97.53
120	89,575	7,776,541	756	250,061	90.81	98.03	5,020	602,400	8,378,941	97.85
125	88,335	7,864,876	717	250,778	91.85	98.31	4,303	537,875	8,402,751	98.13
130	83,399	7,948,275	652	251,430	92.82	98.57	3,651	474,630	8,422,905	98.36
135	73,410	8,021,685	553	251,983	93.68	98.79	3,098	418,230	8,439,915	98.56
140	58,807	8,080,492	427	252,410	94.36	98.95	2,671	373,940	8,454,432	98.73
145	49,390	8,129,882	347	252,757	94.94	99.09	2,324	336,980	8,466,862	98.88
150	40,386	8,170,268	275	253,032	95.41	99.20	2,049	307,350	8,477,618	99.00
155	34,021	8,204,289	224	253,256	95.81	99.28	1,825	282,875	8,487,164	99.11
160	36,688	8,240,977	231	253,487	96.24	99.38	1,594	255,040	8,496,017	99.22
165	32,581	8,273,558	198	253,685	96.62	99.45	1,396	230,340	8,503,898	99.31
170	23,500	8,297,058	140	253,825	96.89	99.51	1,256	213,520	8,510,578	99.39
175	18,247	8,315,305	106	253,931	97.11	99.55	1,150	201,250	8,516,555	99.46
180	16,077	8,331,382	91	254,022	97.29	99.58	1,059	190,620	8,522,002	99.52
185	11,174	8,342,556	61	254,083	97.42	99.61	998	184,630	8,527,186	99.58
190	13,801	8,356,357	74	254,157	97.59	99.64	924	175,560	8,531,917	99.64
195	12,438	8,368,795	64	254,221	97.73	99.66	860	167,700	8,536,495	99.69
200	26,221	8,395,016	132	254,353	98.04	99.71	728	145,600	8,540,616	99.74
999,999	168,100	8,563,116	728	255,081	100.00	100.00	0	0	8,563,116	100.00
TOTAL	8,563,116		255,081							
AVG. USE	33.6									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-11 CLASS = MULTI-FAMILY LOW INCOME RESIDENTIAL AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	543	543	0.00	2.85	18,514	0	0	0.00
1	275	275	276	819	0.15	4.30	18,238	18,238	18,513	10.03
2	547	822	546	1,365	0.45	7.16	17,692	35,384	36,206	19.61
3	1,212	2,034	593	1,958	1.10	10.27	17,099	51,297	53,331	28.89
4	3,303	5,337	1,078	3,036	2.89	15.93	16,021	64,084	69,421	37.61
5	6,293	11,630	1,541	4,577	6.30	24.02	14,480	72,400	84,030	45.52
6	8,547	20,177	1,674	6,251	10.93	32.80	12,806	76,836	97,013	52.56
7	9,869	30,046	1,611	7,862	16.28	41.26	11,195	78,365	108,411	58.73
8	11,045	41,091	1,546	9,408	22.26	49.37	9,649	77,192	118,283	64.08
9	10,555	51,646	1,292	10,700	27.98	56.15	8,357	75,213	126,859	68.72
10	11,022	62,668	1,199	11,899	33.95	62.44	7,158	71,580	134,248	72.73
11	10,804	73,472	1,058	12,957	39.80	67.99	6,100	67,100	140,572	76.15
12	9,726	83,198	866	13,823	45.07	72.54	5,234	62,808	146,006	79.10
13	9,821	93,019	801	14,624	50.39	76.74	4,433	57,629	150,648	81.61
14	9,333	102,352	703	15,327	55.45	80.43	3,730	52,220	154,572	83.74
15	7,530	109,882	527	15,854	59.53	83.19	3,203	48,045	157,927	85.56
16	7,237	117,119	472	16,326	63.45	85.67	2,731	43,696	160,815	87.12
17	7,018	124,137	429	16,755	67.25	87.92	2,302	39,134	163,271	88.45
18	5,533	129,670	318	17,073	70.25	89.59	1,984	35,712	165,382	89.59
19	5,360	135,030	291	17,364	73.15	91.12	1,693	32,167	167,197	90.58
20	4,362	139,392	223	17,587	75.51	92.29	1,470	29,400	168,792	91.44
25	3,763	143,155	184	17,771	77.55	93.25	1,286	32,150	175,305	94.97
30	14,977	158,132	586	18,357	85.67	96.33	700	21,000	179,132	97.04
35	10,977	169,109	358	18,715	91.61	98.21	342	11,970	181,079	98.10
40	5,090	174,199	142	18,857	94.37	98.95	200	8,000	182,199	98.70
45	2,678	176,877	65	18,922	95.82	99.29	135	6,075	182,952	99.11
50	2,545	179,422	55	18,977	97.20	99.58	80	4,000	183,422	99.37
55	1,599	181,021	31	19,008	98.07	99.74	49	2,695	183,716	99.53
60	1,587	182,608	28	19,036	98.93	99.89	21	1,260	183,868	99.61
65	0	182,608	0	19,036	98.93	99.89	21	1,365	183,973	99.67
70	0	182,608	0	19,036	98.93	99.89	21	1,470	184,078	99.72
75	225	182,833	3	19,039	99.05	99.91	18	1,350	184,183	99.78
80	240	183,073	3	19,042	99.18	99.92	15	1,200	184,273	99.83
85	0	183,073	0	19,042	99.18	99.92	15	1,275	184,348	99.87
90	671	183,744	7	19,049	99.54	99.96	8	720	184,464	99.93
95	184	183,928	2	19,051	99.64	99.97	6	570	184,498	99.95
100	98	184,026	1	19,052	99.69	99.97	5	500	184,526	99.97
105	103	184,129	1	19,053	99.75	99.98	4	420	184,549	99.98
110	213	184,342	2	19,055	99.87	99.99	2	220	184,562	99.98
115	0	184,342	0	19,055	99.87	99.99	2	230	184,572	99.99
120	0	184,342	0	19,055	99.87	99.99	2	240	184,582	100.00
125	248	184,590	2	19,057	100.00	100.00	0	0	184,590	100.00
130	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
135	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
140	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
145	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
150	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
155	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
160	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
165	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
170	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
175	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
180	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
185	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
190	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
195	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
200	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
999,999	0	184,590	0	19,057	100.00	100.00	0	0	184,590	100.00
TOTAL	184,590		19,057							
AVG. USE	9.7									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-11 CLASS = MULTI-FAMILY LOW INCOME RESIDENTIAL AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	1,059	1,059	0.00	5.44	18,418	0	0	0.00
1	312	312	332	1,391	0.08	7.14	18,086	18,086	18,398	4.66
2	566	878	301	1,692	0.22	8.69	17,785	35,570	36,448	9.22
3	848	1,726	292	1,984	0.44	10.19	17,493	52,479	54,205	13.72
4	1,443	3,169	373	2,357	0.80	12.10	17,120	68,480	71,649	18.13
5	2,687	5,856	561	2,918	1.48	14.98	16,559	82,795	88,651	22.43
6	3,216	9,072	564	3,482	2.30	17.88	15,995	95,970	105,042	26.58
7	4,318	13,390	650	4,132	3.39	21.21	15,345	107,415	120,805	30.57
8	4,735	18,125	622	4,754	4.59	24.41	14,723	117,784	135,909	34.39
9	5,973	24,098	692	5,446	6.10	27.96	14,031	126,279	150,377	38.05
10	6,656	30,754	694	6,140	7.78	31.52	13,337	133,370	164,124	41.53
11	7,062	37,816	678	6,818	9.57	35.01	12,659	139,249	177,065	44.80
12	8,379	46,195	724	7,542	11.69	38.72	11,935	143,220	189,415	47.93
13	9,140	55,335	728	8,270	14.00	42.46	11,207	145,691	201,026	50.87
14	9,277	64,612	684	8,954	16.35	45.97	10,523	147,322	211,934	53.63
15	9,530	74,142	664	9,618	18.76	49.38	9,859	147,885	222,027	56.18
16	10,267	84,409	668	10,286	21.36	52.81	9,191	147,056	231,465	58.57
17	10,045	94,454	613	10,899	23.90	55.96	8,578	145,826	240,280	60.80
18	10,310	104,764	594	11,493	26.51	59.01	7,984	143,712	248,476	62.87
19	10,425	115,189	569	12,062	29.15	61.93	7,415	140,885	256,074	64.79
20	11,011	126,200	568	12,630	31.93	64.85	6,847	136,940	263,140	66.58
25	33,324	159,524	1,475	14,105	40.36	72.42	5,372	134,300	293,824	74.35
30	37,975	197,499	1,270	15,375	49.97	78.94	4,102	123,060	320,559	81.11
35	29,209	226,708	874	16,249	57.36	83.43	3,228	112,980	339,688	85.95
40	31,957	258,665	888	17,137	65.45	87.99	2,340	93,600	352,265	89.13
45	23,506	282,171	545	17,682	71.40	90.78	1,795	80,775	362,946	91.84
50	22,403	304,574	475	18,157	77.07	93.22	1,320	66,000	370,574	93.77
55	16,901	321,475	322	18,479	81.34	94.88	998	54,890	376,365	95.23
60	13,665	335,140	237	18,716	84.80	96.09	761	45,660	380,800	96.35
65	11,190	346,330	184	18,900	87.63	97.04	577	37,505	383,835	97.12
70	7,266	353,596	108	19,008	89.47	97.59	469	32,830	386,426	97.78
75	7,807	361,403	108	19,116	91.44	98.15	361	27,075	388,478	98.30
80	5,402	366,805	69	19,185	92.81	98.50	292	23,360	390,165	98.72
85	6,593	373,398	81	19,266	94.48	98.92	211	17,935	391,333	99.02
90	5,687	379,085	65	19,331	95.92	99.25	146	13,140	392,225	99.24
95	4,386	383,471	48	19,379	97.03	99.50	98	9,310	392,781	99.38
100	2,314	385,785	24	19,403	97.61	99.62	74	7,400	393,185	99.49
105	2,436	388,221	24	19,427	98.23	99.74	50	5,250	393,471	99.56
110	853	389,074	8	19,435	98.45	99.78	42	4,620	393,694	99.62
115	570	389,644	5	19,440	98.59	99.81	37	4,255	393,899	99.67
120	930	390,574	8	19,448	98.83	99.85	29	3,480	394,054	99.71
125	970	391,544	8	19,456	99.07	99.89	21	2,625	394,169	99.74
130	389	391,933	3	19,459	99.17	99.91	18	2,340	394,273	99.76
135	269	392,202	2	19,461	99.24	99.92	16	2,160	394,362	99.78
140	279	392,481	2	19,463	99.31	99.93	14	1,960	394,441	99.80
145	0	392,481	0	19,463	99.31	99.93	14	2,030	394,511	99.82
150	298	392,779	2	19,465	99.38	99.94	12	1,800	394,579	99.84
155	458	393,237	3	19,468	99.50	99.95	9	1,395	394,632	99.85
160	314	393,551	2	19,470	99.58	99.96	7	1,120	394,671	99.86
165	162	393,713	1	19,471	99.62	99.97	6	990	394,703	99.87
170	0	393,713	0	19,471	99.62	99.97	6	1,020	394,733	99.88
175	174	393,887	1	19,472	99.66	99.97	5	875	394,762	99.89
180	0	393,887	0	19,472	99.66	99.97	5	900	394,787	99.89
185	183	394,070	1	19,473	99.71	99.98	4	740	394,810	99.90
190	0	394,070	0	19,473	99.71	99.98	4	760	394,830	99.90
195	0	394,070	0	19,473	99.71	99.98	4	780	394,850	99.91
200	198	394,268	1	19,474	99.76	99.98	3	600	394,868	99.91
999,999	946	395,214	3	19,477	100.00	100.00	0	0	395,214	100.00
TOTAL	395,214		19,477							
AVG. USE	20.3									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-15 CLASS = SPECIAL RESIDENTIAL AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	5	5	0.00	1.67	295	0	0	0.00
1	11	11	12	17	0.06	5.67	283	283	294	1.49
2	6	17	5	22	0.09	7.33	278	556	573	2.91
3	5	22	2	24	0.11	8.00	276	828	850	4.31
4	44	66	13	37	0.33	12.33	263	1,052	1,118	5.67
5	63	129	14	51	0.65	17.00	249	1,245	1,374	6.97
6	109	238	19	70	1.21	23.33	230	1,380	1,618	8.20
7	121	359	18	88	1.82	29.33	212	1,484	1,843	9.34
8	141	500	18	106	2.53	35.33	194	1,552	2,052	10.40
9	154	654	18	124	3.32	41.33	176	1,584	2,238	11.35
10	118	772	12	136	3.91	45.33	164	1,640	2,412	12.23
11	88	860	8	144	4.36	48.00	156	1,716	2,576	13.06
12	116	976	10	154	4.95	51.33	146	1,752	2,728	13.83
13	137	1,113	11	165	5.64	55.00	135	1,755	2,868	14.54
14	80	1,193	6	171	6.05	57.00	129	1,806	2,999	15.20
15	120	1,313	8	179	6.66	59.67	121	1,815	3,128	15.86
16	144	1,457	9	188	7.39	62.67	112	1,792	3,249	16.47
17	197	1,654	12	200	8.39	66.67	100	1,700	3,354	17.00
18	89	1,743	5	205	8.84	68.33	95	1,710	3,453	17.51
19	110	1,853	6	211	9.39	70.33	89	1,691	3,544	17.97
20	100	1,953	5	216	9.90	72.00	84	1,680	3,633	18.42
25	70	2,023	3	219	10.26	73.00	81	2,025	4,048	20.52
30	355	2,378	13	232	12.06	77.33	68	2,040	4,418	22.40
35	347	2,725	11	243	13.82	81.00	57	1,995	4,720	23.93
40	348	3,073	9	252	15.58	84.00	48	1,920	4,993	25.31
45	219	3,292	5	257	16.69	85.67	43	1,935	5,227	26.50
50	148	3,440	3	260	17.44	86.67	40	2,000	5,440	27.58
55	164	3,604	3	263	18.27	87.67	37	2,035	5,639	28.59
60	420	4,024	7	270	20.40	90.00	30	1,800	5,824	29.53
65	195	4,219	3	273	21.39	91.00	27	1,755	5,974	30.29
70	210	4,429	3	276	22.45	92.00	24	1,680	6,109	30.97
75	0	4,429	0	276	22.45	92.00	24	1,800	6,229	31.58
80	319	4,748	4	280	24.07	93.33	20	1,600	6,348	32.18
85		4,748	0	280	24.07	93.33	20	1,700	6,448	32.69
90	180	4,928	2	282	24.98	94.00	18	1,620	6,548	33.20
95	0	4,928	0	282	24.98	94.00	18	1,710	6,638	33.65
100	85	5,013	0	282	25.42	94.00	18	1,800	6,813	34.54
105	0	5,013	0	282	25.42	94.00	18	1,890	6,903	35.00
110	0	5,013	0	282	25.42	94.00	18	1,980	6,993	35.45
115	240	5,253	2	284	26.63	94.67	16	1,840	7,093	35.96
120	102	5,355	0	284	27.15	94.67	16	1,920	7,275	36.88
125	243	5,598	2	286	28.38	95.33	14	1,750	7,348	37.25
130	0	5,598	0	286	28.38	95.33	14	1,820	7,418	37.61
135	0	5,598	0	286	28.38	95.33	14	1,890	7,488	37.96
140	0	5,598	0	286	28.38	95.33	14	1,960	7,558	38.32
145	0	5,598	0	286	28.38	95.33	14	2,030	7,628	38.67
150	0	5,598	0	286	28.38	95.33	14	2,100	7,698	39.03
155	0	5,598	0	286	28.38	95.33	14	2,170	7,768	39.38
160	0	5,598	0	286	28.38	95.33	14	2,240	7,838	39.74
165	0	5,598	0	286	28.38	95.33	14	2,310	7,908	40.09
170	0	5,598	0	286	28.38	95.33	14	2,380	7,978	40.45
175	0	5,598	0	286	28.38	95.33	14	2,450	8,048	40.80
180	0	5,598	0	286	28.38	95.33	14	2,520	8,118	41.16
185	0	5,598	0	286	28.38	95.33	14	2,590	8,188	41.51
190	0	5,598	0	286	28.38	95.33	14	2,660	8,258	41.87
195	762	6,360	4	290	32.24	96.67	10	1,950	8,310	42.13
200	0	6,360	0	290	32.24	96.67	10	2,000	8,360	42.38
999,999	13,364	19,724	10	300	100.00	100.00	0	0	19,724	100.00

TOTAL	19,724	300
AVG. USE	65.7	

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-15 CLASS = SPECIAL RESIDENTIAL AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
0	0	0	5	5	0.00	1.67	295	0	0	0.00
1	6	5	7	12	0.01	4.00	288	288	293	0.82
2	7	0	4	16	0.00	5.33	284	568	568	1.58
3	5	8	2	18	0.02	6.00	282	846	854	2.38
4	11	11	3	21	0.03	7.00	279	1,116	1,127	3.14
5	9	19	2	23	0.05	7.67	277	1,385	1,404	3.92
6	11	51	2	25	0.14	8.33	275	1,650	1,701	4.74
7	20	38	3	28	0.11	9.33	272	1,904	1,942	5.42
8	55	44	7	35	0.12	11.67	265	2,120	2,164	6.04
9	35	42	4	39	0.12	13.00	261	2,349	2,391	6.67
10	59	38	6	45	0.11	15.00	255	2,550	2,588	7.22
11	43	53	4	49	0.15	16.33	251	2,761	2,814	7.85
12	59	57	5	54	0.16	18.00	246	2,952	3,009	8.39
13	38	75	3	57	0.21	19.00	243	3,159	3,234	9.02
14	41	54	3	60	0.15	20.00	240	3,360	3,414	9.52
15	44	42	3	63	0.12	21.00	237	3,555	3,597	10.03
16	63	77	4	67	0.21	22.33	233	3,728	3,805	10.61
17	50	146	3	70	0.41	23.33	230	3,910	4,056	11.31
18	53	104	3	73	0.29	24.33	227	4,086	4,190	11.69
19	56	18	3	76	0.05	25.33	224	4,256	4,274	11.92
20	139	116	7	83	0.32	27.67	217	4,340	4,456	12.43
25	124	497	5	88	1.39	29.33	212	5,300	5,797	16.17
30	119	321	4	92	0.90	30.67	208	6,240	6,561	18.30
35	594	481	17	109	1.34	36.33	191	6,685	7,166	19.99
40	359	777	9	118	2.17	39.33	182	7,280	8,057	22.47
45	494	406	11	129	1.13	43.00	171	7,695	8,101	22.59
50	799	502	16	145	1.40	48.33	155	7,750	8,252	23.01
55	384	1,063	7	152	2.96	50.67	148	8,140	9,203	25.67
60	479	1,118	8	160	3.12	53.33	140	8,400	9,518	26.55
65	1,039	367	16	176	1.02	58.67	124	8,060	8,427	23.50
70	1,049	722	15	191	2.01	63.67	109	7,630	8,352	23.29
75	299	700	4	195	1.95	65.00	105	7,875	8,575	23.92
80	639	521	8	203	1.45	67.67	97	7,760	8,281	23.10
85	594	632	7	210	1.76	70.00	90	7,650	8,282	23.10
90	449	682	5	215	1.90	71.67	85	7,650	8,332	23.24
95	569	368	6	221	1.03	73.67	79	7,505	7,873	21.96
100	599	192	6	227	0.54	75.67	73	7,300	7,492	20.89
105	314	1,299	3	230	3.62	76.67	70	7,350	8,649	24.12
110	109	209	1	231	0.58	77.00	69	7,590	7,799	21.75
115	1,149	1,090	10	241	3.04	80.33	59	6,785	7,875	21.96
120	119	342	1	242	0.95	80.67	58	6,960	7,302	20.36
125	874	238	7	249	0.66	83.00	51	6,375	6,613	18.44
130	259	246	2	251	0.69	83.67	49	6,370	6,616	18.45
135	134	256	1	252	0.71	84.00	48	6,480	6,736	18.79
140	139	540	1	253	1.51	84.33	47	6,580	7,120	19.86
145	144	419	1	254	1.17	84.67	46	6,670	7,089	19.77
150	449	142	3	257	0.40	85.67	43	6,450	6,592	18.38
155	309	1,186	2	259	3.31	86.33	41	6,355	7,541	21.03
160	959	615	6	265	1.72	88.33	35	5,600	6,215	17.33
165	494	159	3	268	0.44	89.33	32	5,280	5,439	15.17
170	0	652	0	268	1.82	89.33	32	5,440	6,092	16.99
175	524	335	3	271	0.93	90.33	29	5,075	5,410	15.09
180	180	0	1	272	0.00	90.67	28	5,040	5,040	14.06
185	0	539	0	272	1.50	90.67	28	5,180	5,719	15.95
190	569	184	3	275	0.51	91.67	25	4,750	4,934	13.76
195	0	0	0	275	0.00	91.67	25	4,875	4,875	13.60
200	1,600	0	8	283	0.00	94.33	17	3,400	3,400	9.48
999,999	18,138	17,030	17	300	47.50	100.00	0	0	17,030	47.50
TOTAL	35,856		300							
AVG. USE	119.5									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-15 CLASS = MASTER METERED MOBILE HOME PARKS AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	3,771	3771	184	184	1.35	31.62	398	39,800	43,571	15.63
200	16,445	20,216	112	296	7.25	50.86	286	57,200	77,416	27.77
300	17,760	37,976	68	364	13.62	62.54	218	65,400	103,376	37.08
400	17,666	55,642	48	412	19.96	70.79	170	68,000	123,642	44.35
500	13,095	68,737	27	439	24.66	75.43	143	71,500	140,237	50.31
600	8,039	76,776	16	455	27.54	78.18	127	76,200	152,976	54.88
700	8,244	85,020	12	467	30.50	80.24	115	80,500	165,520	59.38
800	13,600	98,620	17	484	35.38	83.16	98	78,400	177,020	63.50
900	8,373	106,993	10	494	38.38	84.88	88	79,200	186,193	66.79
1,000	2,826	109,819	3	497	39.39	85.40	85	85,000	194,819	69.89
1,100	10,335	120,154	10	507	43.10	87.11	75	82,500	202,654	72.70
1,200	7,944	128,098	7	514	45.95	88.32	68	81,600	209,698	75.22
1,300	7,487	135,585	6	520	48.64	89.35	62	80,600	216,185	77.55
1,400	9,255	144,840	7	527	51.96	90.55	55	77,000	221,840	79.58
1,500	8,609	153,449	6	533	55.05	91.58	49	73,500	226,949	81.41
1,750	15,546	168,995	9	542	60.62	93.13	40	70,000	238,995	85.73
2,000	23,813	192,808	12	554	69.16	95.19	28	56,000	248,808	89.25
2,250	18,000	210,808	8	562	75.62	96.56	20	45,000	255,808	91.76
2,500	16,398	227,206	7	569	81.50	97.77	13	32,500	259,706	93.16
3,000	18,469	245,675	7	576	88.13	98.97	6	18,000	263,675	94.59
3,500	6,219	251,894	2	578	90.36	99.31	4	14,000	265,894	95.38
4,000	8,000	259,894	2	580	93.23	99.66	2	8,000	267,894	96.10
4,500	0	259,894	0	580	93.23	99.66	2	9,000	268,894	96.46
5,000	4,753	264,647	0	580	94.93	99.66	2	10,000	274,647	98.52
99,999	14,122	278,769	2	582	100.00	100.00	0	0	278,769	100.00
TOTAL	278,769		582							
AVG. USE	479.0									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-20 CLASS = MASTER METERED MOBILE HOME PARKS AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	5,513	5513	80	80	0.56	13.75	502	50,200	55,713	5.70
200	14,484	19,997	98	178	2.05	30.58	404	80,800	100,797	10.32
300	10,167	30,164	41	219	3.09	37.63	363	108,900	139,064	14.23
400	12,842	43,006	39	258	4.40	44.33	324	129,600	172,606	17.67
500	13,934	56,940	32	290	5.83	49.83	292	146,000	202,940	20.77
600	16,793	73,733	31	321	7.55	55.15	261	156,600	230,333	23.57
700	10,620	84,353	17	338	8.63	58.08	244	170,800	255,153	26.11
800	12,671	97,024	17	355	9.93	61.00	227	181,600	278,624	28.52
900	11,754	108,778	14	369	11.13	63.40	213	191,700	300,478	30.75
1,000	11,872	120,650	13	382	12.35	65.64	200	200,000	320,650	32.82
1,100	16,500	137,150	15	397	14.04	68.21	185	203,500	340,650	34.86
1,200	15,600	152,750	13	410	15.63	70.45	172	206,400	359,150	36.76
1,300	6,500	159,250	5	415	16.30	71.31	167	217,100	376,350	38.52
1,400	17,958	177,208	13	428	18.14	73.54	154	215,600	392,808	40.20
1,500	20,261	197,469	14	442	20.21	75.95	140	210,000	407,469	41.70
1,750	17,110	214,579	11	453	21.96	77.84	129	225,750	440,329	45.07
2,000	18,276	232,855	10	463	23.83	79.55	119	238,000	470,855	48.19
2,250	26,348	259,203	13	476	26.53	81.79	106	238,500	497,703	50.94
2,500	27,876	287,079	12	488	29.38	83.85	94	235,000	522,079	53.43
3,000	17,473	304,552	6	494	31.17	84.88	88	264,000	568,552	58.19
3,500	30,994	335,546	10	504	34.34	86.60	78	273,000	608,546	62.28
4,000	43,224	378,770	12	516	38.77	88.66	66	264,000	642,770	65.78
4,500	21,906	400,676	5	521	41.01	89.52	61	274,500	675,176	69.10
5,000	0	400,676	0	521	41.01	89.52	61	305,000	705,676	72.22
99,999	576,403	977,079	61	582	100.00	100.00	0	0	977,079	100.00
TOTAL	977,079		582							
AVG. USE	1678.8									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 SMALL CLASS = GENERAL GAS SERVICE SMALL AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
5	82,792	82792	66,994	66,994	9.79	65.77	34,866	174,330	257,122	30.41
10	94,106	176,898	9,696	76,690	20.92	75.29	25,170	251,700	428,598	50.68
15	93,733	270,631	6,513	83,203	32.00	81.68	18,657	279,855	550,486	65.10
20	92,108	362,739	4,664	87,867	42.89	86.26	13,993	279,860	642,599	75.99
25	72,818	435,557	2,961	90,828	51.51	89.17	11,032	275,800	711,357	84.12
30	94,007	529,564	3,687	94,515	62.62	92.79	7,345	220,350	749,914	88.68
35	51,698	581,262	1,695	96,210	68.74	94.45	5,650	197,750	779,012	92.12
40	73,190	654,452	2,062	98,272	77.39	96.48	3,588	143,520	797,972	94.36
45	57,389	711,841	1,417	99,689	84.18	97.87	2,171	97,695	809,536	95.73
50	35,757	747,598	786	100,475	88.40	98.64	1,385	69,250	816,848	96.59
55	18,539	766,137	367	100,842	90.60	99.00	1,018	55,990	822,127	97.22
60	22,656	788,793	408	101,250	93.28	99.40	610	36,600	825,393	97.60
65	11,980	800,773	198	101,448	94.69	99.60	412	26,780	827,553	97.86
70	7,863	808,636	120	101,568	95.62	99.71	292	20,440	829,076	98.04
75	1,125	809,761	15	101,583	95.76	99.73	277	20,775	830,536	98.21
80	5,440	815,201	68	101,651	96.40	99.79	209	16,720	831,921	98.38
85	2,125	817,326	25	101,676	96.65	99.82	184	15,640	832,966	98.50
90	1,980	819,306	22	101,698	96.88	99.84	162	14,580	833,886	98.61
95	1,045	820,351	11	101,709	97.01	99.85	151	14,345	834,696	98.70
100	2,300	822,651	23	101,732	97.28	99.87	128	12,800	835,451	98.79
125	6,125	828,776	49	101,781	98.00	99.92	79	9,875	838,651	99.17
150	4,500	833,276	30	101,811	98.54	99.95	49	7,350	840,626	99.41
99,999	12,377	845,653	49	101,860	100.00	100.00	0	0	845,653	100.00
TOTAL	845,653		101,860							
AVG. USE	8.3									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 SMALL CLASS = GENERAL GAS SERVICE SMALL AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
5	39,616	39616	41,724	41,724	1.44	40.32	61,756	308,780	348,396	12.63
10	37,877	77,493	7,524	49,248	2.81	47.59	54,232	542,320	619,813	22.46
15	85,445	162,938	8,538	57,786	5.91	55.84	45,694	685,410	848,348	30.75
20	101,284	264,222	6,534	64,320	9.58	62.16	39,160	783,200	1,047,422	37.96
25	59,449	323,671	2,900	67,220	11.73	64.96	36,260	906,500	1,230,171	44.58
30	113,397	437,068	4,447	71,667	15.84	69.26	31,813	954,390	1,391,458	50.43
35	139,960	577,028	4,589	76,256	20.91	73.69	27,224	952,840	1,529,868	55.45
40	99,607	676,635	2,806	79,062	24.52	76.40	24,418	976,720	1,653,355	59.92
45	122,146	798,781	3,016	82,078	28.95	79.32	21,402	963,090	1,761,871	63.85
50	84,269	883,050	1,852	83,930	32.00	81.11	19,550	977,500	1,860,550	67.43
55	97,410	980,460	1,929	85,859	35.53	82.97	17,621	969,155	1,949,615	70.66
60	107,455	1,087,915	1,936	87,795	39.43	84.84	15,685	941,100	2,029,015	73.54
65	66,040	1,153,955	1,092	88,887	41.82	85.90	14,593	948,545	2,102,500	76.20
70	95,126	1,249,081	1,452	90,339	45.27	87.30	13,141	919,870	2,168,951	78.61
75	62,145	1,311,226	881	91,220	47.52	88.15	12,260	919,500	2,230,726	80.85
80	76,141	1,387,367	1,008	92,228	50.28	89.13	11,252	900,160	2,287,527	82.90
85	77,190	1,464,557	959	93,187	53.08	90.05	10,293	874,905	2,339,462	84.79
90	42,729	1,507,286	500	93,687	54.63	90.54	9,793	881,370	2,388,656	86.57
95	71,212	1,578,498	787	94,474	57.21	91.30	9,006	855,570	2,434,068	88.22
100	9,542	1,588,040	100	94,574	57.55	91.39	8,906	890,600	2,478,640	89.83
125	268,914	1,856,954	2,676	97,250	67.30	93.98	6,230	778,750	2,635,704	95.52
150	193,619	2,050,573	1,537	98,787	74.32	95.46	4,693	703,950	2,754,523	99.83
99,999	708,656	2,759,229	4,693	103,480	100.00	100.00	0	0	2,759,229	100.00
TOTAL	2,759,229		103,480							
	26.7									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 MEDIUM CLASS= GENERAL GAS SERVICE - MEDIUM AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	490,218	490218	28,965	28,965	2.91	29.62	68,813	3,440,650	3,930,868	23.36
60	196,939	687,157	3,621	32,586	4.08	33.33	65,192	3,911,520	4,598,677	27.33
70	250,406	937,563	3,958	36,544	5.57	37.37	61,234	4,286,380	5,223,943	31.05
80	259,149	1,196,712	3,546	40,090	7.11	41.00	57,688	4,615,040	5,811,752	34.54
90	279,061	1,475,773	3,356	43,446	8.77	44.43	54,332	4,889,880	6,365,653	37.83
100	266,654	1,742,427	2,868	46,314	10.36	47.37	51,464	5,146,400	6,888,827	40.94
110	223,419	1,965,846	2,188	48,502	11.68	49.60	49,276	5,420,360	7,386,206	43.90
120	260,777	2,226,623	2,351	50,853	13.23	52.01	46,925	5,631,000	7,857,623	46.70
130	264,170	2,490,793	2,184	53,037	14.80	54.24	44,741	5,816,330	8,307,123	49.37
140	265,360	2,756,153	2,025	55,062	16.38	56.31	42,716	5,980,240	8,736,393	51.92
150	218,185	2,974,338	1,555	56,617	17.68	57.90	41,161	6,174,150	9,148,488	54.37
160	205,252	3,179,590	1,364	57,981	18.90	59.30	39,797	6,367,520	9,547,110	56.74
170	258,825	3,438,415	1,613	59,594	20.44	60.95	38,184	6,491,280	9,929,695	59.02
180	257,770	3,696,185	1,512	61,106	21.97	62.49	36,672	6,600,960	10,297,145	61.20
190	246,271	3,942,456	1,364	62,470	23.43	63.89	35,308	6,708,520	10,650,976	63.30
200	341,894	4,284,350	1,795	64,265	25.46	65.73	33,513	6,702,600	10,986,950	65.30
220	411,480	4,695,830	2,016	66,281	27.91	67.79	31,497	6,929,340	11,625,170	69.09
240	519,408	5,215,238	2,347	68,628	31.00	70.19	29,150	6,996,000	12,211,238	72.58
260	541,560	5,756,798	2,240	70,868	34.22	72.48	26,910	6,996,600	12,753,398	75.80
280	570,072	6,326,870	2,179	73,047	37.60	74.71	24,731	6,924,680	13,251,550	78.76
300	529,024	6,855,894	1,888	74,935	40.75	76.64	22,843	6,852,900	13,708,794	81.48
320	622,426	7,478,320	2,068	77,003	44.45	78.75	20,775	6,648,000	14,126,320	83.96
340	530,413	8,008,733	1,652	78,655	47.60	80.44	19,123	6,501,820	14,510,553	86.24
360	643,468	8,652,201	1,887	80,542	51.42	82.37	17,236	6,204,960	14,857,161	88.30
380	637,100	9,289,301	1,765	82,307	55.21	84.18	15,471	5,878,980	15,168,281	90.15
400	613,439	9,902,740	1,610	83,917	58.86	85.82	13,861	5,544,400	15,447,140	91.81
420	685,522	10,588,262	1,710	85,627	62.93	87.57	12,151	5,103,420	15,691,682	93.26
440	647,369	11,235,631	1,538	87,165	66.78	89.15	10,613	4,669,720	15,905,351	94.53
460	713,375	11,949,006	1,618	88,783	71.02	90.80	8,995	4,137,700	16,086,706	95.61
480	638,698	12,587,704	1,385	90,168	74.82	92.22	7,610	3,652,800	16,240,504	96.53
500	636,719	13,224,423	1,324	91,492	78.60	93.57	6,286	3,143,000	16,367,423	97.28
520	639,507	13,863,930	1,276	92,768	82.40	94.88	5,010	2,605,200	16,469,130	97.88
540	581,725	14,445,655	1,117	93,885	85.86	96.02	3,893	2,102,220	16,547,875	98.35
560	396,822	14,842,477	733	94,618	88.22	96.77	3,160	1,769,600	16,612,077	98.73
580	476,315	15,318,792	849	95,467	91.05	97.64	2,311	1,340,380	16,659,172	99.01
600	363,381	15,682,173	625	96,092	93.21	98.28	1,686	1,011,600	16,693,773	99.22
700	703,963	16,386,136	1,160	97,252	97.39	99.46	526	368,200	16,754,336	99.58
800	249,151	16,635,287	355	97,607	98.87	99.83	171	136,800	16,772,087	99.69
900	45,019	16,680,306	55	97,662	99.14	99.88	116	104,400	16,784,706	99.76
1,000	31,486	16,711,792	34	97,696	99.33	99.92	82	82,000	16,793,792	99.81
1,200	48,776	16,760,568	46	97,742	99.62	99.96	36	43,200	16,803,768	99.87
1,400	12,565	16,773,133	9	97,751	99.69	99.97	27	37,800	16,810,933	99.92
1,600	13,029	16,786,162	9	97,760	99.77	99.98	18	28,800	16,814,962	99.94
1,800	16,228	16,802,390	10	97,770	99.87	99.99	8	14,400	16,816,790	99.95
2,000	1,866	16,804,256	1	97,771	99.88	99.99	7	14,000	16,818,256	99.96
2,500	11,925	16,816,181	5	97,776	99.95	100.00	2	5,000	16,821,181	99.98
3,000	0	16,816,181	0	97,776	99.95	100.00	2	6,000	16,822,181	99.98
99,999	8,855	16,825,036	2	97,778	100.00	100.00	0	0	16,825,036	100.00
TOTAL	16,825,036		97,778							
AVG. USE	172.1									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 MEDIUM CLASS= GENERAL GAS SERVICE - MEDIUM AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	469,053	469053	16,036	16,036	1.57	16.23	82,742	4,137,100	4,606,153	15.42
60	64,913	533,966	1,207	17,243	1.79	17.46	81,535	4,892,100	5,426,066	18.17
70	123,959	657,925	1,928	19,171	2.20	19.41	79,607	5,572,490	6,230,415	20.86
80	192,156	850,081	2,618	21,789	2.85	22.06	76,989	6,159,120	7,009,201	23.47
90	192,676	1,042,757	2,287	24,076	3.49	24.37	74,702	6,723,180	7,765,937	26.00
100	214,371	1,257,128	2,267	26,343	4.21	26.67	72,435	7,243,500	8,500,628	28.46
110	181,152	1,438,280	1,750	28,093	4.81	28.44	70,685	7,775,350	9,213,630	30.84
120	300,634	1,738,914	2,630	30,723	5.82	31.10	68,055	8,166,600	9,905,514	33.16
130	249,120	1,988,034	1,984	32,707	6.66	33.11	66,071	8,589,230	10,577,264	35.41
140	269,372	2,257,406	1,986	34,693	7.56	35.12	64,085	8,971,900	11,229,306	37.59
150	212,112	2,469,518	1,464	36,157	8.27	36.60	62,621	9,393,150	11,862,668	39.71
160	289,439	2,758,957	1,878	38,035	9.24	38.51	60,743	9,718,880	12,477,837	41.77
170	366,356	3,125,313	2,216	40,251	10.46	40.75	58,527	9,949,590	13,074,903	43.77
180	287,125	3,412,438	1,630	41,881	11.42	42.40	56,897	10,241,460	13,653,898	45.71
190	290,119	3,702,557	1,568	43,449	12.40	43.99	55,329	10,512,510	14,215,067	47.59
200	498,909	4,201,466	2,521	45,970	14.07	46.54	52,808	10,561,600	14,763,066	49.42
220	616,290	4,817,756	2,893	48,863	16.13	49.47	49,915	10,981,300	15,799,056	52.89
240	641,339	5,459,095	2,768	51,631	18.28	52.27	47,147	11,315,280	16,774,375	56.16
260	725,429	6,184,524	2,896	54,527	20.70	55.20	44,251	11,505,260	17,689,784	59.22
280	631,120	6,815,644	2,339	56,866	22.82	57.57	41,912	11,735,360	18,551,004	62.10
300	792,170	7,607,814	2,720	59,586	25.47	60.32	39,192	11,757,600	19,365,414	64.83
320	952,893	8,560,707	3,052	62,638	28.66	63.41	36,140	11,564,800	20,125,507	67.38
340	803,489	9,364,196	2,401	65,039	31.35	65.84	33,739	11,471,260	20,835,456	69.75
360	759,217	10,123,413	2,144	67,183	33.89	68.01	31,595	11,374,200	21,497,613	71.97
380	869,395	10,992,808	2,335	69,518	36.80	70.38	29,260	11,118,800	22,111,608	74.02
400	820,741	11,813,549	2,099	71,617	39.55	72.50	27,161	10,864,400	22,677,949	75.92
420	1,012,670	12,826,219	2,450	74,067	42.94	74.98	24,711	10,378,620	23,204,839	77.68
440	690,944	13,517,163	1,597	75,664	45.25	76.60	23,114	10,170,160	23,687,323	79.30
460	672,951	14,190,114	1,491	77,155	47.50	78.11	21,623	9,946,580	24,136,694	80.80
480	846,938	15,037,052	1,811	78,966	50.34	79.94	19,812	9,509,760	24,546,812	82.18
500	720,116	15,757,168	1,484	80,450	52.75	81.45	18,328	9,164,000	24,921,168	83.43
520	878,012	16,635,180	1,728	82,178	55.69	83.19	16,600	8,632,000	25,267,180	84.59
540	923,574	17,558,754	1,753	83,931	58.78	84.97	14,847	8,017,380	25,576,134	85.62
560	811,944	18,370,698	1,480	85,411	61.50	86.47	13,367	7,485,520	25,856,218	86.56
580	538,473	18,909,171	948	86,359	63.30	87.43	12,419	7,203,020	26,112,191	87.42
600	604,873	19,514,044	1,025	87,384	65.33	88.47	11,394	6,836,400	26,350,444	88.21
700	2,355,166	21,869,210	3,705	91,089	73.21	92.22	7,689	5,382,300	27,251,510	91.23
800	1,669,778	23,538,988	2,268	93,357	78.80	94.51	5,421	4,336,800	27,875,788	93.32
900	1,102,380	24,641,368	1,327	94,684	82.49	95.86	4,094	3,684,600	28,325,968	94.83
1,000	824,214	25,465,582	888	95,572	85.25	96.75	3,206	3,206,000	28,671,582	95.99
1,200	1,330,924	26,796,506	1,263	96,835	89.71	98.03	1,943	2,331,600	29,128,106	97.51
1,400	1,054,588	27,851,094	848	97,683	93.24	98.89	1,095	1,533,000	29,384,094	98.37
1,600	609,161	28,460,255	423	98,106	95.28	99.32	672	1,075,200	29,535,455	98.88
1,800	379,744	28,839,999	231	98,337	96.55	99.55	441	793,800	29,633,799	99.21
2,000	231,053	29,071,052	127	98,464	97.32	99.68	314	628,000	29,699,052	99.42
2,500	340,085	29,411,137	160	98,624	98.46	99.84	154	385,000	29,796,137	99.75
3,000	246,214	29,657,351	95	98,719	99.29	99.94	59	177,000	29,834,351	99.88
99,999	213,470	29,870,821	59	98,778	100.00	100.00	0	0	29,870,821	100.00
TOTAL	29,870,821		98,778							
AVG. USE	302.4									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 L1 CLASS = L1 GENERAL SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	91,568	91568	2,634	2,634	0.26	6.62	37,142	3,714,200	3,805,768	10.63
200	244,895	336,463	1,735	4,369	0.94	10.98	35,407	7,081,400	7,417,863	20.71
300	300,707	637,170	1,253	5,622	1.78	14.13	34,154	10,246,200	10,883,370	30.39
400	428,151	1,065,321	1,265	6,887	2.97	17.31	32,889	13,155,600	14,220,921	39.71
500	696,879	1,762,200	1,597	8,484	4.92	21.33	31,292	15,646,000	17,408,200	48.61
600	1,617,718	3,379,918	3,023	11,507	9.44	28.93	28,269	16,961,400	20,341,318	56.80
700	3,023,032	6,402,950	4,817	16,324	17.88	41.04	23,452	16,416,400	22,819,350	63.72
800	2,948,406	9,351,356	4,089	20,413	26.11	51.32	19,363	15,490,400	24,841,756	69.37
900	2,545,585	11,896,941	3,117	23,530	33.22	59.16	16,246	14,621,400	26,518,341	74.05
1,000	2,344,746	14,241,687	2,567	26,097	39.77	65.61	13,679	13,679,000	27,920,687	77.97
1,250	4,962,235	19,203,922	4,624	30,721	53.63	77.24	9,055	11,318,750	30,522,672	85.24
1,500	4,059,313	23,263,235	3,082	33,803	64.96	84.98	5,973	8,959,500	32,222,735	89.98
1,750	2,888,061	26,151,296	1,857	35,660	73.03	89.65	4,116	7,203,000	33,354,296	93.14
2,000	2,220,442	28,371,738	1,236	36,896	79.23	92.76	2,880	5,760,000	34,131,738	95.31
2,500	3,219,667	31,591,405	1,497	38,393	88.22	96.52	1,383	3,457,500	35,048,905	97.88
3,000	2,061,859	33,653,264	785	39,178	93.98	98.50	598	1,794,000	35,447,264	98.99
3,500	978,104	34,631,368	316	39,494	96.71	99.29	282	987,000	35,618,368	99.47
4,000	577,026	35,208,394	159	39,653	98.32	99.69	123	492,000	35,700,394	99.69
4,500	252,027	35,460,421	61	39,714	99.02	99.84	62	279,000	35,739,421	99.80
5,000	96,600	35,557,021	21	39,735	99.29	99.90	41	205,000	35,762,021	99.87
5,500	86,213	35,643,234	17	39,752	99.54	99.94	24	132,000	35,775,234	99.90
6,000	41,804	35,685,038	7	39,759	99.65	99.96	17	102,000	35,787,038	99.94
7,000	77,907	35,762,945	12	39,771	99.87	99.99	5	35,000	35,797,945	99.97
8,000	31,098	35,794,043	4	39,775	99.96	100.00	1	8,000	35,802,043	99.98
99,999	15,621	35,809,664	1	39,776	100.00	100.00	0	0	35,809,664	100.00
TOTAL	35,809,664		39,776							
AVG. USE	900.3									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 L1 CLASS = L1 GENERAL SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	7,194	7194	453	453	0.01	1.15	38,859	3,885,900	3,893,094	6.36
200	15,489	22,683	109	562	0.04	1.43	38,750	7,750,000	7,772,683	12.71
300	34,637	57,320	149	711	0.09	1.81	38,601	11,580,300	11,637,620	19.02
400	57,064	114,384	175	886	0.19	2.25	38,426	15,370,400	15,484,784	25.31
500	109,622	224,006	261	1,147	0.37	2.92	38,165	19,082,500	19,306,506	31.56
600	764,852	988,858	1,416	2,563	1.62	6.52	36,749	22,049,400	23,038,258	37.66
700	1,892,377	2,881,235	2,999	5,562	4.71	14.15	33,750	23,625,000	26,506,235	43.33
800	2,189,712	5,070,947	3,040	8,602	8.29	21.88	30,710	24,568,000	29,638,947	48.45
900	2,693,003	7,763,950	3,305	11,907	12.69	30.29	27,405	24,664,500	32,428,450	53.01
1,000	1,177,091	8,941,041	1,300	13,207	14.62	33.60	26,105	26,105,000	35,046,041	57.29
1,250	6,666,202	15,607,243	6,292	19,499	25.51	49.60	19,813	24,766,250	40,373,493	66.00
1,500	6,286,103	21,893,346	4,736	24,235	35.79	61.65	15,077	22,615,500	44,508,846	72.76
1,750	4,968,321	26,861,667	3,139	27,374	43.91	69.63	11,938	20,891,500	47,753,167	78.06
2,000	2,193,790	29,055,457	1,250	28,624	47.50	72.81	10,688	21,376,000	50,431,457	82.44
2,500	9,925,234	38,980,691	4,704	33,328	63.72	84.78	5,984	14,960,000	53,940,691	88.17
3,000	5,321,867	44,302,558	1,993	35,321	72.42	89.85	3,991	11,973,000	56,275,558	91.99
3,500	3,987,263	48,289,821	1,271	36,592	78.94	93.08	2,720	9,520,000	57,809,821	94.50
4,000	2,404,575	50,694,396	682	37,274	82.87	94.82	2,038	8,152,000	58,846,396	96.19
4,500	2,434,113	53,128,509	608	37,882	86.85	96.36	1,430	6,435,000	59,563,509	97.37
5,000	2,746,014	55,874,523	610	38,492	91.34	97.91	820	4,100,000	59,974,523	98.04
5,500	1,181,315	57,055,838	234	38,726	93.27	98.51	586	3,223,000	60,278,838	98.53
6,000	567,602	57,623,440	102	38,828	94.19	98.77	484	2,904,000	60,527,440	98.94
7,000	1,456,355	59,079,795	241	39,069	96.57	99.38	243	1,701,000	60,780,795	99.36
8,000	564,377	59,644,172	80	39,149	97.50	99.59	163	1,304,000	60,948,172	99.63
99,999	1,530,933	61,175,105	163	39,312	100.00	100.00	0	0	61,175,105	100.00
TOTAL	61,175,105		39,312							
AVG. USE	1556.1									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 L2 CLASS = L2 GENERAL SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
500	11,935	11935	126	126	0.12	6.39	1,846	923,000	934,935	9.11
1,000	21,220	33,155	31	157	0.32	7.96	1,815	1,815,000	1,848,155	18.01
1,500	47,567	80,722	38	195	0.79	9.89	1,777	2,665,500	2,746,222	26.77
2,000	83,558	164,280	49	244	1.60	12.37	1,728	3,456,000	3,620,280	35.29
2,500	167,165	331,445	77	321	3.23	16.28	1,651	4,127,500	4,458,945	43.46
3,000	271,740	603,185	103	424	5.88	21.50	1,548	4,644,000	5,247,185	51.14
3,500	371,978	975,163	119	543	9.50	27.54	1,429	5,001,500	5,976,663	58.25
4,000	573,652	1,548,815	161	704	15.10	35.70	1,268	5,072,000	6,620,815	64.53
4,500	664,561	2,213,376	163	867	21.57	43.97	1,105	4,972,500	7,185,876	70.04
5,000	653,411	2,866,787	145	1,012	27.94	51.32	960	4,800,000	7,666,787	74.73
6,000	1,357,218	4,224,005	259	1,271	41.17	64.45	701	4,206,000	8,430,005	82.17
7,000	1,078,322	5,302,327	175	1,446	51.68	73.33	526	3,682,000	8,984,327	87.57
8,000	1,262,496	6,564,823	176	1,622	63.99	82.25	350	2,800,000	9,364,823	91.28
9,000	998,851	7,563,674	121	1,743	73.72	88.39	229	2,061,000	9,624,674	93.81
10,000	778,293	8,341,967	84	1,827	81.31	92.65	145	1,450,000	9,791,967	95.44
11,000	278,936	8,620,903	27	1,854	84.03	94.02	118	1,298,000	9,918,903	96.68
12,000	482,259	9,103,162	43	1,897	88.73	96.20	75	900,000	10,003,162	97.50
13,000	299,931	9,403,093	24	1,921	91.65	97.41	51	663,000	10,066,093	98.11
14,000	156,674	9,559,767	12	1,933	93.18	98.02	39	546,000	10,105,767	98.50
15,000	157,432	9,717,199	11	1,944	94.71	98.58	28	420,000	10,137,199	98.81
16,000	153,920	9,871,119	10	1,954	96.21	99.09	18	288,000	10,159,119	99.02
17,000	136,000	10,007,119	8	1,962	97.54	99.49	10	170,000	10,177,119	99.20
18,000	90,000	10,097,119	5	1,967	98.42	99.75	5	90,000	10,187,119	99.29
19,000	76,000	10,173,119	4	1,971	99.16	99.95	1	19,000	10,192,119	99.34
99,999	86,527	10,259,646	1	1,972	100.00	100.00	0	0	10,259,646	100.00
TOTAL	10,259,646		1,972							
AVG. USE	5202.7									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25 L2 CLASS = L2 GENERAL SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
500	1,664	1664	38	38	0.01	2.00	1,859	929,500	931,164	5.91
1,000	1,738	3,402	2	40	0.02	2.11	1,857	1,857,000	1,860,402	11.81
1,500	7,289	10,691	6	46	0.07	2.42	1,851	2,776,500	2,787,191	17.69
2,000	10,179	20,870	6	52	0.13	2.74	1,845	3,690,000	3,710,870	23.55
2,500	25,677	46,547	11	63	0.30	3.32	1,834	4,585,000	4,631,547	29.39
3,000	31,958	78,505	11	74	0.50	3.90	1,823	5,469,000	5,547,505	35.20
3,500	140,163	218,668	42	116	1.39	6.11	1,781	6,233,500	6,452,168	40.94
4,000	196,598	415,266	51	167	2.64	8.80	1,730	6,920,000	7,335,266	46.55
4,500	162,878	578,144	38	205	3.67	10.81	1,692	7,614,000	8,192,144	51.99
5,000	461,372	1,039,516	101	306	6.60	16.13	1,591	7,955,000	8,994,516	57.08
6,000	1,431,027	2,470,543	265	571	15.68	30.10	1,326	7,956,000	10,426,543	66.16
7,000	1,914,180	4,384,723	296	867	27.82	45.70	1,030	7,210,000	11,594,723	73.58
8,000	978,913	5,363,636	134	1,001	34.04	52.77	896	7,168,000	12,531,636	79.52
9,000	1,676,680	7,040,316	205	1,206	44.68	63.57	691	6,219,000	13,259,316	84.14
10,000	1,241,810	8,282,126	136	1,342	52.56	70.74	555	5,550,000	13,832,126	87.78
11,000	1,554,300	9,836,426	151	1,493	62.42	78.70	404	4,444,000	14,280,426	90.62
12,000	1,254,004	11,090,430	111	1,604	70.38	84.55	293	3,516,000	14,606,430	92.69
13,000	1,011,779	12,102,209	82	1,686	76.80	88.88	211	2,743,000	14,845,209	94.20
14,000	306,268	12,408,477	23	1,709	78.74	90.09	188	2,632,000	15,040,477	95.44
15,000	780,606	13,189,083	54	1,763	83.69	92.94	134	2,010,000	15,199,083	96.45
16,000	575,660	13,764,743	38	1,801	87.35	94.94	96	1,536,000	15,300,743	97.09
17,000	391,000	14,155,743	23	1,824	89.83	96.15	73	1,241,000	15,396,743	97.70
18,000	121,542	14,277,285	7	1,831	90.60	96.52	66	1,188,000	15,465,285	98.14
19,000	76,000	14,353,285	4	1,835	91.08	96.73	62	1,178,000	15,531,285	98.56
99,999	1,405,275	15,758,560	62	1,897	100.00	100.00	0	0	15,758,560	100.00
TOTAL	15,758,560		1,897							
AVG. USE	8307.1									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25(TE) CLASS = GENERAL SERVICE TRANSPORTATION ELIGIBI AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
2000	6,931	6931	13	13	0.07	3.49	359	718,000	724,931	7.30
4000	31,543	38,474	8	21	0.39	5.65	351	1,404,000	1,442,474	14.52
6000	5,935	44,409	1	22	0.45	5.91	350	2,100,000	2,144,409	21.59
8000	164,587	208,996	27	49	2.10	13.17	323	2,584,000	2,792,996	28.11
10000	339,995	548,991	42	91	5.53	24.46	281	2,810,000	3,358,991	33.81
12000	624,000	1,172,991	52	143	11.81	38.44	229	2,748,000	3,920,991	39.47
14000	519,975	1,692,966	43	186	17.04	50.00	186	2,604,000	4,296,966	43.25
16000	320,000	2,012,966	20	206	20.26	55.38	166	2,656,000	4,668,966	47.00
18000	324,000	2,336,966	18	224	23.52	60.22	148	2,664,000	5,000,966	50.34
20000	300,000	2,636,966	15	239	26.54	64.25	133	2,660,000	5,296,966	53.32
22000	242,000	2,878,966	11	250	28.98	67.20	122	2,684,000	5,562,966	56.00
24000	720,000	3,598,966	30	280	36.23	75.27	92	2,208,000	5,806,966	58.45
26000	207,987	3,806,953	8	288	38.32	77.42	84	2,184,000	5,990,953	60.31
28000	195,989	4,002,942	7	295	40.29	79.30	77	2,156,000	6,158,942	62.00
30000	149,990	4,152,932	5	300	41.80	80.65	72	2,160,000	6,312,932	63.55
32000	127,994	4,280,926	4	304	43.09	81.72	68	2,176,000	6,456,926	65.00
34000	101,934	4,382,860	3	307	44.12	82.53	65	2,210,000	6,592,860	66.36
36000	143,931	4,526,791	4	311	45.57	83.60	61	2,196,000	6,722,791	67.67
38000	113,957	4,640,748	3	314	46.71	84.41	58	2,204,000	6,844,748	68.90
40000	119,974	4,760,722	3	317	47.92	85.22	55	2,200,000	6,960,722	70.07
42000	83,914	4,844,636	2	319	48.77	85.75	53	2,226,000	7,070,636	71.17
44000	615,902	5,460,538	14	333	54.97	89.52	39	1,716,000	7,176,538	72.24
46000	321,979	5,782,517	7	340	58.21	91.40	32	1,472,000	7,254,517	73.02
48000	47,967	5,830,484	1	341	58.69	91.67	31	1,488,000	7,318,484	73.67
50000	199,813	6,030,297	4	345	60.70	92.74	27	1,350,000	7,380,297	74.29
55000	164,846	6,195,143	3	348	62.36	93.55	24	1,320,000	7,515,143	75.65
60000	299,857	6,495,000	5	353	65.38	94.89	19	1,140,000	7,635,000	76.85
65000	0	6,495,000	0	353	65.38	94.89	19	1,235,000	7,730,000	77.81
70000	0	6,495,000	0	353	65.38	94.89	19	1,330,000	7,825,000	78.77
75000	0	6,495,000	0	353	65.38	94.89	19	1,425,000	7,920,000	79.72
80000	0	6,495,000	0	353	65.38	94.89	19	1,520,000	8,015,000	80.68
85000	84,566	6,579,566	1	354	66.23	95.16	18	1,530,000	8,109,566	81.63
90000	0	6,579,566	0	354	66.23	95.16	18	1,620,000	8,199,566	82.54
95000	663,425	7,242,991	7	361	72.91	97.04	11	1,045,000	8,287,991	83.43
100000	0	7,242,991	0	361	72.91	97.04	11	1,100,000	8,342,991	83.98
110000	0	7,242,991	0	361	72.91	97.04	11	1,210,000	8,452,991	85.09
120000	0	7,242,991	0	361	72.91	97.04	11	1,320,000	8,562,991	86.20
130000	0	7,242,991	0	361	72.91	97.04	11	1,430,000	8,672,991	87.30
140000	0	7,242,991	0	361	72.91	97.04	11	1,540,000	8,782,991	88.41
150000	0	7,242,991	0	361	72.91	97.04	11	1,650,000	8,892,991	89.52
160000	950,487	8,193,478	6	367	82.48	98.66	5	800,000	8,993,478	90.53
170000	0	8,193,478	0	367	82.48	98.66	5	850,000	9,043,478	91.03
180000	0	8,193,478	0	367	82.48	98.66	5	900,000	9,093,478	91.54
190000	0	8,193,478	0	367	82.48	98.66	5	950,000	9,143,478	92.04
200000	0	8,193,478	0	367	82.48	98.66	5	1,000,000	9,193,478	92.54
210000	0	8,193,478	0	367	82.48	98.66	5	1,050,000	9,243,478	93.05
220000	0	8,193,478	0	367	82.48	98.66	5	1,100,000	9,293,478	93.55
230000	915,228	9,108,706	4	371	91.69	99.73	1	230,000	9,338,706	94.00
240000	0	9,108,706	0	371	91.69	99.73	1	240,000	9,348,706	94.10
250000	0	9,108,706	0	371	91.69	99.73	1	250,000	9,358,706	94.21
999999	825,652	9,934,358	1	372	100.00	100.00	0	0	9,934,358	100.00

TOTAL	9,934,358		372
AVG. USE	26705.3		

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-25(TE) CLASS = GENERAL SERVICE TRANSPORTATION ELIGIBI AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
2000	1,852	1852	2	2	0.01	0.54	370	740,000	741,852	5.61
4000	2,614	4,466	1	3	0.03	0.81	369	1,476,000	1,480,466	11.20
6000	0	4,466	0	3	0.03	0.81	369	2,214,000	2,218,466	16.78
8000	13,346	17,812	2	5	0.13	1.34	367	2,936,000	2,953,812	22.34
10000	27,873	45,685	3	8	0.35	2.15	364	3,640,000	3,685,685	27.87
12000	35,551	81,236	3	11	0.61	2.96	361	4,332,000	4,413,236	33.38
14000	96,086	177,322	8	19	1.34	5.11	353	4,942,000	5,119,322	38.72
16000	275,021	452,343	18	37	3.42	9.95	335	5,360,000	5,812,343	43.96
18000	376,471	828,814	22	59	6.27	15.86	313	5,634,000	6,462,814	48.88
20000	807,582	1,636,396	42	101	12.38	27.15	271	5,420,000	7,056,396	53.37
22000	395,842	2,032,238	18	119	15.37	31.99	253	5,566,000	7,598,238	57.47
24000	884,673	2,916,911	39	158	22.06	42.47	214	5,136,000	8,052,911	60.90
26000	415,487	3,332,398	16	174	25.20	46.77	198	5,148,000	8,480,398	64.14
28000	865,836	4,198,234	32	206	31.75	55.38	166	4,648,000	8,846,234	66.90
30000	685,445	4,883,679	23	229	36.94	61.56	143	4,290,000	9,173,679	69.38
32000	580,512	5,464,191	19	248	41.33	66.67	124	3,968,000	9,432,191	71.34
34000	237,215	5,701,406	7	255	43.12	68.55	117	3,978,000	9,679,406	73.21
36000	523,010	6,224,416	16	271	47.08	72.85	101	3,636,000	9,860,416	74.57
38000	147,089	6,371,505	4	275	48.19	73.92	97	3,686,000	10,057,505	76.07
40000	419,493	6,790,998	11	286	51.36	76.88	86	3,440,000	10,230,998	77.38
42000	166,815	6,957,813	4	290	52.62	77.96	82	3,444,000	10,401,813	78.67
44000	84,623	7,042,436	2	292	53.26	78.49	80	3,520,000	10,562,436	79.88
46000	181,611	7,224,047	4	296	54.64	79.57	76	3,496,000	10,720,047	81.08
48000	187,373	7,411,420	4	300	56.05	80.65	72	3,456,000	10,867,420	82.19
50000	333,926	7,745,346	7	307	58.58	82.53	65	3,250,000	10,995,346	83.16
55000	681,066	8,426,412	14	321	63.73	86.29	51	2,805,000	11,231,412	84.94
60000	799,595	9,226,007	14	335	69.78	90.05	37	2,220,000	11,446,007	86.57
65000	373,758	9,599,765	6	341	72.60	91.67	31	2,015,000	11,614,765	87.84
70000	427,714	10,027,479	7	348	75.84	93.55	24	1,680,000	11,707,479	88.54
75000	427,743	10,455,222	6	354	79.07	95.16	18	1,350,000	11,805,222	89.28
80000	79,294	10,534,516	1	355	79.67	95.43	17	1,360,000	11,894,516	89.96
85000	164,799	10,699,315	2	357	80.92	95.97	15	1,275,000	11,974,315	90.56
90000	260,447	10,959,762	3	360	82.89	96.77	12	1,080,000	12,039,762	91.06
95000	186,332	11,146,094	2	362	84.30	97.31	10	950,000	12,096,094	91.48
100000	0	11,146,094	0	362	84.30	97.31	10	1,000,000	12,146,094	91.86
110000	200,596	11,346,690	2	364	85.82	97.85	8	880,000	12,226,690	92.47
120000	118,613	11,465,303	1	365	86.71	98.12	7	840,000	12,305,303	93.07
130000	0	11,465,303	0	365	86.71	98.12	7	910,000	12,375,303	93.59
140000	357,613	11,822,916	3	368	89.42	98.92	4	560,000	12,382,916	93.65
150000	141,159	11,964,075	1	369	90.48	99.19	3	450,000	12,414,075	93.89
160000	0	11,964,075	0	369	90.48	99.19	3	480,000	12,444,075	94.11
170000	328,072	12,292,147	2	371	92.97	99.73	1	170,000	12,462,147	94.25
180000	0	12,292,147	0	371	92.97	99.73	1	180,000	12,472,147	94.33
190000	0	12,292,147	0	371	92.97	99.73	1	190,000	12,482,147	94.40
200000	0	12,292,147	0	371	92.97	99.73	1	200,000	12,492,147	94.48
210000	0	12,292,147	0	371	92.97	99.73	1	210,000	12,502,147	94.55
220000	0	12,292,147	0	371	92.97	99.73	1	220,000	12,512,147	94.63
230000	0	12,292,147	0	371	92.97	99.73	1	230,000	12,522,147	94.71
240000	0	12,292,147	0	371	92.97	99.73	1	240,000	12,532,147	94.78
250000	0	12,292,147	0	371	92.97	99.73	1	250,000	12,542,147	94.86
999999	930,095	13,222,242	1	372	100.00	100.00	0	0	13,222,242	100.00

TOTAL	13,222,242	372
AVG. USE	35543.7	

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-40 CLASS =AIR CONDITIONING GAS SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	510	510	48	48	0.37	44.44	60	6,000	6,510	4.69
200	302	812	2	50	0.59	46.30	58	11,600	12,412	8.95
300	799	1,611	3	53	1.16	49.07	55	16,500	18,111	13.05
400	1,371	2,982	4	57	2.15	52.78	51	20,400	23,382	16.85
500	2,284	5,266	5	62	3.80	57.41	46	23,000	28,266	20.37
600	1,130	6,396	2	64	4.61	59.26	44	26,400	32,796	23.64
700	2,173	8,569	3	67	6.18	62.04	41	28,700	37,269	26.86
800	2,203	10,772	3	70	7.76	64.81	38	30,400	41,172	29.67
900	1,755	12,527	2	72	9.03	66.67	36	32,400	44,927	32.38
1,000	998	13,525	1	73	9.75	67.59	35	35,000	48,525	34.97
1,100	3,165	16,690	3	76	12.03	70.37	32	35,200	51,890	37.40
1,200	3,493	20,183	3	79	14.55	73.15	29	34,800	54,983	39.63
1,300	1,266	21,449	1	80	15.46	74.07	28	36,400	57,849	41.69
1,400	1,347	22,796	1	81	16.43	75.00	27	37,800	60,596	43.67
1,500	0	22,796	0	81	16.43	75.00	27	40,500	63,296	45.62
1,750	1,547	24,343	1	82	17.55	75.93	26	45,500	69,843	50.34
2,000	11,317	35,660	6	88	25.70	81.48	20	40,000	75,660	54.53
2,250	6,515	42,175	3	91	30.40	84.26	17	38,250	80,425	57.97
2,500	4,616	46,791	2	93	33.72	86.11	15	37,500	84,291	60.75
3,000	12,964	59,755	5	98	43.07	90.74	10	30,000	89,755	64.69
3,500	0	59,755	0	98	43.07	90.74	10	35,000	94,755	68.29
4,000	0	59,755	0	98	43.07	90.74	10	40,000	99,755	71.90
4,500	4,420	64,175	1	99	46.25	91.67	9	40,500	104,675	75.44
5,000	0	64,175	0	99	46.25	91.67	9	45,000	109,175	78.69
99,999	74,569	138,744	9	108	100.00	100.00	0	0	138,744	100.00
TOTAL	138,744		108							
AVG. USE	1284.7									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-40 CLASS =AIR CONDITIONING GAS SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	261	261	49	49	0.27	45.37	59	5,900	6,161	6.48
200	2,136	2,397	14	63	2.52	58.33	45	9,000	11,397	11.98
300	2,530	4,927	10	73	5.18	67.59	35	10,500	15,427	16.21
400	692	5,619	2	75	5.91	69.44	33	13,200	18,819	19.78
500	815	6,434	2	77	6.76	71.30	31	15,500	21,934	23.05
600	515	6,949	1	78	7.30	72.22	30	18,000	24,949	26.22
700	1,240	8,189	2	80	8.61	74.07	28	19,600	27,789	29.21
800	2,297	10,486	3	83	11.02	76.85	25	20,000	30,486	32.04
900	830	11,316	1	84	11.89	77.78	24	21,600	32,916	34.60
1,000	0	11,316	0	84	11.89	77.78	24	24,000	35,316	37.12
1,100	1,042	12,358	0	84	12.99	77.78	24	26,400	38,758	40.74
1,200	1,166	13,524	1	85	14.21	78.70	23	27,600	41,124	43.22
1,300	1,266	14,790	1	86	15.55	79.63	22	28,600	43,390	45.61
1,400	4,071	18,861	3	89	19.82	82.41	19	26,600	45,461	47.78
1,500	4,372	23,233	3	92	24.42	85.19	16	24,000	47,233	49.64
1,750	3,237	26,470	2	94	27.82	87.04	14	24,500	50,970	53.57
2,000	1,753	28,223	1	95	29.66	87.96	13	26,000	54,223	56.99
2,250	0	28,223	0	95	29.66	87.96	13	29,250	57,473	60.41
2,500	0	28,223	0	95	29.66	87.96	13	32,500	60,723	63.82
3,000	18,968	47,191	7	102	49.60	94.44	6	18,000	65,191	68.52
3,500	0	47,191	0	102	49.60	94.44	6	21,000	68,191	71.67
4,000	0	47,191	0	102	49.60	94.44	6	24,000	71,191	74.83
4,500	0	47,191	0	102	49.60	94.44	6	27,000	74,191	77.98
5,000	0	47,191	0	102	49.60	94.44	6	30,000	77,191	81.13
99,999	47,951	95,142	6	108	100.00	100.00	0	0	95,142	100.00
TOTAL	95,142		108							
AVG. USE	880.9									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-55 CLASS = GENERAL SERVICE FOR COMP OF AREA = ARIZONA PERIOD = SUMMER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	8,351	8351	212	212	0.19	70.67	88	4,400	12,751	0.29
100	3,196	11,547	32	244	0.26	81.33	56	5,600	17,147	0.39
150	2,544	14,091	17	261	0.32	87.00	39	5,850	19,941	0.45
200	580	14,671	3	264	0.33	88.00	36	7,200	21,871	0.50
300	2,388	17,059	8	272	0.39	90.67	28	8,400	25,459	0.58
400	0	17,059	0	272	0.39	90.67	28	11,200	28,259	0.64
500	491	17,550	1	273	0.40	91.00	27	13,500	31,050	0.71
750	2,249	19,799	3	276	0.45	92.00	24	18,000	37,799	0.86
1000	3,999	23,798	4	280	0.54	93.33	20	20,000	43,798	1.00
1250	0	23,798	0	280	0.54	93.33	20	25,000	48,798	1.11
1500	0	23,798	0	280	0.54	93.33	20	30,000	53,798	1.22
2000	0	23,798	0	280	0.54	93.33	20	40,000	63,798	1.45
2500	0	23,798	0	280	0.54	93.33	20	50,000	73,798	1.68
3000	0	23,798	0	280	0.54	93.33	20	60,000	83,798	1.91
3500	0	23,798	0	280	0.54	93.33	20	70,000	93,798	2.13
4000	0	23,798	0	280	0.54	93.33	20	80,000	103,798	2.36
4500	0	23,798	0	280	0.54	93.33	20	90,000	113,798	2.59
5000	0	23,798	0	280	0.54	93.33	20	100,000	123,798	2.82
6000	0	23,798	0	280	0.54	93.33	20	120,000	143,798	3.27
7000	0	23,798	0	280	0.54	93.33	20	140,000	163,798	3.73
8000	15,899	39,697	2	282	0.90	94.00	18	144,000	183,697	4.18
9000	0	39,697	0	282	0.90	94.00	18	162,000	201,697	4.59
10000	19,887	59,584	2	284	1.36	94.67	16	160,000	219,584	5.00
11000	0	59,584	0	284	1.36	94.67	16	176,000	235,584	5.36
12000	0	59,584	0	284	1.36	94.67	16	192,000	251,584	5.72
13000	0	59,584	0	284	1.36	94.67	16	208,000	267,584	6.09
15000	0	59,584	0	284	1.36	94.67	16	240,000	299,584	6.81
17000	0	59,584	0	284	1.36	94.67	16	272,000	331,584	7.54
19000	0	59,584	0	284	1.36	94.67	16	304,000	363,584	8.27
20000	0	59,584	0	284	1.36	94.67	16	320,000	379,584	8.63
25000	49,322	108,906	2	286	2.48	95.33	14	350,000	458,906	10.44
30000	59,881	168,787	2	288	3.84	96.00	12	360,000	528,787	12.03
35000	68,447	237,234	2	290	5.40	96.67	10	350,000	587,234	13.36
40000	0	237,234	0	290	5.40	96.67	10	400,000	637,234	14.50
99999	4,158,823	4,396,057	10	300	100.00	100.00	0	0	4,396,057	100.00
TOTAL	4,396,057		300							
AVG. USE	14653.5									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-55 CLASS = GENERAL SERVICE FOR COMP OI AREA = ARIZONA PERIOD = WINTER

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	9,200	9200	184	184	0.19	61.33	116	5,800	15,000	0.31
100	4,300	13,500	43	227	0.28	75.67	73	7,300	20,800	0.44
150	2,250	15,750	15	242	0.33	80.67	58	8,700	24,450	0.51
200	1,400	17,150	7	249	0.36	83.00	51	10,200	27,350	0.57
300	1,800	18,950	6	255	0.40	85.00	45	13,500	32,450	0.68
400	800	19,750	2	257	0.41	85.67	43	17,200	36,950	0.77
500	1,000	20,750	2	259	0.44	86.33	41	20,500	41,250	0.87
750	1,500	22,250	2	261	0.47	87.00	39	29,250	51,500	1.08
1000	3,000	25,250	3	264	0.53	88.00	36	36,000	61,250	1.28
1250	0	25,250	0	264	0.53	88.00	36	45,000	70,250	1.47
1500	0	25,250	0	264	0.53	88.00	36	54,000	79,250	1.66
2000	0	25,250	0	264	0.53	88.00	36	72,000	97,250	2.04
2500	0	25,250	0	264	0.53	88.00	36	90,000	115,250	2.42
3000	0	25,250	0	264	0.53	88.00	36	108,000	133,250	2.79
3500	6,712	31,962	2	266	0.67	88.67	34	119,000	150,962	3.17
4000	0	31,962	0	266	0.67	88.67	34	136,000	167,962	3.52
4500	17,845	49,807	4	270	1.04	90.00	30	135,000	184,807	3.88
5000		49,807	0	270	1.04	90.00	30	150,000	199,807	4.19
6000		49,807	0	270	1.04	90.00	30	180,000	229,807	4.82
7000	13,888	63,695	2	272	1.34	90.67	28	196,000	259,695	5.45
8000	47,488	111,183	6	278	2.33	92.67	22	176,000	287,183	6.02
9000	0	111,183	0	278	2.33	92.67	22	198,000	309,183	6.48
10000	72,240	183,423	8	286	3.85	95.33	14	140,000	323,423	6.78
11000	0	183,423	0	286	3.85	95.33	14	154,000	337,423	7.08
12000	0	183,423	0	286	3.85	95.33	14	168,000	351,423	7.37
13000	0	183,423	0	286	3.85	95.33	14	182,000	365,423	7.66
15000	0	183,423	0	286	3.85	95.33	14	210,000	393,423	8.25
17000	0	183,423	0	286	3.85	95.33	14	238,000	421,423	8.84
19000	0	183,423	0	286	3.85	95.33	14	266,000	449,423	9.43
20000	19,854	203,277	1	287	4.26	95.67	13	260,000	463,277	9.72
25000	24,799	228,076	1	288	4.78	96.00	12	300,000	528,076	11.08
30000	79,603	307,679	3	291	6.45	97.00	9	270,000	577,679	12.12
35000	92,690	400,369	0	291	8.40	97.00	9	315,000	715,369	15.00
40000	39,914	440,283	1	292	9.23	97.33	8	320,000	760,283	15.95
99999	4,327,471	4,767,754	8	300	100.00	100.00	0	0	4,767,754	100.00
TOTAL	4,767,754		300							
AVG. USE	15892.5									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-60 ELECTRIC GENERATION GAS SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	279	279	69	69	0.03	63.89	39	1,950	2,229	0.22
100	613	892	9	78	0.09	72.22	30	3,000	3,892	0.39
150	103	995	1	79	0.10	73.15	29	4,350	5,345	0.54
200	0	995	0	79	0.10	73.15	29	5,800	6,795	0.68
300	0	995	0	79	0.10	73.15	29	8,700	9,695	0.98
400	0	995	0	79	0.10	73.15	29	11,600	12,595	1.27
500	423	1,418	1	80	0.14	74.07	28	14,000	15,418	1.55
750	589	2,007	1	81	0.20	75.00	27	20,250	22,257	2.24
1,000	1,840	3,847	2	83	0.39	76.85	25	25,000	28,847	2.91
1,250	3,399	7,246	3	86	0.73	79.63	22	27,500	34,746	3.50
1,500	2,590	9,836	2	88	0.99	81.48	20	30,000	39,836	4.01
2,000	3,498	13,334	2	90	1.34	83.33	18	36,000	49,334	4.97
2,500	6,721	20,055	3	93	2.02	86.11	15	37,500	57,555	5.80
3,000	0	20,055	0	93	2.02	86.11	15	45,000	65,055	6.55
4,000	0	20,055	0	93	2.02	86.11	15	60,000	80,055	8.06
5,000	0	20,055	0	93	2.02	86.11	15	75,000	95,055	9.57
6,000	0	20,055	0	93	2.02	86.11	15	90,000	110,055	11.08
7,000	0	20,055	0	93	2.02	86.11	15	105,000	125,055	12.59
8,000	0	20,055	0	93	2.02	86.11	15	120,000	140,055	14.11
9,000	0	20,055	0	93	2.02	86.11	15	135,000	155,055	15.62
10,000	0	20,055	0	93	2.02	86.11	15	150,000	170,055	17.13
11,000	0	20,055	0	93	2.02	86.11	15	165,000	185,055	18.64
12,000	0	20,055	0	93	2.02	86.11	15	180,000	200,055	20.15
13,000	0	20,055	0	93	2.02	86.11	15	195,000	215,055	21.66
14,000	0	20,055	0	93	2.02	86.11	15	210,000	230,055	23.17
15,000	0	20,055	0	93	2.02	86.11	15	225,000	245,055	24.68
20,000	36,598	56,653	2	95	5.71	87.96	13	260,000	316,653	31.89
25,000	66,753	123,406	3	98	12.43	90.74	10	250,000	373,406	37.61
30,000	28,617	152,023	1	99	15.31	91.67	9	270,000	422,023	42.50
35,000	0	152,023	0	99	15.31	91.67	9	315,000	467,023	47.03
40,000	37,849	189,872	1	100	19.12	92.59	8	320,000	509,872	51.35
50,000	40,969	230,841	1	101	23.25	93.52	7	350,000	580,841	58.50
60,000	50,254	281,095	1	102	28.31	94.44	6	360,000	641,095	64.57
70,000	68,844	349,939	1	103	35.24	95.37	5	350,000	699,939	70.49
99,999	642,989	992,928	5	108	100.00	100.00	0	0	992,928	100.00
TOTAL	992,928		108							
AVG. USE	9193.8									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-60 ELECTRIC GENERATION GAS SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
50	304	304	57	57	0.05	52.78	51	2,550	2,854	0.50
100	1,056	1,360	17	74	0.24	68.52	34	3,400	4,760	0.83
150	135	1,495	1	75	0.26	69.44	33	4,950	6,445	1.12
200	195	1,690	1	76	0.29	70.37	32	6,400	8,090	1.41
300	1,390	3,080	5	81	0.54	75.00	27	8,100	11,180	1.95
400	0	3,080	0	81	0.54	75.00	27	10,800	13,880	2.42
500	0	3,080	0	81	0.54	75.00	27	13,500	16,580	2.89
750	0	3,080	0	81	0.54	75.00	27	20,250	23,330	4.07
1,000	762	3,842	1	82	0.67	75.93	26	26,000	29,842	5.20
1,250	5,477	9,319	5	87	1.62	80.56	21	26,250	35,569	6.20
1,500	1,386	10,705	1	88	1.87	81.48	20	30,000	40,705	7.09
2,000	0	10,705	0	88	1.87	81.48	20	40,000	50,705	8.84
2,500	6,933	17,638	2	90	3.07	83.33	18	45,000	62,638	10.91
3,000	8,059	25,697	3	93	4.48	86.11	15	45,000	70,697	12.32
4,000	3,434	29,131	1	94	5.08	87.04	14	56,000	85,131	14.83
5,000	13,091	42,222	2	96	7.36	88.89	12	60,000	102,222	17.81
6,000	5,403	47,625	1	97	8.30	89.81	11	66,000	113,625	19.80
7,000	0	47,625	0	97	8.30	89.81	11	77,000	124,625	21.72
8,000	7,241	54,866	1	98	9.56	90.74	10	80,000	134,866	23.50
9,000	0	54,866	0	98	9.56	90.74	10	90,000	144,866	25.24
10,000	9,483	64,349	1	99	11.21	91.67	9	90,000	154,349	26.90
11,000	0	64,349	0	99	11.21	91.67	9	99,000	163,349	28.46
12,000	0	64,349	0	99	11.21	91.67	9	108,000	172,349	30.03
13,000	0	64,349	0	99	11.21	91.67	9	117,000	181,349	31.60
14,000	0	64,349	0	99	11.21	91.67	9	126,000	190,349	33.17
15,000	14,319	78,668	1	100	13.71	92.59	8	120,000	198,668	34.62
20,000	19,809	98,477	1	101	17.16	93.52	7	140,000	238,477	41.55
25,000	0	98,477	0	101	17.16	93.52	7	175,000	273,477	47.65
30,000	0	98,477	0	101	17.16	93.52	7	210,000	308,477	53.75
35,000	31,323	129,800	1	102	22.62	94.44	6	210,000	339,800	59.21
40,000	0	129,800	0	102	22.62	94.44	6	240,000	369,800	64.44
50,000	47,647	177,447	1	103	30.92	95.37	5	250,000	427,447	74.48
60,000	52,690	230,137	1	104	40.10	96.30	4	240,000	470,137	81.92
70,000	65,813	295,950	1	105	51.57	97.22	3	210,000	505,950	88.16
99,999	277,936	573,886	3	108	100.00	100.00	0	0	573,886	100.00
TOTAL	573,886		108							
AVG. USE	5313.8									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-75 CLASS = SMALL ESSENTIAL AG. GAS SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
250	4,960	4960	151	151	0.40	41.26	215	53,750	58,710	4.69
500	7,808	12,768	22	173	1.02	47.27	193	96,500	109,268	8.72
750	10,820	23,588	17	190	1.88	51.91	176	132,000	155,588	12.42
1,000	20,095	43,683	23	213	3.49	58.20	153	153,000	196,683	15.70
1,500	40,028	83,711	32	245	6.68	66.94	121	181,500	265,211	21.17
2,000	25,708	109,419	15	260	8.73	71.04	106	212,000	321,419	25.66
2,500	13,212	122,631	6	266	9.79	72.68	100	250,000	372,631	29.74
3,000	10,781	133,412	4	270	10.65	73.77	96	288,000	421,412	33.64
3,500	16,773	150,185	5	275	11.99	75.14	91	318,500	468,685	37.41
4,000	19,653	169,838	5	280	13.56	76.50	86	344,000	513,838	41.02
4,500	24,759	194,597	6	286	15.53	78.14	80	360,000	554,597	44.27
5,000	18,611	213,208	4	290	17.02	79.23	76	380,000	593,208	47.35
5,500	10,375	223,583	2	292	17.85	79.78	74	407,000	630,583	50.33
6,000	16,999	240,582	3	295	19.20	80.60	71	426,000	666,582	53.21
7,000	39,944	280,526	6	301	22.39	82.24	65	455,000	735,526	58.71
8,000	22,072	302,598	3	304	24.15	83.06	62	496,000	798,598	63.75
9,000	169,049	471,647	20	324	37.65	88.52	42	378,000	849,647	67.82
10,000	74,344	545,991	8	332	43.58	90.71	34	340,000	885,991	70.72
11,000	62,421	608,412	6	338	48.56	92.35	28	308,000	916,412	73.15
12,000	23,347	631,759	2	340	50.43	92.90	26	312,000	943,759	75.33
13,000	74,598	706,357	6	346	56.38	94.54	20	260,000	966,357	77.14
14,000	81,447	787,804	6	352	62.88	96.17	14	196,000	983,804	78.53
15,000	42,968	830,772	3	355	66.31	96.99	11	165,000	995,772	79.48
16,000	77,133	907,905	5	360	72.47	98.36	6	96,000	1,003,905	80.13
99,999	344,894	1,252,799	6	366	100.00	100.00	0	0	1,252,799	100.00
TOTAL	1,252,799		366							
AVG. USE	3422.9									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-75 CLASS = SMALL ESSENTIAL AG. GAS SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
250	16,195	16195	80	80	1.05	21.86	286	71,500	87,695	5.67
500	11,055	27,250	30	110	1.76	30.05	256	128,000	155,250	10.04
750	9,694	36,944	16	126	2.39	34.43	240	180,000	216,944	14.03
1,000	12,397	49,341	14	140	3.19	38.25	226	226,000	275,341	17.81
1,500	40,574	89,915	33	173	5.82	47.27	193	289,500	379,415	24.54
2,000	58,349	148,264	34	207	9.59	56.56	159	318,000	466,264	30.16
2,500	24,036	172,300	11	218	11.14	59.56	148	370,000	542,300	35.08
3,000	32,246	204,546	13	231	13.23	63.11	135	405,000	609,546	39.43
3,500	29,318	233,864	9	240	15.13	65.57	126	441,000	674,864	43.65
4,000	18,489	252,353	5	245	16.32	66.94	121	484,000	736,353	47.63
4,500	47,271	299,624	11	256	19.38	69.95	110	495,000	794,624	51.40
5,000	33,453	333,077	7	263	21.54	71.86	103	515,000	848,077	54.86
5,500	31,782	364,859	6	269	23.60	73.50	97	533,500	898,359	58.11
6,000	11,249	376,108	2	271	24.33	74.04	95	570,000	946,108	61.20
7,000	32,439	408,547	5	276	26.43	75.41	90	630,000	1,038,547	67.18
8,000	98,447	506,994	13	289	32.79	78.96	77	616,000	1,122,994	72.64
9,000	84,007	591,001	10	299	38.23	81.69	67	603,000	1,194,001	77.23
10,000	133,703	724,704	14	313	46.88	85.52	53	530,000	1,254,704	81.16
11,000	125,893	850,597	12	325	55.02	88.80	41	451,000	1,301,597	84.19
12,000	35,887	886,484	3	328	57.34	89.62	38	456,000	1,342,484	86.84
13,000	163,144	1,049,628	13	341	67.89	93.17	25	325,000	1,374,628	88.91
14,000	95,539	1,145,167	7	348	74.07	95.08	18	252,000	1,397,167	90.37
15,000	0	1,145,167	0	348	74.07	95.08	18	270,000	1,415,167	91.54
16,000	0	1,145,167	0	348	74.07	95.08	18	288,000	1,433,167	92.70
99,999	400,837	1,546,004	18	366	100.00	100.00	0	0	1,546,004	100.00
TOTAL	1,546,004		366							
AVG. USE	4224.1									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-80 CLASS = NATURAL GAS ENGINE SERVICE AREA = ARIZONA PERIOD = SUMMER (MAY - OCT)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	11,466	11466	754	754	0.10	30.15	1,747	174,700	186,166	1.56
200	7,618	19,084	48	802	0.16	32.07	1,699	339,800	358,884	3.01
300	9,411	28,495	32	834	0.24	33.35	1,667	500,100	528,595	4.43
400	2,400	30,895	6	840	0.26	33.59	1,661	664,400	695,295	5.82
500	21,145	52,040	45	885	0.44	35.39	1,616	808,000	860,040	7.20
750	28,354	80,394	39	924	0.67	36.95	1,577	1,182,750	1,263,144	10.58
1,000	9,000	89,394	9	933	0.75	37.31	1,568	1,568,000	1,657,394	13.88
1,250	50,876	140,270	50	983	1.17	39.30	1,518	1,897,500	2,037,770	17.06
1,500	38,506	178,776	29	1,012	1.50	40.46	1,489	2,233,500	2,412,276	20.20
1,750	75,007	253,783	47	1,059	2.12	42.34	1,442	2,523,500	2,777,283	23.25
2,000	97,416	351,199	51	1,110	2.94	44.38	1,391	2,782,000	3,133,199	26.24
2,250	119,755	470,954	54	1,164	3.94	46.54	1,337	3,008,250	3,479,204	29.13
2,500	86,429	557,383	35	1,199	4.67	47.94	1,302	3,255,000	3,812,383	31.92
2,750	112,833	670,216	42	1,241	5.61	49.62	1,260	3,465,000	4,135,216	34.63
3,000	0	670,216	0	1,241	5.61	49.62	1,260	3,780,000	4,450,216	37.26
3,250	335,207	1,005,423	104	1,345	8.42	53.78	1,156	3,757,000	4,762,423	39.88
3,500	168,000	1,173,423	48	1,393	9.83	55.70	1,108	3,878,000	5,051,423	42.30
4,000	324,701	1,498,124	84	1,477	12.54	59.06	1,024	4,096,000	5,594,124	46.84
4,500	481,663	1,979,787	110	1,587	16.58	63.45	914	4,113,000	6,092,787	51.02
5,000	370,434	2,350,221	75	1,662	19.68	66.45	839	4,195,000	6,545,221	54.80
5,500	352,000	2,702,221	64	1,726	22.63	69.01	775	4,262,500	6,964,721	58.32
6,000	348,000	3,050,221	58	1,784	25.54	71.33	717	4,302,000	7,352,221	61.56
7,000	309,040	3,359,261	47	1,831	28.13	73.21	670	4,690,000	8,049,261	67.40
8,000	1,047,803	4,407,064	140	1,971	36.90	78.81	530	4,240,000	8,647,064	72.40
99,999	7,535,752	11,942,816	530	2,501	100.00	100.00	0	0	11,942,816	100.00
TOTAL	11,942,816		2,501							
AVG. USE	4775.2									

SOUTHWEST GAS CORPORATION

BILL FREQUENCY ANALYSIS

TEST YEAR AS ADJUSTED

RATE SCHEDULE = G-80 CLASS = NATURAL GAS ENGINE SERVICE AREA = ARIZONA PERIOD = WINTER (JAN - APR & NOV - DEC)

INTERVAL UPPER LIMIT	THERMS IN INTERVAL	CUMULATIVE THERMS	BILLS IN INTERVAL	CUMULATIVE BILLS	CUMULATIVE USAGE PERCENT	CUMULATIVE BILLS PERCENT	BILLS PASSING INTERVAL UPPER LIMIT	THERMS FROM BILLS PASSING UPPER LIMIT	CONSOLIDATED THERMS	FACTOR PERCENT
100	22,115	22115	790	790	0.41	31.83	1,692	169,200	191,315	3.56
200	20,904	43,019	105	895	0.80	36.06	1,587	317,400	360,419	6.70
300	0	43,019	0	895	0.80	36.06	1,587	476,100	519,119	9.65
400	31,179	74,198	96	991	1.38	39.93	1,491	596,400	670,598	12.46
500	28,392	102,590	62	1,053	1.91	42.43	1,429	714,500	817,090	15.19
750	64,350	166,940	117	1,170	3.10	47.14	1,312	984,000	1,150,940	21.39
1,000	140,903	307,843	170	1,340	5.72	53.99	1,142	1,142,000	1,449,843	26.95
1,250	187,305	495,148	167	1,507	9.20	60.72	975	1,218,750	1,713,898	31.86
1,500	171,341	666,489	121	1,628	12.39	65.59	854	1,281,000	1,947,489	36.20
1,750	214,161	880,650	124	1,752	16.37	70.59	730	1,277,500	2,158,150	40.11
2,000	0	880,650	0	1,752	16.37	70.59	730	1,460,000	2,340,650	43.51
2,250	133,849	1,014,499	63	1,815	18.86	73.13	667	1,500,750	2,515,249	46.75
2,500	194,437	1,208,936	82	1,897	22.47	76.43	585	1,462,500	2,671,436	49.65
2,750	0	1,208,936	0	1,897	22.47	76.43	585	1,608,750	2,817,686	52.37
3,000	179,024	1,387,960	64	1,961	25.80	79.01	521	1,563,000	2,950,960	54.85
3,250	89,225	1,477,185	28	1,989	27.46	80.14	493	1,602,250	3,079,435	57.24
3,500	160,897	1,638,082	47	2,036	30.45	82.03	446	1,561,000	3,199,082	59.46
4,000	122,141	1,760,223	33	2,069	32.72	83.36	413	1,652,000	3,412,223	63.42
4,500	69,920	1,830,143	17	2,086	34.02	84.05	396	1,782,000	3,612,143	67.14
5,000	158,804	1,988,947	35	2,121	36.97	85.46	361	1,805,000	3,793,947	70.52
5,500	134,215	2,123,162	27	2,148	39.46	86.54	334	1,837,000	3,960,162	73.61
6,000	200,471	2,323,633	36	2,184	43.19	87.99	298	1,788,000	4,111,633	76.42
7,000	560,556	2,884,189	91	2,275	53.61	91.66	207	1,449,000	4,333,189	80.54
8,000	80,001	2,964,190	11	2,286	55.09	92.10	196	1,568,000	4,532,190	84.24
99,999	2,415,959	5,380,149	196	2,482	100.00	100.00	0	0	5,380,149	100.00
TOTAL	5,380,149		2,482							
AVG. USE	2167.7									

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CALCULATION OF MONTHLY MARGIN PER CUSTOMER - EQUAL SPREAD
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total / Weighed Avg Annual Margin Per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Single-Family Residential Gas Service														
1	Number of Customers w/o GCU	1,018,232	1,017,921	1,017,271	1,015,804	1,009,538	1,008,408	1,012,612	1,014,266	1,014,194	1,014,342	1,015,423	1,017,032	12,175,043	1
2	Number of Customers Including GCU	1,023,313	1,023,002	1,022,359	1,020,895	1,014,611	1,013,476	1,017,680	1,019,327	1,019,246	1,019,413	1,020,491	1,022,081	12,235,894	
3	Current Monthly Margin per Customer (2019 GRC)	$ 58.57	$ 51.06	$ 41.27	$ 30.08	$ 23.82	$ 23.02	$ 21.14	$ 20.18	$ 20.69	$ 21.72	$ 24.05	$ 42.82	$ 378.75	3
4	Current Monthly Margin (2019 GRC)	$ 59,637,848	$ 51,975,046	$ 41,982,774	$ 30,555,384	$ 24,047,195	$ 23,213,552	$ 21,406,618	$ 20,467,888	$ 20,983,674	$ 22,031,508	$ 24,420,923	$ 43,549,310	$ 384,271,721	4
5	Proposed Monthly Margin per Customer (2021 GRC)	$ 63.94	$ 56.43	$ 46.64	$ 35.45	$ 29.19	$ 28.39	$ 26.51	$ 25.55	$ 26.06	$ 27.09	$ 29.42	$ 48.19	$ 443.19	5
6	Margin Increase / (Decrease) [1]	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 5.37	$ 64.44	6
7	Total Monthly Margin (2021 GRC)	$ 65,430,633	$ 57,728,003	$ 47,682,824	$ 36,190,728	$ 29,616,495	$ 28,772,584	$ 26,978,697	$ 26,043,805	$ 26,561,551	$ 27,615,898	$ 30,022,845	$ 49,254,083	$ 451,898,146	7
	Multi-Family Residential Gas Service														
8	Number of Customers	37,841	37,846	37,788	37,748	37,290	37,189	37,503	37,598	37,628	37,668	37,707	37,813	451,619	8
9	Current Monthly Margin per Customer (2019 GRC)	$ 33.77	$ 30.97	$ 26.92	$ 22.79	$ 20.27	$ 19.90	$ 18.56	$ 17.92	$ 18.26	$ 18.66	$ 20.04	$ 27.77	$ 276.05	9
10	Current Monthly Margin (2019 GRC)	$ 1,277,891	$ 1,172,091	$ 1,017,253	$ 860,277	$ 755,868	$ 740,061	$ 696,056	$ 673,756	$ 687,087	$ 702,885	$ 755,648	$ 1,050,067	$ 10,388,940	10
11	Proposed Monthly Margin per Customer (2021 GRC)	$ 38.32	$ 35.52	$ 31.47	$ 27.34	$ 24.82	$ 24.45	$ 23.11	$ 22.47	$ 22.81	$ 23.21	$ 24.59	$ 32.32	$ 330.65	11
12	Margin Increase / (Decrease) [1]	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 4.55	$ 54.60	12
13	Total Monthly Margin (2021 GRC)	$ 1,450,067	$ 1,344,290	$ 1,189,188	$ 1,032,030	$ 925,538	$ 909,271	$ 866,694	$ 844,827	$ 858,295	$ 874,274	$ 927,215	$ 1,222,116	$ 12,443,806	13
	Single-Family Low Income Residential Gas Service														
14	Number of Customers	42,330	42,699	42,870	42,629	42,120	41,870	41,645	41,367	41,372	41,674	42,266	42,287	505,129	14
15	Current Monthly Margin per Customer (2019 GRC)	$ 56.21	$ 49.86	$ 39.04	$ 28.41	$ 22.24	$ 21.45	$ 19.78	$ 18.91	$ 19.25	$ 20.05	$ 22.86	$ 41.44	$ 360.73	15
16	Current Monthly Margin (2019 GRC)	$ 2,379,369	$ 2,128,972	$ 1,673,645	$ 1,211,090	$ 936,749	$ 898,112	$ 823,738	$ 782,250	$ 796,411	$ 835,564	$ 966,201	$ 1,752,373	$ 15,184,473	16
17	Proposed Monthly Margin per Customer (2021 GRC)	$ 61.00	$ 54.65	$ 43.83	$ 33.20	$ 27.03	$ 26.24	$ 24.57	$ 23.70	$ 24.04	$ 24.84	$ 27.65	$ 46.23	$ 418.21	17
18	Margin Increase / (Decrease) [1]	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 4.79	$ 57.48	18
19	Total Monthly Margin (2021 GRC)	$ 2,582,130	$ 2,333,500	$ 1,878,992	$ 1,415,283	$ 1,138,504	$ 1,098,669	$ 1,023,218	$ 980,398	$ 994,583	$ 1,035,182	$ 1,168,655	$ 1,954,928	$ 17,604,041	19
	Multi-Family Low Income Residential Gas Service														
20	Number of Customers	3,227	3,271	3,267	3,229	3,186	3,177	3,175	3,168	3,157	3,194	3,244	3,239	38,534	20
21	Current Monthly Margin per Customer (2019 GRC)	$ 38.83	$ 35.19	$ 29.40	$ 23.89	$ 20.72	$ 20.56	$ 19.00	$ 18.26	$ 18.53	$ 18.87	$ 20.49	$ 30.67	$ 295.12	21
22	Current Monthly Margin (2019 GRC)	$ 125,304	$ 115,106	$ 96,050	$ 77,141	$ 66,014	$ 65,319	$ 60,325	$ 57,848	$ 58,499	$ 60,271	$ 66,470	$ 99,340	$ 947,687	22
23	Proposed Monthly Margin per Customer (2021 GRC)	$ 43.59	$ 39.95	$ 34.16	$ 28.65	$ 25.48	$ 25.32	$ 23.76	$ 23.02	$ 23.29	$ 23.63	$ 25.25	$ 35.43	$ 352.24	23
24	Margin Increase / (Decrease) [1]	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 4.76	$ 57.12	24
25	Total Monthly Margin (2021 GRC)	$ 140,665	$ 130,676	$ 111,601	$ 92,511	$ 81,179	$ 80,442	$ 75,438	$ 72,927	$ 73,527	$ 75,474	$ 81,911	$ 114,758	$ 1,131,109	25
	Small General Gas Service														
26	Number of Customers w/o GCU - Sales	17,239	17,286	17,439	17,380	17,156	17,081	16,964	16,895	16,891	16,873	16,997	17,139	205,340	26
27	Number of Customers w/o GCU - Transportation	7	7	7	7	7	7	7	7	7	7	7	7	84	
28	Number of Customers Including GCU	17,370	17,417	17,570	17,511	17,287	17,213	17,095	17,026	17,021	17,001	17,127	17,269	206,907	
29	Current Monthly Margin per Customer (2019 GRC)	$ 74.88	$ 66.68	$ 56.50	$ 43.63	$ 39.10	$ 38.80	$ 37.23	$ 36.60	$ 36.90	$ 37.39	$ 39.38	$ 56.34	$ 564.51	29
30	Current Monthly Margin (2019 GRC)	$ 1,291,380	$ 1,153,097	$ 985,699	$ 758,595	$ 671,073	$ 663,014	$ 631,830	$ 618,613	$ 623,536	$ 631,143	$ 669,618	$ 966,006	$ 9,663,605	30
31	Proposed Monthly Margin per Customer (2021 GRC)	$ 81.39	$ 73.19	$ 63.01	$ 50.14	$ 45.61	$ 45.31	$ 43.74	$ 43.11	$ 43.41	$ 43.90	$ 45.89	$ 62.85	$ 642.62	31
32	Margin Increase / (Decrease) [1]	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 6.51	$ 78.11	32
33	Total Monthly Margin (2021 GRC)	$ 1,413,744	$ 1,274,750	$ 1,107,086	$ 878,002	$ 788,460	$ 779,921	$ 747,735	$ 733,991	$ 738,882	$ 746,344	$ 785,958	$ 1,085,357	$ 11,080,229	33
	Medium General Gas Service														
34	Number of Customers w/o GCU - Sales	16,554	16,530	16,389	16,330	16,020	16,504	16,308	16,249	16,319	16,378	16,459	16,516	196,556	34
35	Number of Customers w/o GCU - Transportation	91	91	91	91	91	91	91	91	91	91	91	91	1,092	35
36	Number of Customers Including GCU	16,767	16,743	16,602	16,543	16,233	16,717	16,521	16,462	16,532	16,591	16,672	16,729	199,112	
37	Current Monthly Margin per Customer (2019 GRC)	$ 236.26	$ 220.83	$ 190.40	$ 161.39	$ 141.20	$ 136.28	$ 123.18	$ 119.57	$ 124.23	$ 131.15	$ 145.09	$ 198.31	$ 1,930.36	37
38	Current Monthly Margin (2019 GRC)	$ 3,932,548	$ 3,670,415	$ 3,137,792	$ 2,650,185	$ 2,274,873	$ 2,261,567	$ 2,020,029	$ 1,953,774	$ 2,038,614	$ 2,159,909	$ 2,401,240	$ 3,293,334	$ 31,794,280	38
39	Proposed Monthly Margin per Customer (2021 GRC)	$ 269.10	$ 253.67	$ 223.24	$ 194.23	$ 174.04	$ 169.12	$ 156.02	$ 152.41	$ 157.07	$ 163.99	$ 177.93	$ 231.15	$ 2,324.42	39
40	Margin Increase / (Decrease) [1]	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 32.84	$ 394.06	40
41	Total Monthly Margin (2021 GRC)	$ 4,512,000	$ 4,247,197	$ 3,706,230	$ 3,213,147	$ 2,825,191	$ 2,827,179	$ 2,577,606	$ 2,508,973	$ 2,596,681	$ 2,720,758	$ 2,966,449	$ 3,866,908	$ 38,568,321	41

SCHEDULE H-6
SHEET 1 OF 2

SOUTHWEST GAS CORPORATION
ARIZONA GENERAL RATE CASE
CALCULATION OF MONTHLY MARGIN PER CUSTOMER - EQUAL SPREAD
FOR THE TWELVE MONTHS ENDED AUGUST 31, 2021

Line No.	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total / Weighed Avg Annual Margin Per Customer	Line No.
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Large-1 General Gas Service														
42	Number of Customers w/o GCU - Sales	6,558	6,567	6,509	6,520	6,088	7,042	6,685	6,731	6,634	6,596	6,588	6,570	79,088	42
43	Number of Customers w/o GCU - Transportation	180	180	180	180	180	180	180	180	180	180	180	180	2,160	43
44	Number of Customers Including GCU	6,757	6,766	6,708	6,719	6,287	7,241	6,884	6,930	6,833	6,795	6,787	6,769	81,476	
45	Current Monthly Margin per Customer (2019 GRC)	$ 924.28	$ 861.15	$ 748.52	$ 664.53	$ 575.10	$ 537.15	$ 461.75	$ 438.56	$ 456.32	$ 498.59	$ 578.24	$ 794.12	$ 7,524.17	45
46	Current Monthly Margin (2019 GRC)	$ 6,227,799	$ 5,810,179	$ 5,006,850	$ 4,452,351	$ 3,604,727	$ 3,879,297	$ 3,169,914	$ 3,030,888	$ 3,109,364	$ 3,378,446	$ 3,913,528	$ 5,360,310	$ 50,943,654	46
47	Proposed Monthly Margin per Customer (2021 GRC)	$ 991.91	$ 928.78	$ 816.15	$ 732.16	$ 642.73	$ 604.78	$ 529.38	$ 506.19	$ 523.95	$ 566.22	$ 645.87	$ 861.75	$ 8,335.77	47
48	Margin Increase / (Decrease) [1]	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 67.63	$ 811.60	48
49	Total Monthly Margin (2021 GRC)	$ 6,702,336	$ 6,284,125	$ 5,474,734	$ 4,919,383	$ 4,040,844	$ 4,379,212	$ 3,644,252	$ 3,507,897	$ 3,580,150	$ 3,847,465	$ 4,383,520	$ 5,833,186	$ 56,597,103	49
	Large-2 General Gas Service														
50	Number of Customers w/o GCU - Sales	313	315	314	318	289	362	337	339	321	324	321	316	3,869	50
51	Number of Customers w/o GCU - Transportation	73	73	73	73	73	73	73	73	73	73	73	73	876	51
52	Number of Customers Including GCU	389	391	390	394	365	438	413	415	397	400	397	392	4,781	
53	Current Monthly Margin per Customer (2019 GRC)	$ 3,713.72	$ 3,466.60	$ 3,396.93	$ 2,929.62	$ 2,579.91	$ 2,425.28	$ 1,998.60	$ 1,909.58	$ 1,988.68	$ 2,166.89	$ 2,623.98	$ 3,310.14	$ 32,368.43	53
54	Current Monthly Margin (2019 GRC)	$ 1,433,496	$ 1,345,041	$ 1,314,612	$ 1,145,481	$ 933,927	$ 1,054,997	$ 819,426	$ 786,747	$ 783,540	$ 860,255	$ 1,033,848	$ 1,287,644	$ 12,799,015	54
55	Proposed Monthly Margin per Customer (2021 GRC)	$ 4,093.35	$ 3,846.23	$ 3,776.56	$ 3,309.25	$ 2,959.54	$ 2,804.91	$ 2,378.23	$ 2,289.21	$ 2,368.31	$ 2,546.52	$ 3,003.61	$ 3,689.77	$ 36,925.05	55
56	Margin Increase / (Decrease) [1]	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 379.63	$ 4,556.63	56
57	Total Monthly Margin (2021 GRC)	$ 1,592,313	$ 1,503,876	$ 1,472,858	$ 1,303,845	$ 1,080,232	$ 1,228,551	$ 982,209	$ 950,022	$ 940,219	$ 1,018,608	$ 1,192,433	$ 1,446,390	$ 14,711,556	57

[1] Annual Margin Per Customer incremental increase spread equally among months. Some months may be adjusted to equal proposed class margin revenue.

SCHEDULE H-6
SHEET 2 OF 2