ORIGINAL

E000006583

MEMORANDUM

TO: Docket Control

FROM: Elijah O. Abinah
Director
Utilities Division

DATE: May 19, 2020

RE: IN THE MATTER OF THE RATE REVIEW AND EXAMINATION OF THE BOOKS AND RECORDS OF ARIZONA PUBLIC SERVICE COMPANY AND ITS AFFILIATES, SUBSIDIARIES AND PINNACLE WEST CORPORATION. (DOCKET NO. E-01345A-19-0003)

In Decision No. 77270, dated June 27, 2019, the Arizona Corporation Commission ("Commission") directed Arizona Public Service Company ("APS") to fund and implement a Customer Outreach and Education Program that was to be developed and administered by the Commission's Utilities Division Staff ("Staff"). In Finding of Fact 39, Staff was directed to hire, and APS was directed to pay for, an independent consultant to complete this task.

Attached is the evaluation completed by Staff's consultant, Barbara R. Alexander. This report is being docketed in the APS Rate Review Docket No. E-01345A-19-0003 and the APS Rate Case Docket No. E-01345A-19-0236.

EOA:RSP:elr

Originator: Ranelle Paladino

Attachments

ACC - Docket Control - Received 5/19/2020 11:55 AM
ACC - Docket Control - Docketed 5/19/2020 1:30 PM

On this 19th day of May 2020, the foregoing document was filed with Docket Control as a Utilities Division Memorandum, and copies of the foregoing were mailed on behalf of the Utilities Division to the following who have not consented to email service. On this date or as soon as possible thereafter, the Commission's eDocket program will automatically email a link to the foregoing to the following who have consented to email service.

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AN EVALUATION OF ARIZONA PUBLIC SERVICE COMPANY'S CUSTOMER EDUCATION PLAN AND ITS IMPLEMENTATION

Barbara R. Alexander
Barbara Alexander Consulting LLC

May 19, 2020

PREPARED ON BEHALF OF THE STAFF OF THE ARIZONA CORPORATION COMMISSION

DOCKET NO. E-01345A-19-0236
And
DOCKET NO. E-01345A-19-0003

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I. EXECUTIVE SUMMARY

NOTE: This Executive Summary does not include the footnotes and citations provided in the body of the Report.

BEST PRACTICES. This Report relies on the Marketing, Education, and Outreach (ME&O) plans developed by the California investor owned electric utilities to implement the Time of Use rate mandate for residential customers as the basis for comparing the APS Plan to "best practices." While no other U.S. investor owned utility has been ordered to impose rate design changes for all its residential customers similar to that ordered by the Commission in its August 2017 Order for APS, the California experience reflects the closest comparison.

The Table of Contents for the Southern California Edison (similar to those in effect for Pacific Gas & Electric and San Diego Gas & Electric) ME&O plan includes the following key issues and attributes, most of which are missing from the APS Education Plan:

- ME&O Messaging Strategy
- Current Market Overview
- Research Results and Implications/Challenges
- Risks and Barriers to Achieve Goals
- Specific Marketing Actions and Timeline
- Ongoing Research on messaging, customer satisfaction, awareness
- Marketing Objectives: specific with each phase
- Target Audience and Segmentation: customer demographics; low income; relationship to solar customers
- Specific messages and timing for all outbound communications
- New/Transfer Customer Engagement
- Partner and Community Based Organization Strategy
- Measurement and Metrics: goals; ongoing tracking surveys; measurement plan; accountability and enforcement
- Budget

HOW APS DEVELOPED ITS EDUCATION PLAN. The Commission required APS to file a draft Customer Education and Outreach Plan pursuant to Decision 76295 that was subject to Stakeholder review over a 10-day calendar period. APS filed its final Plan on September 29, 2017 consisting of 15 pages. The purpose of this Plan was to educate customers about the Commission's approval of a Settlement agreement to migrate all non-solar residential customers to one of five new rate plans starting February 2018 and concluding by May 1, 2018, a period of 4-5 months from the submittal of the Plan. This Settlement was the result of APS's 2016 rate case filing in which APS had recommended that all residential customers move to time of use and/or demand rates. The Education Plan was to be funded by a $5 million transfer of unallocated Demand Side Management funds.

APS submitted its draft plan to Stakeholders. However, most of the comments from consumer organizations were ignored in the final version of the Plan. Several consumer representatives reported that they attempted to get more detailed information from APS about how this Plan would be implemented, including information on messaging, reporting, and performance metrics. All the major consumer organizations submitted a detailed letter to APS pointing out the deficiencies of the draft plan and identifying specific content that should be included in the Plan.

APS's filing letter that accompanied the submission of the Final Plan stated that the Stakeholder input resulted in improvements to the Plan in only three areas and that APS had adopted these recommendations: (1) Spanish language messaging; (2) allowing customers to opt out of text messaging at any time; and (3) demand side management messaging. Therefore, APS ignored the comments of the consumer organizations and failed to even describe or reference those comments in its cover letter accompanying the Final Plan to the Commission on September 29th.

In this Plan APS promised to notify customers through a variety of channels, including bill messages, web portal, text messages, social media posts, and formal TV and newspaper media, of their "best rate, a rate plan that provides them with the lowest electricity bill based on the analysis of the customer's most recent 12-months usage data." This information was to be accompanied with messages and education to encourage "further awareness, understanding, and cost saving opportunities through customer touchpoints." Further, APS proposed to use customer segmentation analytics to educate customers on their "best rate" and how to manage electricity to save on their electric bill. This customer segmentation process would depend on analysis of the customer's historical usage. Overall, APS promised to use customer usage patterns, various levels of engagement, and various communication methods to achieve their objectives.

APS stated its "goals" as (1) drive awareness of new rate structures and "best rate" choices; (2) acknowledge customer interest and answer customer questions; (3) educate customers on opportunities to save through the core message of "shift, stagger, and save," and demand side management programs; (4) encourage customers to "engage" with their electricity usage and learn how usage can affect their total bill; and (5) increase customer adoption of tools and resources to "facilitate their electricity usage awareness and control."

A critical aspect of the APS Plan is that the messages focused on "saving" on a plan, but that calculation was not based on promises of saving on lower future electricity rates by reducing peak or demand usage. Nor was it based on comparing a customer's new plan with the customer's old plan, but rather on comparing the customer's usage profile to each of the new plans. As a result of the strict limitations associated with service under the flat rate options due to their annual usage limitations, it was assumed that the vast majority of customers who had not voluntarily selected a time of use or demand charge plan in the past would be moved to a time of use or demand side for the first time.

NO IDENTIFICATION OF RISKS AND BARRIERS IN PLAN. The APS Plan failed to identify risks and barriers to achieve its intended goals and objectives:

- Rate design changes for all customers;
- Changes in rate design with increase in rates;
- Short time period for education;
- No significant change in bill presentation, especially for demand charges;
- Customers pay monthly bills not annual bills and all bill impact projections based on annual costs;
- No bill protections or exemptions for low income customers or those with special needs.

The following table shows the residential customer enrollment in the legacy rate plans at the time of the 2016 rate case and the enrollment of non-solar residential customers in the new rate plans in December 2018:

Rate Class	2015 Test Year	2018 Actual	% Change (2015 to 2018)
Basic Rate Plans (R-XS, R-Basic, R-Basic Legacy)	420,207	456,301	9%
Time of Use-Energy (R-TOU-E)	329,997	372,869	13%
Time of Use-Demand (R-2, R-3, R-TECH)	263,930	192,225	(27%)
Total	1,046,990	1,100,816	

APS PERFORMANCE TRACKING WAS INSUFFICIENT: APS's Customer Education Plan did not include any performance metrics or methodology to allow an objective determination of its success or failure in meeting its stated objectives. When later asked how the Company determined the success or value of its Plan, the response primarily took the form of compiling the volume of its various customer communications.

While APS's response touted its success or "effectiveness" in a later communication to the Commission based, in part, on the fact that 22.8% of residential customers voluntarily switched to a new service plan during the transition period, the actual Plan itself does not establish any goals or objectives to reflect customer switch rates. As a result, it is not possible to determine if this switch rate was reasonable or not.

APS later presented information about how it internally decided to track the plan's implementation through the number of advertisements it published, the number of social media posts published, the number of web pages visited, the number of meetings with APS personnel as speakers, and the number of bill inserts and customer communications it issued.

None of the APS internal performance tracking metrics or results were included in the Education Plan and not all of them are related to the Education Plan's implementation. Nor has the Commission approved the "targets" that APS established for itself in these metrics.

APS'S CUSTOMER EDUCATION PLAN DID NOT CONFORM TO BEST PRACTICES. APS's Customer Education Plan failed to include essential components of a reasonable customer education plan or program given the monumental task that the Company stated it could achieve. Among the key defects or omissions:

A. APS did not include a performance metrics or other measures of success, that is, how it would measure the achievement of its stated goals and objectives in its Customer Education Plan.

B. While APS's Plan specifically identified many "touchpoints" to measure communications or interactions with customers, APS did not identify the volume or type of customer inquiries or complaints as indicia of the Plan's success.

C. APS's Plan did not propose to track the success of its Plan by relying on call center call completion, abandonment rate, or other indicia of customer experience in attempting to communicate with APS's customer call center. However, APS's customer service performance at its call center was below average during the transition period and remains below average today.

D. The APS Plan did not propose to measure the number of customers who actually signed up to receive text messages, enroll with the APS web portal to view their account usage details, or enroll in budget billing (a program emphasized to customers who were questioning the difference in higher summer bills under their rate plan). In fact, the data concerning these enrollments reflect less than half of APS's residential customers.

E. The APS plan did not establish any objectives or goals that actually measured customer behavior as a result of the APS communications, including any measurement of switch rates or a measurement of whether customers were actually put on the "best plan" as a result of APS's educational program. The fact that only 22% of its residential customers affirmatively chose a "best" plan during the transition period raises questions about this level of customer response and indicates that lack of any determination as to whether the feedback loop between the Plan itself and the actual customer response to the Plan's messages was reasonable. Other data suggests that APS's communications designed to educate customers about their "best" or "most economical" plan have not been successful. As of the September 2019 mailing to residential customers, 400,008 customers were informed that they were not on the most economical plan, 36% of APS's residential customers.

F. Finally, APS did not conduct any research to determine customer comprehension or understanding of its customer communications and messaging about the new rate plans, their names, or the details of the plan options, after the Settlement Agreement was reached. Nor has APS conducted any customer research concerning how or whether customers actually understand how their rate plan works since the transition was implemented. Rather, APS's research and messaging relies almost entirely on pre-transition research conducted when the time of use and demand feature rate plans were voluntary. Of particular concern is that APS renamed all its rate plans AFTER the Education Plan was submitted and has not conducted any customer research on whether the "SAVER" and "PREMIER" rate names are understood by customers or that those names properly reflect the key attributes of the rate plan.

G. The APS Customer Education Plan did not present information on the demographic characteristics for residential customers in its service territory. Customer housing patterns, family size, educational achievement, literacy, income, and employment situations all need to be considered in developing a customer focused educational strategy. APS used the same messages and themes in all its communications.

H. The Plan did not specifically identify the special needs of low income and fixed income customers in its Education Plan or develop specific communication channels and messaging for these customers. Nor did APS's Plan include any specific coordination with or involvement by local community organizations to educate special needs and/or vulnerable customers about these rate changes in a manner that responds to their specific needs. APS's Plan did not include any funding to local community organizations to implement targeted education and counseling on rate options.

APS'S DEMAND CHARGE RATE EDUCATION HAS BEEN FAULTY. APS's Education Plan relied primarily on its experience in explaining demand rates and demand rate plans to its customers when these rate options were voluntary to implement the new rate plan mandates and the transition in 2017-2018. That Plan stated that it would rely on the "shift, stagger, and save" messaging that had been in use since 2016.

But the Plan did not include specific messages or educational content to explain the demand rate plans or how the rate-specific criteria to move customers into those plans would be explained to affected customers. Instead, demand rate plans were presented as opportunities to "save" by shifting usage and taking "control" of usage on an hourly basis. It should be noted that the change in the peak usage hours from the legacy TOU and demand rate plans compared to the newly adopted plans was not specifically discussed in the Education Plan.

The training provided to the Company's customer service representatives reflects the complexity of explaining the demand charge feature of these rate plans and the manner in

which the demand charge dollar amount is calculated and presented on the customer bill. The only manner in which the customer can actually see the daily peak usage and any demand value since the issuance of the last bill is on the APS web portal and on the APS app if downloaded to the customer's smart phone. However, these features only show the customer's demand event up to the prior day. On the customer's bill, there is no presentation of the demand charge rate itself (the dollar amount per kW stated in the tariff) or when the demand peak was incurred. Furthermore, the total dollar amount of the applicable demand charge does not appear on the customer's bill. The right column on the bill tells the customer the "on peak demand meter reading" and the "on peak demand in kW." The other column shows a long list of detailed and itemized charges, including two different dollar amounts labeled "generation demand charge" and a "distribution demand charge."

APS HAS NOT EVALUATED THE ACCURACY OF ITS RATE PLAN EDUCATION FOR NEW AND MOVING CUSTOMERS. APS did not change its method or approach in dealing with customers calling for new or transferred service that was adopted at the time it implemented voluntary time of use and demand rate options. This approach relies on asking a few basic "lifestyle" questions about the square footage of the home, whether the home is all electric or any gas appliances, or whether there is a pool or spa. At the customer's request, all the rate plan options are identified, and the customer is referred to the aps.com web portal for more detailed information. New customers are informed about the importance of reviewing their rate plan after 3-6 months of usage and to use the Rate Comparison Tool on the website.

APS has not undertaken any specific customer research as to whether the plan recommended to the new or moving customer who are put on a plan without any actual historical usage information has actually resulted in the "best" plan or whether these customers have switched to a cheaper plan and, if so, when.

ANNUAL RATE REVIEW AND INVOLUNTARY RATE CHANGES. While not discussed in the Education Plan, APS conducts an annual review of those customers who are no longer qualified for the customer's current rate plan and changes that customer's rate plan without explicit customer approval. This annual rate migration is undertaken based on a review of the customers with at least 12 months of historical usage. The number of customers who were involuntarily migrated to a different service plan as of the December 2019 review totaled 58,984; 30,900 of whom were moved from Lite Choice to Premier Choice or Saver Choice and 24,228 customers on Premier Choice moved to Lite Choice and Saver Choice. This switch was announced to customers via a bill message. However, even APS's own internal training materials informs their representatives that "the reassigned plan is not necessarily the least expensive plan so always perform a service plan comparison for customers who contact us."

The fact that so many customers are being served by plans for which they are no longer qualified based on their historical usage suggests a concern with the efficacy of APS's Education Plan.

THERE IS NO FORMAL CUSTOMER EDUCATION PLAN FOR 2020 AND BEYOND. APS has not updated its Education Plan or undertaken steps to update its Customer Education goals and objectives since the end of the transition period covered by the 2017 Plan. Rather, APS has developed what it refers to as various "plans" for marketing of various approved APS programs (for example, home performance, DSM, energy education, safety net, and other routine customer communications for ongoing initiatives). However, these documents do not include any of the key components of an education plan as set forth in this Report. Nor are the various communication "plans" coordinated or reflective of any ongoing customer research.

RECENT POSITIVE DEVELOPMENTS. After the discovery of the errors in its rate analysis tool APS issued a public apology and has pledged to issue refunds to affected customers funded by shareholders. Additional initiatives are worth noting as positive developments.

- At the direction of the Commission, APS is implementing a "pro forma" bill in March 2020 that includes information that is customer specific about the monthly and annual total bill implications of the customer's rate plan compared to the "lowest cost" rate plan for which the customer qualifies. This is likely to improve customer understanding of the bill impacts of their own plan compared to other options.
- APS is conducting more outreach and engagement with stakeholders.
- APS is developing a redesigned residential customer bill and has sought stakeholder input on its design options. One aspect of the bill redesign that should be the focus of consumer and Commission attention is the presentation of demand charges, how they are calculated and what specific usage profile triggered the billed demand charge. There is no evidence to date that reflects any significant change from the current bill information on demand charges in the bill design discussions or bill design formats I have reviewed.

RECOMMENDATIONS. While this Report identifies the shortcomings of APS's Customer Education Plan, it is not my recommendation that the Commission or the Commission Staff should develop a customer education plan or implement customer education on behalf of APS. Public utilities should be held to account for their investments and policy decisions and rewarded or penalized for conduct that does not conform to clearly defined expectations. The utility and its management should be held responsible for basic utility services and service performance. This approach allows the Commission to retain and properly exercise its role as the regulator with judicial powers and enforcement remedies. It would be difficult if not improper for the Commission to evaluate its own actions in educating APS's customers on rate designs and customer service programs.

Rather, the Commission should order APS to create and propose a Customer Education Plan concerning not only rate design options but integrate its rate design education with its limited income programs, demand side management programs, and consumer protection rights and remedies to ensure the retention of essential electricity service. Such a comprehensive plan would allow APS to develop customer educational materials and outreach strategies in a

coordinated manner for its residential customers. Most importantly, such a plan should address all the many deficiencies of the Customer Education Plan implemented in 2017-2018 as identified in this Report, particularly including the need for ongoing customer research and feedback mechanisms. As a key requirement, the Commission should require the Plan to include performance standards and reporting mechanisms that will allow a meaningful and regular review of APS's progress in implementing the plan and achieving its goals and objectives. The ongoing reliance on counting customer communication "touchpoints" in all of the APS outreach programs is not a proper means of developing or evaluating a customer education plan. Performance standards should include, at a minimum, measuring and reporting quarterly on:

- Customer initiated changes to their rate plans;
- APS initiated changes to customer rate plans;
- Number of customers not on the "best" or "most economical rate" by rate class;
- frequency and type of complaints;
- Call center performance;
- Results of customer research on messaging and bill presentment;
- Enrollment for limited income programs;
- Achievement of participation objectives for demand side management programs;
- An evaluation of how the rate plans have resulted in system wide benefits, such as lowering peak energy usage and reducing generation supply costs; and
- Key indicia of credit and collection activities, such as disconnection notices, disconnections, and payment arrangements.

A future Customer Education Plan should be developed with frequent and substantive interaction with consumer stakeholders and reflect an obligation for ongoing customer research and feedback mechanisms that will encourage an organic and updated Plan. After opportunity for stakeholder input and response to that input by APS, the Plan should be the subject of a more formal review process with opportunity for hearings if substantive disagreements cannot be resolved in a collaborative manner.

Finally, it might be appropriate as well for the Commission to regularly consider whether the number and complexity of the current residential rate plans, particularly those with demand charge features, should be simplified based on customer feedback and measurements of customer understanding and satisfaction. Such an analysis should consider the actual impact of these current plans on reducing peak usage or contributing to the lower cost of generation supply and determine if the policy objectives associated with this move to time based and demand charge rates for the vast majority of residential customers are achieving their intended purpose.

II. INTRODUCTION AND PURPOSE OF REPORT

This Report provides an evaluation of the Arizona Public Service Company("APS") Customer Education and Outreach Plan ("Customer Education Plan" or "Plan") dated September 29, 2017 and the implementation of that plan up to and including current activities. The review and evaluation was conducted by means of formal discovery conducted as part of the pending base rate case in Docket No. E-01345A-19-0235, as well as a review of the material developed and reflected in review of the APS consumer education plan conducted for the Staff as part of Docket No. E-01345A-19-0003 (rate review). In addition to discovery responses from APS, the report also relies on input from residential stakeholders who responded to formal interrogatories and several subsequent informal interviews.

Finally, this Report relies on Ms. Alexander's 30-year experience in public utility regulation on behalf of residential customers. Ms. Alexander's background and experience are attached to this Report as Appendix A.

There are several issues that this Report does not address:

- This Report did not conduct an audit of APS's consumer education plan expenditures under the Plan, the cost of the rate impact tool (original and revised to correct the errors discovered in 2019), or customer communication costs included in this rate case.
- The purpose of this evaluation did not include a review of the accuracy of the APS rate analysis tool and the subsequent discovery of an error in the computerized algorithm to predict a customer's "best plan." APS publicly acknowledged this error in 2019 and announced a plan for its resolution in the form of bill credits to affected customers and a revision of the rate impact tool to correct the error. While this event clearly had an impact on APS's reputation with its customers and adversely impacted some customers, the rate impact tool error and its resolution is not the subject of this evaluation of APS's Customer Education Plan.
- Further, this Report does not explicitly explore the experience of rooftop solar customers in their transition to the newly approved applicable rates. The Education Plan did not address the specific needs of these customers. These customers are typically more aware of their usage profile and their smaller number allows for a more targeted and detailed communication compared to mass market residential customers.

This Report is organized by first identifying the best practices that should govern an evaluation of APS's Customer Education Plan and then comparing the Plan and its implementation with those best practices. Specific issues that receive detailed analysis in the Report include the presentation of demand rates and charges, the policies governing the rate plans for new and moving customers, the annual plan review process, and the lack of any

current comprehensive customer education plan. Finally, the Report identifies the recommendations for APS's ongoing customer education programs and identifies the reforms and enhanced content that should be included in such plans and programs to ensure that the Arizona Corporation Commission ("Commission") can exercise its proper regulatory oversight.

III. BEST PRACTICES FOR CONSUMER EDUCATION PLANS GOVERNING RATE TRANSITION FOR RESIDENTIAL CUSTOMERS

There are very few models to rely upon for best practices in the development and implementation of customer education plans for the scope and scale of the rate transitions at issue in this Report. No other investor owned utility has been ordered to impose rate design changes for all its residential customers similar to that ordered by the Commission in its August 2017 Order for APS. However, the California experience reflects the closest comparison.

There are no other investor owned utilities that have been ordered or have been approved to transfer the vast majority of its residential customers to either time of use or time of use with demand charge features. As a result, there is no large number of customer education plans to compare to APS's Plan other than the California electric utility customer education plans. Customer education plans prepared and implemented by several other electric utilities that are moving to default or mandatory time of use rate plans in California were compared to the APS plan to identify best practices.[1] The move to time-based rates for residential customers in California is being implemented pursuant to consumer protections that are not applicable to the Arizona rate plan mandates. These consumer protections are identified in Appendix B to this Report. However, regardless of these policy differences, the California electric utility customer education plans include content and criteria that are appropriate to compare to the APS Plan. These California Marketing, Education & Outreach (ME&O) plans are properly relied upon for "best practices" in the transformation of residential customer rate design.

The Marketing, Education, and Outreach Plan developed by Southern California Edison for the transition of its residential customers to default time of use rates was developed and is still undergoing development to reflect both statutory directives and Commission ordered content.[2] The Table of Contents for this Plan clearly documents the key criteria and content that should be reflected in any Customer Education Plan that seeks to make the significant changes in customer rate design as ordered in Arizona.[3]

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[1] Ms. Alexander submitted testimony on behalf of The Utility Reform Network (TURN) and the Center for Accessible Technology on proposed updates and amendments to customer education plans submitted by Southern California Edison and Pacific Gas & Electric before the California PUC in Docket No. A.17-12-011, et al. (October 28, 2018).

[2] As an example of the customer education plan approach and content required by the California electric utilities for the transition to time of use rates, see the approved Southern California Edison Marketing, Education, and Outreach Plan submitted in 2017: https://library.sce.com/content/dam/sce-doclib/public/regulatory/filings/approved/electric/ELECTRIC_3500-E.pdf This Plan reflects content that includes all the specific items identified in this Report that are missing from the APS Plan.

[3] It is fair to recognize that the California customer education plans reflect a multi-year program that included several opt in and opt out time of use pilot programs that were evaluated by third party consultants, the costs of which were included in these plans. SCE serves over 15 million customers and the multi-year education plan included a budget that totaled almost $70 million over a four-year period. This level of costs is not suggested as appropriate for APS. Rather, it is the overall content and approach of the California education plans that is reasonable to compare to APS's 2017 Plan.

The Table of Contents for the Southern California Edison (similar to those in effect for Pacific Gas & Electric and San Diego Gas & Electric) ME&O plan includes the following key issues and attributes, most of which are missing from the APS Education Plan:

- ME&O Messaging Strategy
- Current Market Overview
- Research Results and Implications/Challenges
- Risks and Barriers to Achieve Goals
- Specific Marketing Actions and Timeline
- Ongoing Research on messaging, customer satisfaction, awareness
- Marketing Objectives: specific with each phase
- Target Audience and Segmentation: customer demographics; low income; relationship to solar customers
- Specific messages and timing for all outbound communications
- New/Transfer Customer Engagement
- Partner and Community Based Organization Strategy
- Measurement and Metrics: goals; ongoing tracking surveys; measurement plan; accountability and enforcement
- Budget

IV. APS'S CUSTOMER EDUCATION AND OUTREACH PLAN

The Commission required APS to file a draft Customer Education and Outreach Plan pursuant to Decision 76295[4] that was subject to Stakeholder review over a 10-day calendar period, followed by final approval by the Commission Staff. APS filed its final Plan on September 29, 2017 consisting of 15 pages. The purpose of this Plan was to educate customers about the Commission's approval of a Settlement agreement to migrate all residential customers to one of six new rate plans starting February 2018 and concluding by May 1, 2018, a period of 4-5 months from the submittal of the Plan. This Settlement was the result of APS's 2016 rate case filing that had recommended that all residential customers move to time of use and/or demand rates. The Education Plan was to be funded by a $5 million transfer of unallocated Demand Side Management funds.

APS submitted its draft plan to Stakeholders. Several consumer representatives reported that they attempted to get more detailed information from APS about how this Plan would be implemented, including information on messaging, reporting, and performance metrics.[5] All of the major consumer representatives submitted a detailed critique of the proposed Education Plan on September 21, 2017.[6] These organizations identified the lack of specific information in the APS draft plan on actual proposed customer communications, the lack of any commitment on performance measures and the need for more detailed monthly reporting, including the need to monitor the number of customers transitioned to the new rate plans. It is also important to recognize that this communication to APS specifically referenced the California education plans associated with the move to time of use rates as an appropriate model for APS to follow. These comments also included a list of proposed metrics. Among the specific recommendations made by the consumer organizations:

> 1. **Messaging, content and tactics.** APS should provide the Commission with a comprehensive set of examples of the communications that various customer classes and groups will receive and how and when they will receive that information.[1] We are also interested in learning if all, or any, of these communications will be provided in Spanish or other languages. (We believe that they should

[4] Docket Nos. E-01345A-16-0036 and E-01345A-16-0123 (August 18, 2017). This Order approved the Settlement that concluded the 2016 Rate Case filed by APS.

[5] See, e.g., Response from Wildfire and RUCO to Staff Data Request #1 to Intervenors. Subsequent discussions with representatives from Wildfire and RUCO confirmed their frustration and inability to achieve a meaningful dialogue with APS representatives on the details of this Plan and the lack of APS's respond to their efforts to engage in the implementation of the Plan.

[6] https://docket.images.azcc.gov/0000182833.pdf This communication was signed by representatives of Arizona Community Action Association (now renamed Wildfire), Arizona Interfaith Power & Light, Arizona PIRG Education Fund, Conservative Alliance for Solar Energy, Environmental Arizona Research & Policy Center, Sierra Club-Grand Canyon Chapter, and Southwest Energy Efficiency Project.

be.) APS should also clarify if any customers will be charged for text messages, and how customers can opt-out of communications if they wish not to be charged. Finally, APS should explain how it will incorporate messaging on the availability of energy efficiency programs, services, and tools to help customers manage their rate options.

2. **Enrollment and transition process to new rates.** APS should provide the Commission with monthly reports that provide information on the number of customers by customer class projected to and enrolled and transitioned to each rate plan. APS should also provide the Commission with information on customers who are put on the default rate plan and the plan that these customers choose after the 90-day period expires. Finally, information should be provided on the number of customers who prefer to use a plan other than the demand rate or time-of-use (TOU) rate options.

3. **Budget and expenditures.** The APS plan does not describe a budget or how funds will be spent. A budget should be provided so that the Commission and stakeholders understand how ratepayer money will be invested. APS should report regularly on actual expenditures relative to this budget.

4. **Quantifying, measuring, and reporting on effectiveness.** APS should propose and the Commission should establish and approve metrics for quantifying and measuring the effectiveness of APS' outreach and education activities. APS should also describe the tracking and reporting mechanisms it will implement to report on these metrics. The Commission should ensure that it receives a written report from APS no later than June 30, 2018. This report should describe how well the plan was executed and any lessons learned. Example metrics for the Commission's consideration could include the following:

a. Open rates and click-thru rates for rate education-related emails.
b. Percent increase in frequency of visits to customers' online accounts.
c. Number of rate-related customer complaints.
d. Number of views to rate education web pages.
e. Number of customers who have changed rates over the last quarter.
f. Number of events and presentations held in support of rate education and outreach and the number of people reached.
g. Number of community partners utilized to support rate education and outreach and the number of people reached.
h. Customer awareness of rate plans that may help them to mitigate electricity expenditures.
i. Customer knowledge of where to go to get more information about how to manage their energy use.
j. Customer understanding of how energy use can impact electricity bills.
k. Customer awareness of the rebates, energy efficiency programs, and tips offered by APS that can help them manage their energy bill.
l. Length of time, number of pages visited, unique visitors to the APS website.
m. Number of featured stories in the news regarding APS' rate reform.

5. **Regular engagement with consumer groups.** As you are likely aware, our organizations frequently communicate with ratepayers in APS' service territory and across the state. We understand the benefits of reducing peak electricity use and strongly support reducing electricity consumption on peak and overall, especially through energy efficiency programs. We appreciate ratepayers having choices on rate plans; however, to make an informed choice, ratepayers need clear and understandable information. We appreciate that APS has included

> consumer advocates in their outreach plan and has accepted an offer to meet with several of our groups. We further recommend that as part of the implementation of this Plan, APS formalize a consumer stakeholder working group that meets regularly to provide input and recommendations on the Plan ' s development and implementation. APS has formed similar working groups in the past, for example, when it designed and implemented its pre-pay pilot. These working groups are invaluable because the participating stakeholders can provide perspectives about the unique constituencies that they understand and represent.

APS's Final Plan did not address any of the recommendations and comments made by the consumer representatives who participated in the stakeholder review of the draft Plan. Several representatives stated that the speed with which this review occurred, and the high-level nature of the APS proposal made it difficult to develop specific comments. APS's filing letter that accompanied the submission of the Final Plan stated that the Stakeholder input resulted in improvements to the Plan in only three areas and that APS had adopted these recommendations: (1) Spanish language messaging; (2) allowing customers to opt out of text messaging at any time; and (3) demand side management messaging. Therefore, APS ignored the consumer organizations' comments and failed to even describe or reference those comments in its cover letter accompanying the Final Plan to the Commission on September 29th.

APS had approximately 1.1 million non-solar residential customers and based on the customer enrollment in rate plans as presented in the 2016 rate case, approximately 570,000 of these customers had already voluntarily selected a rate with a time of use component. However, the Settlement Agreement approved in Decision 76295 changed the design of every existing residential rate, including the flat rates and the time of use periods.[7] As a result, APS stated that it would transition customers to their "most like" rate in early 2018 if the customer did not otherwise select a new rate. The following chart shows the changes from the rates in effect in 2017 to those that were approved for residential customers as a result of the Settlement agreement as identified in the Education Plan. Please note that the actual names of the new rates were not yet identified by APS in this Plan[8] and, therefore, the stakeholders were unable to comment on the names used by APS to market the rate transition:

[7] The flat rate options eliminated the seasonal pricing feature and prohibited customers from enrolling or staying in these flat rate plans based on annual usage criteria.

[8] APS Final Education Plan, APS19R00423, page 5 of 15.

OLD RATES ("legacy rates")	NEW RATES AS NAMED IN THE EDUCATION PLAN ("most like"; "best rates")	ACTUAL RATES USED BY APS IN THEIR MESSAGING (not named in the Plan)
E-12 (FLAT RATE)	R-XS; R-BASIC/LARGE	Lite Choice; Premier Choice; Premier Choice Large [Legacy rate]
ET-1, ET-2	TOU-E	Saver Choice
ECT-1R; ECT0-2	R-3	Saver Choice Plus; Saver Choice Max

In this Plan APS promised to notify customers through a variety of channels, including bill messages, web portal, text messages, social media posts, and formal TV and newspaper media, of their "best rate, a rate plan that provides them with the lowest electricity bill based on the analysis of the customer's most recent 12-months usage data."[9] This information was to be accompanied with messages and education to encourage "further awareness, understanding, and cost saving opportunities through customer touchpoints."[10] Further, APS proposed to use customer segmentation analytics to education customers on their "best rate" and how to manage electricity to save on their electric bill. This customer segmentation process would depend on analysis of the customer's historical usage. Overall, APS promised to use customer usage patterns, various levels of engagement, and various communication methods to achieve their objectives.

Initial generic customer communications were scheduled for August 2017, followed by new rate specific education from October 2017 to May 2018, and then transition to "most like" rates beginning February 2018 and concluding in May 2018.

APS stated its "goals" as (1) drive awareness of new rate structures and "best rate" choices; (2) acknowledge customer interest and answer customer questions; (3) educate customers on opportunities to save through the core message of "shift, stagger, and save,"[11] and demand side management programs; (4) encourage customers to "engage" with their electricity usage and learn how usage can affect their total bill; and (5) increase customer adoption of tools and resources to "facilitate their electricity usage awareness and control."[12]

APS committed to educate customers based on their individual historical usage and the "most like" rate during the transition period. APS's Plan stated that if customers selected the "best rate" during this period, they would be put on that rate. If they did not select the "best rate" or any new rate at all, they would be transitioned to the "most like" rate with the option to make another choice later. APS did not submit for approval their customer specific letters and educational messages proposed to be used during this transition phase, but the Final Plan

[9] Ibid., at 6.

[10] Ibid., at 6. A "touchpoint" was described as a contact point.

[11] The "Shift, Stagger, and Save" core message had been implemented in the fall of 2016 to promote and educate customers with the voluntary time of use and demand charge plans.

[12] Ibid., at 4.

included some small print images of bill inserts or bill messages. All of these communications emphasized "save with your new plan."[13] But, of course, there was no actual promise of saving due to the overall rate increase and the elimination of the older rate plans.

Beyond the transition phase, the Final Plan again emphasized the "shift, stagger, and save" message that had previously been developed for customers who had volunteered for a demand charge plan, as well as "save" oriented messages to familiarize customers with their new rate plan, again emphasizing "personalized direct mail," and other touchpoints.

The Final Plan described the "tools for saving" that were being implemented: email and text alerts for bill amounts, usage, and peak usage thresholds, a mobile application, a peak usage demand calculator tool that compares a customer's peak demand data by season compared to other similar used homes in their area, and smart thermostats that would connect to the internet and automatically lower usage during customer predetermined criteria. In addition, APS described a forthcoming rate comparison tool available on aps.com. This tool was not yet actually implemented at the time of the submission of the Plan but was presented "for illustrative purposes only."[14]

A critical aspect of the APS Plan is that the messages focused on "saving" on a plan, but that calculation was not based on promises of saving on lower future electricity rates by reducing peak or demand usage. Nor was it based on comparing a customer's new plan with the customer's old plan, but rather on comparing the customer's usage profile to each of the new plans. As a result of the strict limitations associated with service under the flat rate options due to their annual usage limitations, it was assumed that the vast majority of customers who had not voluntarily selected a time of use or demand charge plan in the past would be moved to a time of use or demand side plan for the first time.

[13] Ibid., at 7.
[14] Ibid, at 10.

V. THE APS EDUCATION PLAN FAILED TO IDENTIFY AND DISCUSS THE SIGNIFICANT BARRIERS TO A SMOOTH IMPLEMENTATION OF THE INVOLUNTARY MIGRATION OF ALL NON-SOLAR RESIDENTIAL CUSTOMERS TO ONE OF FIVE DIFFERENT RATE PLANS

The following table shows the residential customer enrollment in the legacy rate plans at the time of the 2016 rate case and the enrollment of non-solar residential customers in the new rate plans in December 2018:[15]

Rate Class	2015 Test Year	2018 Actual	% Change (2015 to 2018)
Basic Rate Plans (R-XS, R-Basic, R-Basic Legacy)	420,207	456,301	9%
Time of Use-Energy (R-TOU-E)	329,997	372,869	13%
Time of Use-Demand (R-2, R-3, R-TECH)	263,930	192,225	(27%)
Total	1,046,990	1,100,816	

As a result, over a period of many years, approximately 56% of APS's non-solar residential customers had changed from a flat rate plan to a time of use plan or a time of use with demand charge feature plan prior to the rate transition ordered in the 2016 rate case. The APS Plan appears to have assumed that this history would enable a relatively smooth transfer of most of the remaining residential customers to a time of use and/or demand rate plan on an involuntary basis. Whatever the objective, APS's projected enrollment in demand rates in particular were not met.[16]

While not identified in APS's Customer Education Plan, there were (and remain) a number of significant barriers to the smooth transition of residential customers to new rate plans that are designed to put the vast majority of customers into plans that vary rates by time of day and/or a peak demand charge. While some of these barriers or concerns were not of APS's own making, the fact that APS's Customer Education Plan did not discuss these potential concerns in any detail is appropriate to consider:

A. The rate design changes were implemented at the same time as an increase in APS's base rates, thus making it more difficult for customers to understand the predicted

[15] Rate Review and Customer Outreach Plan Evaluation (June 4, 2019), Docket No. E-01345A-19-003, at page 32.
[16] Ibid, Table 3.3, at 33.

rate impacts of changing a rate plan compared to their historical bills. In fact, none of APS's bill comparison calculations included this information. Rather, the APS calculations focused specifically on comparing the customer's usage to one of five new rate plans under the newly approved rates. This dichotomy between the educational messages that emphasized "savings" when rates were increasing may explain some of the customer criticisms and confusion that has occurred.

B. Customers, particularly those on the Basic flat rate plans, typically focus on total customer bill amounts and not rate details, thus making it more difficult to educate customers on the new peak and off-peak usage rates and time periods, as well as how demand charges work or how a peak demand charge is calculated. The APS Plan did not discuss in any detail how this educational effort for this subset of customers might be different compared to soliciting customers to voluntarily choose a time of use and/or demand rate plan.

C. Customers pay monthly bills and not annual bills, thus complicating an educational campaign that focuses on annual bill comparisons. The emphasis on the affordability of monthly bills is particularly important to lower income and fixed income households where the ability to offset higher summer bills with lower winter bills is more difficult when the monthly income is barely enough or insufficient to pay for household necessities. None of APS's educational materials discussed how customers could afford higher summer bills in return for lower bills in other months that is a feature of the seasonal time of use and demand rate plans.

D. The APS bill design was not significantly changed as a result of the new rate plan mandates. APS's residential customer bill reflects a good deal of detailed information, particularly listing all its surcharges, thus making it more difficult to focus on the key aspects of the customer's rate plan that depend on usage by time and the trigger for the demand charge component. The APS bill does not currently present in a simple and graphical manner the customer's rate plan or present information to allow the customer to determine how their monthly usage impacted the resulting bill amount.

E. APS did not change the presentation of a customer demand charge on its bills even with the new mandatory demand charge rate plans. As will be discussed later in this Report, the actual per kW charge ($ per kW as set forth in the tariff) and the total dollar amount of the demand charge is not included in the customer's demand rate bill.

F. APS's Plan relies in large part on customer use of internet and or cellular service, including broadband internet required for most transactions on the aps.com web portal and the APS app for smart phones with internet access. These functionalities are required to view a customer's hourly load profile that is essential for educating customers on time of use and demand rates. Therefore, only customers with

internet access on a regular basis can realistically research and find out more information about peak and off-peak hours and/or a demand charge on their bill without calling and speaking to a customer service representative.

G. APS's rate comparison tool predicts a customer's "best rate" based on three months of historical usage when a customer does not have a full 12 months of usage history with which to make a prediction as to the best rate plan. This approach is also being used for the "pro forma" billing presentation to customers starting in early 2020 so that customers with less than 12 months but who have at least 3 months of usage history will be presented with "lowest cost" plan comparison.[17] Furthermore, APS has not analyzed the accuracy of its recommendations based on 3 months of historical usage compared to recommendations based on 12 months of historical usage.[18] As reflected in Appendix B, this approach differs from the California program to move residential customers to a default time of use rate that requires that residential customers without at least 12 months of usage history remain on flat rates.

H. Arizona's mandatory rate design changes for residential customers that do not meet the usage profile for fixed rate service and who, therefore, were required to be moved to a time of use or demand rate plan did not exempt known low income and medical support customers, again, unlike the California policies governing the move to default time of use rates. While APS has bill payment assistance programs for low income customers, the rate transition did not treat these customers differently from all other residential customers and moved these customers into the "best" rate based solely on historical usage calculations.

I. Also, unlike the California move to default time of use rates, the mandatory change in rate plans by APS was not accompanied by a longer transition period with a more extensive and customer research effort to test and ensure customer understanding of the messages and new rate designs prior to its implementation.

[17] APS Response to Staff 4.2. See also the APS customer service representative talking points on this calculation provided as APS Response to Staff 4.10, APS19RC00785.
[18] APS Response to Staff 4.3.

VI. HOW DID APS TRACK THE IMPLEMENTATION OF ITS CUSTOMER EDUCATION PLAN?

APS's Customer Education Plan did not include any performance metrics or methodology to allow an objective determination of its success or failure in meeting its stated objectives. When later asked how the Company determined the success or value of its Plan, the response primarily took the form of compiling the volume of its various customer communications. There is no doubt that APS undertook to use its $5 million budget to attempt a wide variety of communications through all the obvious channels during this period.[19] On October 26, 2018 APS responded to a letter from Commissioner Boyd Dunn that requested that APS respond to the Formal Complaint of Stacey Champion. In this Response, APS described the volume of communications sent to its customers, including a total of nearly 200 million touchpoints.[20] The Company alleged that it met all the requirements of "great utility customer engagement."[21] The $5 million budget for its Customer Education Plan was documented as having spent $4.8 million based on subcategories of activities undertaken pursuant to its Customer Education Plan.[22] While APS's response touted its success or "effectiveness" based, in part, on the fact that 22.8% of residential customers voluntarily switched to a new service plan during the transition period,[23] the actual Plan itself does not establish any goals or objectives to reflect customer switch rates. As a result, it is not possible to determine if this switch rate was reasonable or not.

APS later presented information about how it internally decided to track the plan's implementation through the number of advertisements it published, the number of social media posts published, the number of web pages visited, the number of meetings with APS personnel as speakers, and the number of bill inserts and customer communications it issued.[24] When asked how APS internally tracked the performance of its Education Plan even though there were no performance or reporting requirements in the Plan itself, the response provided a 2-page document entitled "Where we are—success metrics."[25] This document reflects results through April 2018 and measures the following areas:

- Self-Serve rate change transactions;
- Customer Care Center (call center performance);

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[19] This Report does not include a review the specific expenditures incurred for the $5 million education budget because (1) this analysis was previously done in the Overland Report and (2) none of those expenses were included for cost recovery in the pending rate case. There is no doubt that APS spent the $5 million on customer communications.

[20] APS19RC00424, page 1 of 957; see also another compilation of "one way" customer communications at Pages 17-18.

[21] Ibid., at 2.

[22] Ibid., at 14.

[23] Ibid., at 15.

[24] APS Response to Staff 2.2.

[25] APS Response to Staff 2.5 and APSRC1900524. Some of these performance areas will be discussed later in this Report.

- Billing (delayed bills);
- Meter Shop (backlog for service orders);
- Over the air reprogramming success (meters);
- Employee engagement (impressions);
- Brand reputation (via surveys);
- Media Coverage (customers issues aired);
- Customer Transitions (percent transitioned by 5/1/2018);
- Contingency Plans (develop and implement);
- ACC Substantiated Complaints;
- Safety (OSHA).

None of these internal performance tracking metrics or results were included in the Education Plan and not all of them are related to the Education Plan's implementation. Nor has the Commission approved the "targets" that APS established for itself in these metrics.

The effectiveness of any Education Plan requires that the Plan set forth specific and measurable goals and objectives and report on the results of those performance metrics or results. APS's Education Plan failed to establish any measurable performance metrics or results to enable a determination of the effectiveness of the Plan.

VII. APS's CUSTOMER EDUCATION PLAN FAILED TO INCLUDE NECESSARY AND REASONABLE CONTENT AND CRITERIA TO ALLOW AN OBJECTIVE EVALUATION OF ITS SUCCESS.

APS's Customer Education Plan failed to include essential components of a reasonable customer education plan or program given the monumental task that the Company stated it could achieve. Among the key defects or omissions:

A. APS did not include performance metrics or other measures of success, that is, how it would measure the achievement of its stated goals and objectives in its Customer Education Plan. The Plan did not measure or set a goal for the number or percentage of customers that would voluntarily select a new rate plan during the transition period, the volume of customer complaints, the performance of its call center, or any measure of customer understanding of its messaging by means of customer research undertaken during the implement of the Plan. As previously documented, this defect was highlighted by consumer organizations during the development of the Plan, but APS's final Plan did not discuss or reflect any remedy to this concern.

B. While APS's Plan specifically identified many "touchpoints" to measure communications or interactions with customers, APS did not identify the volume or type of customer inquiries or complaints as indicia of the Plan's success. However, APS's customer complaints handled internally, and complaints submitted to the Commission increased dramatically during this period. While APS tracked this complaint data there is no evidence that APS actually evaluated or analyzed this data to provide a feedback loop to its customer education activities and messaging. The APS Consumer Advocate Office tracks and responds to complaints received from the Commission, Attorney General's Office, Better Business Bureau, as well as complaints received by APS management.[26] APS's complaint data clearly documents growing complaint levels in 2017 and 2018 for "final bill," (38 to 52) "high bill," (95 to 162) "long hold time," (N/A to 30) "rates" (200 to 124 compared to less that 100 in prior years), and "rate migration." (N/A to 76)[27] It is clear that customer complaints in a number of areas increased in late 2017 and 2018 that appear to be related to the rate increase and rate migration activities.[28] While APS tracks customer complaints that are reflected in various databases, there is no evidence of any actual analysis of complaint trends or actions undertaken in response to such an analysis. Nor is there apparently any analysis or evaluation of the combination of

[26] APS Response to Staff 4.22.

[27] APS Response to SWEEP 1.13, APSRC1900925.

[28] The APS complaint volume trends as reflected in the Corporation Commission's own customer complaint data showed a spike in complaints in 2018 for rates and tariffs and quality of service, as well as complaints reflecting difficulty in reach APS customer service representatives or dissatisfaction with the representative's handling of the call.

these various complaint databases ("executive" complaints; call center complaints, "consumer advocate" complaints, all of which are internal APS units that compile complaint data).[29] The mere compilation of complaint numbers does not allow for the analysis of "red flags" or underlying root causes that is properly done by evaluating complaint trends, their underlying cause, and the resulting actions to correct or reduce the complaints.

C. APS's Plan did not propose to track the success of its Plan by relying on call center call completion, abandonment rate, or other indicia of customer experience in attempting to communicate with APS's customer call center. However, APS's customer service performance at its call center was below average during the transition period. In 2018 APS only answered 47% of the calls within 30 seconds and had an abandonment rate (percentage of customers who hang up after entering the queue to speak to a representative) of 7.18%. This was a significant deterioration in performance compared to 2017 in terms of the calls answered within 30 seconds (61%), but a slight improvement in 2018 compared to the 2017 abandonment rate (8.6%). The 2019 results do not reflect an improvement—answering 64% of calls within 30 seconds and an abandonment rate of 9.8%. Of significance as well is that performance of the calls directed to Spanish speaking representatives is even worse. In 2017 only 38.6% of calls were answered within 30 seconds and the abandonment rate was 15.2%. The 2018 results for Spanish speaking customers were only slightly better with a call answering rate of 43.6% and an abandonment rate of 7.9%. [30] Whatever APS's internal targets, this call center performance is below acceptable levels where calls, particularly when measured over an annual basis, should strive to answer 80% of calls within 30 seconds and experience an abandonment rate of 5% or less.[31]

D. The APS Plan did not propose to measure the number of customers who actually signed up to receive text messages, enroll with the APS web portal to view their account usage details, or enroll in budget billing (a program emphasized to customers who were questioning the difference in higher summer bills under their rate plan). In fact, as of April 30, 2020, 58% of the non-residential solar customers have enrolled in the APS web portal to view their individual account information and a slightly lower percentage have agreed to email communications from APS. Only 17% of APS's residential customers have enrolled in the budget billing plan.[32]

E. The APS plan did not establish any objectives or goals that actually measured customer behavior as a result of the APS communications, including any

[29] APS Response to SWEEP 1.13 included separate spreadsheets showing complaints captured by these various internal units without any analysis of the meaning of these complaint trends.
[30] APS Response to Staff 8.1 (a)-(c), APS19RC00985.
[31] These performance standards are typical industry standards for call centers and, in some cases, required for regulated utility companies.
[32] APS Response to Staff 11.1.

measurement of switch rates or a measurement of whether customers were actually put on the "best plan" as a result of APS's educational program. The fact that only 22% of its residential customers affirmatively chose a "best" plan during the transition period raises questions about this level of customer response and indicates that lack of any determination as to whether the feedback loop between the Plan itself and the actual customer response to the Plan's messages was reasonable. Other data suggests that APS's communications designed to educate customers about their "best" or "most economical" plan have not been successful. As of the September 2019 mailing to residential customers, 400,008 customers were informed that they were not on the most economical plan, 36% of APS's residential customers.[33] The Saver Choice (TOU) rate plan accounted for almost 250,000 of these customers, suggesting that the majority of customers on this rate plan were not on the most economical rate plan and APS's messaging is promoting the demand rate plans as alternatives for these customers. As a result of mailings to those customers to inform them of the most "economical" rate plan that occurred from late August 2019 through October 2019, 24,869 customers made rate changes (22,704 to the recommended rate plan and 2,165 to a different rate plan).[34] The ongoing disconnect between APS communications and the actions taken by customers to select the "best" rate plan (which is usually promoted to be a demand charge rate plan) should be viewed in part as a failure of the APS Education Plan and/or suggesting a reconsidering of the rate plans themselves.

F. Finally, APS did not conduct any research to determine customer comprehension or understanding of its customer communications and messaging about the new rate plans, their names, or the details of the plan options, after the Settlement Agreement was reached. Nor has APS conducted any customer research concerning how or whether customers actually understand how their rate plan works since the transition was implemented.[35] Rather, APS's research and messaging relies almost entirely on pre-transition research conducted when the time of use and demand feature rate plans were voluntary.

- APS has not evaluated the impact of the seasonal rate differential for the time of use and demand rate plans for fixed or lower income customers since the allocation of revenue was approved in Decision No. 76295;[36]
- APS's concludes that customers understand that the words "choice" and "save" in the rate plan names mean a trade-off between convenience and level of effort and that the current rate plan names were designed for two distinct categories: "premier" rate plans for those who do not want to adjust their usage by time of day and "saver" rate plans for those who want to

[33] APS Response to Staff 4.17.
[34] APS Response to Staff 4.18.
[35] APS Response to Staff 8.14.
[36] APS Response to Staff 4.9.

exercise control of their usage.[37] However, the basis for these conclusions is research that was conducted in May 2017 by a third party marketing firm consisting of customer focus groups that explored the naming of APS's rate plans.[38] According to APS, this research concluded that the preferred options were to group plans by "lite choice," "premier choice," and "saver choice." No subsequent research has been done on customer understanding of the messaging and naming of these rate plans.

- APS's customer research on demand rates occurred in 2016 when those rate options were voluntary. This research was conducted to determine customer satisfaction with demand rate subscribers and additional focus groups to test communications strategies for the new rates that APS proposed in its prior rate case.[39] The same is true of its customer research on the "shift, stagger, and save" messaging that is the focus on APS's current customer education.[40]
- APS has not conducted customer satisfaction studies on residential time of use rates in the last five years.[41]
- While APS may rely on its customer satisfaction survey responses to measure customer feedback, these survey instruments do not measure the performance of the APS Education Plan objectives. Rather, they ask customers if they agree with statements about whether APS offers different rate plan options and whether rate plan options are offered to allow a customer to "control your bill amount by managing your usage."[42] These questions may reflect customer opinion based on the form of the question (both of which are stated in a positive manner), but they are not valid measurements of the Plan's stated objectives.
- APS has not done any research to determine that the variables relied upon by its customer service representatives to recommend a rate plan to new customers are valid. Rather, the Company relies on its long-standing experience with time of use and demand rates, which of course until 2018 were voluntarily selected by customers.[43]

G. The APS Customer Education Plan did not present information on the demographic characteristics for residential customers in its service territory. Customer housing

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[37] How APS concluded that customers understand the term "premier" to refer to those who prefer fixed rates is not documented in the materials provided in response to this data request. Furthermore, labeling a rate plan as "saver" without any guarantee of savings is a questionable business practice.

[38] APS Response to Staff 4.7 and APS19RC00783 (16 pages). This report actually suggests that customers wanted a clearer naming for demand rates that was more intuitive and "signal what it is."

[39] APS Response to Staff 8.15.

[40] APS Response to SWEEP 1.11. The two research documents attached to this response (and referenced in APS Response to Staff 8.15) are labeled "competitively confidential." APSRC1900904 and APSRC1900905.

[41] APS Response to SWEEP 1.12.

[42] APS Response to Staff 2.5.

[43] APS Response to Staff 8.12.

patterns, family size, educational achievement, literacy, income, and employment situations all need to be considered in developing a customer focused educational strategy. APS used the same messages and themes in all its communications.[44] Given the reliance on the use of the internet to enable customer communications and details about the impact of a customer's rate plan choice, the lack of any demographic information about the penetration of broadband internet usage by its customers, the frequency with which their customers have signed up for text messaging, or who use the APS web portal, was particularly of concern. As a result, APS's messaging was primarily the same for all customers and relied entirely and solely on a computerized analysis of the customer's usage history.

H. The Plan did not specifically identify the special needs of low income and fixed income customers in its Education Plan or develop specific communication channels and messaging for these customers.[45] Nor did APS's Plan include any specific coordination with or involvement by local community organizations to educate special needs and/or vulnerable customers about these rate changes in a manner that responds to their specific needs. APS's Plan did not include any funding to local community organizations to implement targeted education and counseling on rate options. While the Settlement Agreement included upgrades for the APS "limited income" program, the Education Plan did not include any proposals for how that program would be implemented and communicated to customers already enrolled or who might be eligible in the future for this program. APS relied on the standard educational messages to all residential customers for those enrolled in the energy support programs for the communications about the rate design changes.[46] Therefore, APS's educational activities with regard to the low income programs have occurred separately and without coordination with the rate design plan option communications.[47] It is important to note that enrollment in APS's limited income programs are relatively low compared to the eligible households. As a result, it is not possible to communicate with APS's low income population with a focus on those enrolled in the limited discount program or medical support program. As of February 2020, 60,596 residential customers were enrolled in the rate discount program (6% of the residential customers served by APS) and 212 enrolled in the safety net program.[48] These enrollment levels are far below the actual percentage of households living in poverty in APS's service territory since 15.6% of the households in the City of Phoenix live below the poverty line (compared to 14% for

[44] The APS communications in Spanish translated the English versions so that the messages were the same.
[45] The lack of any mention or attention to the communication needs for low income customers in APS's Customer Education Plan is a singular defect when compared to the California electric utility ME&O plans referenced earlier in this Report.
[46] APS Response to Staff 2.19.
[47] APS's web portal includes information on its energy support programs and the Company has issued customer education materials concerning these programs. See, APS Response to Staff 2.28, 2.33.
[48] APS Response to Staff 4.12 (h) and (i).

Arizona as a whole).[49] Furthermore, this enrollment level is almost 20,000 less than those enrolled in January 2017, suggesting that there may be a barrier to retaining low income customers in the program through the renewal process or suggest needed reforms in soliciting low income customers to apply.[50]

[49] https://censusreporter.org/profiles/16000US0455000-phoenix-az/ This reference to "poverty level" in this summary is 100% of the federal poverty level and does not, therefore, include the additional customers who qualify for the APS program who are at or below 150% of the federal poverty level.
[50] APS Response to 2.27.

VIII. HOW HAS APS HANDLED ITS CUSTOMER EDUCATION ON DEMAND RATES?

APS's Education Plan relied primarily on its experience in explaining demand rates and demand rate plans to its customers when these rate options were voluntary to implement the new rate plan mandates and the transition in 2017-2018. That Plan stated that it would rely on the "shift, stagger, and save" messaging that had been in use since 2016. However, the change in the name of these plans to "SAVER" labels was never explained in the Education Plan.

The Plan explained how it would allow customers to enroll in alert messaging if the customer has selected a peak usage level for such an alert. In addition, a customer can download the APS app or view their account in detail on the APS web portal to see their hourly usage compared to the peak hours associated with their rate plan. In addition, "Since the Fall of 2016, for customers exploring a rate plan with a demand component, aps.com has included a peak demand calculator that shows their actual peak demand data, by season, compared to other similar sized homes in their area."[51]

But the Plan did not include specific messages or educational content to explain the demand rate plans or how the rate-specific criteria to move customers into those plans would be explained to affected customers. Instead, demand rate plans were presented as opportunities to "save" by shifting usage and taking "control" of usage on an hourly basis. It should be noted that the change in the peak usage hours from the legacy TOU and demand rate plans compared to the newly adopted plans was not specifically discussed in the Education Plan.

The training provided to the Company's customer service representatives reflects the complexity of explaining the demand charge feature of these rate plans and the manner in which the demand charge dollar amount is calculated and presented on the customer bill.[52] The only manner in which the customer can actually see the daily peak usage and any demand value since the issuance of the last bill is on the APS web portal and on the APS app if downloaded to the customer's smart phone. However, these features only show the customer's demand event up to the prior day.[53] On the customer's bill, there is no presentation of the demand charge rate itself (the dollar amount per kW as stated in the tariff) or when the demand peak was incurred. Furthermore, the total dollar amount of the applicable demand charge does not appear on the customer's bill.[54] The right column on the bill tells the customer the "on peak demand meter reading" and the "on peak demand

[51] APS Education Plan at 10-11.

[52] APS Response to Staff 2.18, APS19RC00563 (Confidential), an 8-page demand charge "test" used as a teaching tool for APS customer service representatives about demand charges.

[53] ASP Response to Staff 8.13.

[54] APS's residential bills showing the new "pro forma" message were provided as APS Response to Staff 4.5, APS19 RC01208 (Rate Schedule R-2, Saver Choice) and APS19RC01211 (Rate Schedule R-3, Saver Choice Max).

in kW." The other column shows a long list of detailed and itemized charges, including two different dollar amounts labeled "generation demand charge" and a "distribution demand charge."[55] The APS demand charge residential bill currently in effect is attached as Appendix C to this Report.

When a customer calls APS to ask about the applicable demand charge calculation, the representative is able to access screens and calculations that do not appear on the customer's bill to inform the customer about how the "on peak demand in kW" results in the total dollar amount of the monthly demand charge.[56] Furthermore, in at least one highly publicized event that occurred in the fall of 2019, APS's customer service representatives were not able to properly or accurately explain demand charges, an episode that resulted in additional training of representatives.[57]

[55] The actual tariff setting the applicable demand charges (See Rate Schedule R2, Saver Choice Plus) identifies an on peak demand charge of $8.40 and then includes "demand charge components" of $4.00 for a "delivery on peak kW charge" and $4.40 per kW for a "generation on-peak kW charge." None of the customer service representative training materials provided by APS explain this distinction or train customer representatives on the bill presentation of these two demand charges.

[56] See, e.g., APS Response to Staff 2.18, APS19RC00560 (Confidential).

[57] APS Response to Staff 2.18, APSRC1900561 (Confidential).

IX. HOW DOES APS RECOMMEND RATE PLANS FOR NEW OR MOVING CUSTOMERS WITHOUT USAGE HISTORY?

APS did not change its method or approach in dealing with customers calling for new or transferred service that was adopted at the time it implemented voluntary time of use and demand rate options.[58] This approach relies on asking a few basic "lifestyle" questions about the square footage of the home, whether the home is all electric or any gas appliances, or whether there is a pool or spa. The representative is then trained to review the usage history of the home's prior customer and offer the customer a specific rate plan.[59] At the customer's request, all the rate plan options are named and the customer is referred to the APS web portal for more detailed information. New customers are informed about the importance of reviewing their rate plan after 3-6 months of usage and to use the Rate Comparison Tool on the website. The rate plans are referred to by name with descriptions that refer to the peak usage hours but of course the names used for these plans by APS do not explicitly inform customers of the time of use or demand rate structure inherent in the rate plans. It must be emphasized the choosing a rate plan is only one of many requirements for a residential customer to establish service with APS.[60]

APS has not undertaken any specific customer research as to whether the plan recommended to the new or moving customer who are put on a plan without any actual historical usage information has actually resulted in the "best" plan or whether these customers have switched to a cheaper plan and, if so, when. While it is possible that some of the over 400,000 residential customers who were determined not to be on the "best plan" in the fall of 2019 was a reflection of putting new and/or moving customers on the "wrong" rate plan, there is no evidence that APS has researched this potential connection.

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[58] APS Response to Staff 8.3.

[59] APS Response to Staff 2.18, APSRC1900566 (Confidential) and APSRC1900553 (Confidential)

[60] Ibid., APSRC1900566 (Confidential), is a four-page dialogue with multiple subparts.

X. INVOLUNTARY ANNUAL RATE CHANGES

While not discussed in the Education Plan, APS conducts an annual review of those customers who are no longer qualified for the customer's current rate plan and changes that customer's rate plan without explicit customer approval. This feature is unique among any state rate design plan mandates that I am aware of. If a customer is no longer eligible for a rate plan, a reasonable approach would be to notify the customer of this fact several times by personal contact prior to the rate change and, barring any action by the customer to change to another of the optional rate plans, that the customer will be moved to [NAME OF SPECIFIC RATE PLAN] without explicit authorization by a date certain.

This annual rate migration is undertaken based on a review of the customers with at least 12 months of historical usage. The number of customers who were involuntarily migrated to a different service plan as of the December 2019 review totaled 58,984; 30,900 of whom were moved from Lite Choice to Premier Choice or Saver Choice and 24,228 customers on Premier Choice moved to Lite Choice and Saver Choice.[61] This switch was announced to customers via a bill message. However, even APS's own internal training materials informs their representatives that "the reassigned plan is not necessarily the least expensive plan so always perform a service plan comparison for customers who contact us."[62]

The fact that so many customers are being served by plans for which they are no longer qualified based on their historical usage suggests a concern with the efficacy of APS's Education Plan.

[61] APS Response to Staff 8.7.

[62] APS Response to Staff 2.18, APS 19RC00576 (Confidential)

XI. THERE IS NO FORMAL CUSTOMER EDUCATION PLAN FOR 2020 AND BEYOND

APS has not updated its Education Plan or undertaken to update its Customer Education goals and objectives since the end of the transition period covered by the 2017 Plan. Rather, APS has developed what it refers to as various "plans" for marketing of various approved APS programs (for example, home performance, DSM, energy education, safety net, and other routine customer communications for ongoing initiatives).[63] However, these documents do not include any of the key components of an education plan as set forth in this Report.

To be sure, APS has continued its educational activities via a wide variety of customer communications that are similar to those used during the transition period[64] and has issued Quarterly Reports pursuant to Decision No. 77270 (June 27, 2019) that describe its educational activities in detail. These activities, even though possibly appropriate, occur without the context of a formal Education Plan that contains specific objectives, budgets, performance criteria, or the description of the results of customer research and information that would allow an analysis of the effectiveness of APS's educational activities.

[63] APS Response to Staff 2.3.

[64] APS Response to Staff 2.2 provides samples of customer communications issued from November 2018 through June 2019.

XII. RECENT POSITIVE DEVELOPMENTS

After the discovery of the errors in its rate analysis tool APS issued a public apology and has pledged to issue refunds to affected customers funded by shareholders. Additional initiatives are worth noting as positive developments.

At the direction of the Commission, APS is implementing a "pro forma" bill in March 2020 that includes information that is customer specific about the monthly and annual total bill implications of the customer's rate plan compared to the "lowest cost" rate plan for which the customer qualifies. This is likely to improve customer understanding of the bill impacts of their own plan compared to other options. This information will be presented with monthly bill calculations so that customers can easily understand the changes in usage and bill impacts where the rates are higher in the summer and demand and peak usage charges are higher. This information comes over two years after the transmittal of information to customers about their rate options and choices in the transition to mandatory rate changes approved in the Settlement Agreement of 2017. This delay contrasts with the California transition to default TOU rates that will accompanied by this rate plan comparison information from the onset of the transition period.

APS is also currently undergoing a process to change the design and presentation of material information on its customer bills. APS has consulted with stakeholders on its bill design options, and, unlike its development of messaging and communications in 2017, customer focus groups were convened to gather additional input. According to APS, its new bill design is not yet finalized but will be implemented as part of the resolution of this pending rate case.[65] However, APS has not submitted a specific bill design for review in this proceeding. While APS's approach to include customer and stakeholder input is a positive step, the lack of any process for Commission review and input for this bill redesign should be remedied.

One aspect of the bill redesign that should be the focus of consumer and Commission attention is the presentation of demand charges, how they are calculated and what specific usage profile triggered the billed demand charge. There is no evidence to date that reflects any significant change from the current bill information on demand charges in the bill design discussions or bill design formats I have reviewed.

[65] APS Response to Staff 4.6.

XIII. RECOMMENDATIONS

While this Report identifies the shortcomings of APS's Customer Education Plan, it does not recommend that the Commission or the Commission Staff should develop a customer education plan or implement customer education on behalf of APS. Public utilities should be held to account for their investments and policy decisions and rewarded or penalized for conduct that does or does not conform to clearly defined expectations. The utility and its management should be held responsible for basic utility services and service performance. This approach allows the Commission to retain and properly exercise its role as the regulator with judicial powers and enforcement remedies. It would be difficult if not improper for the Commission to evaluate its own actions in educating APS's customers on rate designs and customer service programs.

Rather, the Commission should order APS to create and propose a Customer Education Plan concerning not only rate design options but integrate its rate design education with its limited income programs, demand side management programs, and consumer protection rights and remedies to ensure the retention of essential electricity service. Such a comprehensive plan would allow APS to develop customer educational materials and outreach strategies in a coordinated manner for its residential customers. Most importantly, such a plan should address all the many deficiencies of the Customer Education Plan implemented in 2017-2018 as identified in this Report, particularly including the need for ongoing customer research and feedback mechanisms. As a key requirement, the Commission should require the Plan to include performance standards and reporting mechanisms that will allow a meaningful and regular review of APS's progress in implementing the plan and achieving its goals and objectives.[66] Performance standards should include, at a minimum, measuring and reporting quarterly on:

- Customer initiated changes to their rate plans;
- APS initiated changes to customer rate plans;
- Number of customers not on the "best" or "most economical rate" by rate class;
- frequency and type of complaints;
- Call center performance;
- Results of customer research on messaging and bill presentment;
- Enrollment for limited income programs;
- Achievement of participation objectives for demand side management programs;
- Analysis of the impact of rate design on system benefits, such as peak load reduction and lower generation supply costs; and

[66] APS's response claimed that its 2020 consumer education plans would focus on a wide range of initiatives that the Company claims will "enhance its ability to measure performance in the future." APS Response to Staff 2.6. However, these initiatives, however appropriate, do not reflect integrated plans and do not include specific metrics or performance standards.

- Key indicia of credit and collection activities, such as disconnection notices, disconnections, and payment arrangements.

A future Customer Education Plan should be developed with frequent and substantive interaction with consumer stakeholders and reflect an obligation for ongoing customer research and feedback mechanisms that will encourage an organic and updated Plan. After opportunity for stakeholder input and response to that input by APS, the Plan should be the subject of a more formal review process with opportunity for hearings if substantive disagreements cannot be resolved in a collaborative manner.

Finally, it might be appropriate as well for the Commission to regularly consider whether the number and complexity of the current residential rate plans, particularly those with demand charge features, should be simplified based on customer feedback and measurements of customer understanding and satisfaction. Such an analysis should consider the actual impact of these current plans on reducing peak usage or contributing to the lower cost of generation supply and determine if the policy objectives associated with this move to time based and demand charge rates for the vast majority of residential customers are achieving their intended purposes.

APPENDIX A: BARBARA ALEXANDER PROFESSIONAL QUALIFICATIONS

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Winthrop, ME 04364

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Recent Clients:

The Utility Reform Network (TURN) (California)
Pennsylvania Office of Consumer Advocate
Public Counsel Unit, Attorney General, Washington
Arkansas Attorney General
The Public Utility Project of New York
Ohio Office of Consumer Counsel
District of Columbia Office of People's Counsel
Delaware Division of Public Advocate
Maryland Office of People's Counsel

Areas of Expertise:

- Default Service, Consumer Protection, Service Quality, and Universal Service policies and programs associated with the alternative rate plans and mergers;
- Consumer Protection and Service Quality policies and programs associated with the regulation of competitive energy and telecommunications providers;
- The regulatory policies associated with the regulation of Credit, Collection, Consumer Protection, Low Income, and Service Quality programs and policies for public utilities;
- Customer Education and Rate design and pricing policies applicable to residential customers; and
- Advanced Metering Infrastructure and Grid Modernization costs and benefits, time-based pricing proposals, and performance standards.

Prior Employment

DIRECTOR

1986-96

Consumer Assistance Division
Maine Public Utilities Commission

Augusta, Maine

One of five division directors appointed by a three-member regulatory commission and part of commission management team. Direct supervision of 10 employees, oversight of public utility consumer complaint function, appearance as an expert witness on customer services, consumer protection, service quality and low income policy issues before the PUC. Chair, NARUC Staff Subcommittee on Consumer Affairs.

SUPERINTENDENT

1979-83

Bureau of Consumer Credit Protection
Department of Professional and Financial Regulation

Augusta, Maine

Director of an independent regulatory agency charged with the implementation of Maine Consumer Credit Code and Truth in Lending Act. Investigations and audits of financial institutions and retail creditors, enforcement activities, testimony before Maine Legislature and U.S. Congress.

Education

JURIS DOCTOR

1973-76

University of Maine School of Law *Portland, Maine*

Admitted to the Bar of the State of Maine, September 1976. Currently registered as "inactive."

B.A. (WITH DISTINCTION) IN POLITICAL SCIENCE 1964-68

University of Michigan *Ann Arbor, Michigan*

Publications and Testimony

"How to Construct a Service Quality Index in Performance-Based Ratemaking", The Electricity Journal, April, 1996

"The Consumer Protection Agenda in the Electric Restructuring Debate", William A. Spratley & Associates, May, 1996

Direct Testimony on behalf of the Telecommunications Workers Union, Telecom Public Notice 96-8, Price Cap Regulation and Related Issues, Canadian Radio-Television and Telecommunications Commission, September, 1996. [Analysis of and recommendations concerning the need to regulate service quality in move to price cap regulation]

Direct Testimony on behalf of Public Counsel Section, Office of Attorney General, Docket No. UE-960195, Application by Puget Sound Power and Light Co. And Washington Natural Gas Co. For Approval of Merger), Washington Utilities and Transportation Commission, September, 1996 [Need for and design of a Service Quality Index for both electric and gas business units as part of a multi-year rate plan]

Consumer Protection Proposals for Retail Electric Competition: Model Legislation and Regulations", Regulatory Assistance Project, Gardiner, ME, October, 1996

Direct and Rebuttal Testimony on behalf of the Citizens Utility Board (IL), Docket 96-0178, Illinois Commerce Commission, CUB v. Illinois Bell Telephone Co., January 22, 1997; July, 1997. [Analysis of recent service quality performance and recommendations for changes in current service quality performance plan]

Direct and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, Restructuring Proceedings before the Pennsylvania PUC: PECO Energy; Pennsylvania Power and Light Co.; GPU Energy; Duquesne Light Co.; West Penn Power Co., UGI-Electric, Pennsylvania Power Co., Pike County Light and Power Co. (1997 and 1998). [Specific consumer protection, consumer education and supplier-utility-customer interactions necessary for move to electric restructuring]

"The Transition to Local Telecommunications Competition: A New Challenge for Consumer Protection", Public Counsel Section, Washington Attorney General, October, 1997. [Reprinted in part in NRRI Quarterly Bulletin, Vol. 19, N0.1, Spring, 1998]

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate, Restructuring Proceedings before the New Jersey Board of Public Utilities: Public Service Electric and Gas, Jersey Central (GPU), Rockland Electric Co., Atlantic Electric Co., March-April, 1998. [Phase-in and customer enrollment, Code of Conduct, consumer protections associated with the provision of Provider of Last Resort service]

Oppenheim, Gerald (NCLC) and Alexander, Barbara, Model Electricity Consumer Protection Disclosures, A Report to the National Council on Competition and the Electric Industry, April 1998.

Direct and Reply Testimony on behalf of the Maryland Office of People's Counsel, Investigation into Certain Unauthorized Practices (Slamming and Cramming), Case. No. 8776, before the Maryland Public Service Commission, 1998 and 1999.

Direct Testimony on behalf of the Maryland Office of People's Counsel, Universal Service Issues, Case No. 8745, before the Maryland Public Service Commission, November 20, 1998.

"Cramming is the Last Straw: A Proposal to Prevent and Discourage the Use of the Local Telephone Bill to Commit Fraud," NRRI Quarterly Bulletin, Fall. 1998.

Alexander, Barbara, Retail Electric Competition: A Blueprint for Consumer Protection, U.S. Department of Energy, Office of Energy and Renewable Energy, Washington, D.C., October 1998.

Alexander, Barbara, "Consumer Protection Issues in Electric Restructuring for Colorado: A Report to the Colorado

Electricity Advisory Panel," on behalf of the Colorado Office of Consumer Counsel, February 1999.

Testimony on Proposed Interim Rules (Consumer Protection, Customer Enrollment, Code of Conduct, Supplier Licensing) on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey BPU, May 1999.

Direct Testimony on behalf of AARP, West Virginia PUC Investigation into Retail Electric Competition (consumer protection, universal service, Code of Conduct), June 15, 1999.

Direct and Surrebuttal Testimony on behalf of the Pennsylvania OCA, Natural Gas Restructuring proceedings (8 natural gas utilities): consumer protection; consumer education; code of conduct, before the Pennsylvania PUC, October 1999-April 2000.

Comments on Draft Rules addressing Slamming and Cramming (Docket No. RMU-99-7) on behalf of the Iowa Office of Consumer Advocate, before the Iowa Utilities Board, October 1999.

Alexander, Barbara, "Door to Door Sales of Competitive Energy Services," LEAP Letter, January-February 2000 [Wm. A. Spratley & Associates, Columbus, OH]

Direct Testimony on behalf of the Maine Office of Public Advocate, Central Maine Power Company Alternative Regulation Plan [Docket 99-666] on service quality issues, before the Maine PUC, May 2000.

Direct Testimony on behalf of AARP, Universal Service Programs and Funding of low-income programs for electric and natural gas service, before the New Jersey Board of Public Utilities, Docket No. EX000200091, July, 2000.

Comments (on behalf of NASUCA and AARP) on Uniform Business Practices Reports, May and September 2000.

Direct Testimony on behalf of the Pennsylvania OCA, Verizon-Pennsylvania Structural Separation Plan on service quality, customer service and consumer protection issues [Docket No. M-00001353] before the Pennsylvania PUC, October 2000.

Direct and Rebuttal Testimony on behalf of the Maine Office of Public Advocate, Verizon-Maine Alternative Form of Regulation on service quality issues [Docket No. 99-851] before the Maine PUC, January and February 2001.

Direct and Rebuttal Testimony on behalf of the Citizens Utility Board, Nicor Gas Customer Select Pilot Program, on consumer protection and regulation of competitive natural gas suppliers [Docket Nos. 00-0620 and 00-0621] before the Illinois Commerce Commission, December 2000 and February 2001.

Direct and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate on consumer protection and service quality issues associated with the pending merger between GPU Energy and FirstEnergy, before the Pennsylvania PUC, Docket Nos. A-110300F0095 and A-110400F.0040 (February and March, 2001)

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate on consumer protection, service quality, and universal service issues associated with the pending merger between GPU Energy and FirstEnergy, before the New Jersey Board of Public Utilities, Docket No. EM00110870 (April 2001).

Alexander, Barbara, "Default Service: What Should be Done When the Experiment Goes Awry?" (April 2001)

Responsive Testimony on behalf of the New Jersey Division of Ratepayer Advocate on service quality issues associated with a Plan for Alternative Regulation by Verizon-New Jersey, before the New Jersey Board of Public Utilities, Docket No. To01020095 (May 2001).

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate on service quality, consumer protection, and universal service issues associated with the pending merger between Conectiv and

Pepco, before the New Jersey Board of Public Utilities, BPU Docket No. EM101050308 (September and November 2001).

Direct Testimony on behalf of the Public Interest Advocacy Centre (and others) on service quality regulation in the context of price cap rate plans, before the Canadian Radio-Television and Telecommunications Commission, Docket No. CRTC 2001-37 (August 2001).

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Expert Witness Report, Brown v. Reliant Energy, November 2001 [Claim of negligence in death of elderly resident after disconnection of electric service]

Comments on behalf of the Pennsylvania Office of Consumer Advocate on consumer protection, disclosure, and education program Guidelines applicable to local exchange telephone competition, before the Pennsylvania PUC, January 2002.

Alexander, Barbara, "Default Service for Retail Electric Competition: Can Residential and Low-Income Customers be Protected When the Experiment Goes Awry?" (April 2002) Available at www.ncat.org/liheap/pubs/barbadefault3.doc

Comments on behalf of AARP before the California PUC on CARE (low income program) concerning Rapid Deployment, Rulemaking 01-08-027 (2001 and 2002).

Comments on behalf of Citizens Utility Board before the Illinois Commerce Commission on Proposed Rule to Allow the Use of Credit Scoring to Determine When a Deposit May be Required, ICC Docket No. 01-0644, June 24, 2002.

Comments on behalf of Consumer Groups before the Texas PUC on Rulemaking Proceeding to Amend Requirements for Provider of Last Resort Service, Docket No. 25360, June 28, 2002.

Direct Testimony on behalf of the New Jersey Division of Ratepayer Advocate before the Board of Public Utilities on Joint Petition of New Jersey-American Water Co. and Thames Water Aqua Holding for Approval of a Change in Control of New Jersey-American Water Co., Docket No. WM01120833, July 18, 2002.

Alexander, Barbara, Consumer Education Programs to Accompany the Move to Retail Electric Competition, prepared for the National Association of State Utility Consumer Advocates (NASUCA), July 2002. Available at www.nasuca.org

Direct Testimony on behalf of New Jersey Division of Ratepayer Advocate before the Board of Public Utilities on Petition of NUI Utilities d/b/a Elizabethtown Gas Co. for Approval of Increased Base Tariff Rates and Charges for Gas Service, Docket No. GR02040245, September 6, 2002.

Alexander, Barbara, An Analysis of Residential Energy Markets in Georgia, Massachusetts, Ohio, New York, and Texas, prepared for the National Energy Affordability and Accessibility Project, National Center for Appropriate Technology, September 2002. Available at www.ncat.org/neaap

Direct and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC on Philadelphia Gas Works' Gas Restructuring Filing, Docket No. M-00021612, September 2002 and November 2002.

Direct Testimony on behalf of Consumer Groups before the Texas PUC on Notice and Request of Mutual Energy CPL and Mutual Energy WTU for Approval of Changes in Ownership and Affiliation, Docket No. 25957, October 15, 2002.

Comments on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Advanced Notice of Proposed Rulemaking for Revision of Chapter 54 Pertaining to Electric Generation Supplier Licensing, Docket No. L-00020158, March 5, 2003.

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey BPU on Jersey Central Power & Light's base rate case proceeding (service quality and reliability of service), Docket No. ER02080506, ERT02080507, and ER02070417, December 2002 and February 2003.

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Direct and Surrebuttal Testimony on behalf of the New Jersey Division of the Ratepayer Advocate before the New Jersey BPU on rate case proceedings for New Jersey-American Water Co., Elizabethtown Water Co., and Mt. Holly Water Co. (service quality and low-income programs and policies), Dockets Nos. WR03070509-WR03070511 (December 2003).

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Direct, Rebuttal, and Supplemental Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Petition of Duquesne Light Co. for Approval of Plan for Post-Transition Period POLR Services, Docket No. P-00032071 (February-April 2004).

Comments on behalf of AARP before the California PUC, Order Instituting Rulemaking on the Commission's Own Motion to Establish Consumer Rights and Consumer Protection Rules Applicable to All Telecommunications Utilities, R. 00-02-004 (March 2004).

Comments and Reply Comments on behalf of AARP before the Maine PUC, Inquiry into Standard Offer Supply Procurement for Residential and Small Commercial Customers, Docket No. 2004-147 (April 2004).

Comments on behalf of Wisconsin Citizens' Utility Board before the Wisconsin Public Service Commission's Gas Service Standards, Docket No. 1-AC-210 (July 2004).

Comments on behalf of the Colorado Office of Consumer Counsel before the Public Utilities Commission of Colorado, In the Matter of the Proposed Repeal and Reenactment of all Rules Regulating Telephone Utilities and Providers (Docket No. 03R-524T) (September 2004).

Direct Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Investigation if Metropolitan Edison Co., Pennsylvania Electric Co. and Pennsylvania Power Co. Reliability Performance, Docket no. I-00040102, [customer service and reliability performance] (June 2004).

Direct and Surrebuttal Testimony on behalf of the Vermont Department of Public Service before the Vermont Board of Public Utilities, Investigation into Successor Alternative Regulatory Plan for Verizon Vermont, Docket 6959 [Service Quality] (November 2004 and March 2005).

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Direct and Surrebuttal Testimony on behalf of Wisconsin Citizens' Utility Board before the Wisconsin Public Service Commission, Application of Wisconsin Power and Light Co. for Authority to Increase Retail Electric, Natural Gas and Ripon Water Rates, Docket No. 6680-UR-114 [customer service, credit and collection programs and expenses, low income programs, fixed bill program] (April 2005).

Comments on behalf of the Maine Office of Public Advocate before the Maine Public Utilities Commission, Inquiry into Revisions to Chapter 81, Residential Utility Service Standards for Credit and Collection Programs, and Chapter 86, Disconnection and Deposit Regulations for Nonresidential Utility Service, Docket No. 2005-005 (April and May 2005).

Direct and Rebuttal Testimony on behalf of AARP Montana before the Montana Public Service Commission, Northwestern Energy Electric Cost Tracker, Docket No. D2004.6.90 [Default Service cost recovery policies and integration with low income programs] (December 2004 and July 2005).

Direct Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utilities Commission, Joint Application of PECO Energy Co. and Public Service Electric and Gas Co. for Approval of the Merger of Public Service Enterprise Group, Inc. with and into Exelon Corporation, Docket No. A-110550F0160 [customer service, reliability of service, low income programs] (June 2005).

Direct Testimony on behalf of Illinois Citizens' Utility Board, City of Chicago, and Community Action for Fair Utility Practice, before the Illinois Commerce Commission, Petition to Initiate Rulemaking with Notice and Comment for Approval of Certain Amendments to Illinois Administrative Code Part 280 Concerning Deposit Requests and Deposit Refunds by Utilities, Docket No. 05-0237 (June 2005).

Direct Testimony on behalf of The Utility Reform Network (TURN) before the California Public Utilities Commission, Order Instituting Rulemaking on the Commission's Own Motion to Establish Consumer Rights and Consumer Protection Rules Applicable to All Telecommunications Utilities, Docket R-00-02-004 (August 2005).

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Comments on behalf of Texas Office of Public Utility Counsel, Texas Legal Services Center, Texas Ratepayers' Organization to Save Energy and AARP Texas, before the Texas PUC, Evaluation of Default Service for Residential Customers and Review of Rules Relating to the Price to Beat and Provider of Last Resort, Project No. 31416 (March 2006) [Default service policies]

Rebuttal and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, In the Matter of the Petition of the Pennsylvania Power Co. for Approval of an Interim Provider of Last Resort Supply Plan, Docket No. P-00052188 [Default Service policies] (December 2005 and January 2006).

Direct and Rebuttal Testimony on behalf of the Maine Office of Public Advocate before the Maine PUC, Investigation into Verizon Maine's Alternative Form of Regulation, Docket No. 2005-155 [Retail Service Quality] (January and May 2006).

Alexander, Barbara, "State Developments Changing for Default/Standard Retail Electric Service," Natural Gas & Electricity, September 2006.

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[Consumer Protections to Accompany the Transition to Default Time of Use Rates for residential customers; analysis of customer education and messaging]

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- Presentation on Consumer Protection Policies for Solar Providers, New Mexico Public Regulatory Commission, Santa Fe, NM, January 2017
- Presentation on Residential Rate Design Policies, National Energy Affordability and Energy Conference, Denver, CO., June 2016
- Presentation on "Regulatory-Market Arbitrage: From Rate Base to Market and Back Again," before the Harvard Electricity Policy Group, Washington, D.C., March 2016.
- Presentation on Residential Rate Design and Demand Charges, NASUCA, November 2015.

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- Presentation on "Future Utility Models: A Consumer Perspective," for Kleinman Center for Energy Policy, U. of Pennsylvania, August 2015.
- Presentation. EUCI Workshop on Demand Rates for Residential Customers. Denver. CO [May 2015]
- Presentation. Smart Grid Future. Brookings Institute. Washington. DC [July 2010]
- Participant. Fair Pricing Conference. Rutgers Business School. New Jersey [April 2010]
- Presentation on Smart Metering. National Regulatory Conference. Williamsburg. VA [May 2010]
- Presentation on Smart Metering. Energy Bar Association Annual Meeting. Washington. DC [November 2009]
- Presentation at Workshop on Smart Grid policies. California PUC [July 2009]
- National Energy Affordability and Energy Conference (NEAUC) Annual Conference
- NARUC annual and regional meetings
- NASUCA annual and regional meetings
- National Community Action Foundation's Annual Energy and Community Economic Development Partnerships Conference
- Testimony and Presentations to State Legislatures: Virginia. New Jersey. Texas. Kentucky. Illinois. and Maine
- Training Programs for State Regulatory Commissions: Pennsylvania. Georgia. Kentucky. Illinois. New Jersey
- DOE-NARUC National Electricity Forum
- AIC Conference on Reliability of Electric Service
- Institute of Public Utilities, MSU (Camp NARUC) [Instructor 1996-2006]
- Training Programs on customer service and service quality regulation for international regulators (India and Brazil) on behalf of Regulatory Assistance Project
- Georgia Natural Gas Deregulation Task Force [December 2001]
- Mid Atlantic Assoc. of Regulatory Utility Commissioners [July 2003]
- Illinois Commerce Commission's Post 2006 Initiative [April 2004]
- Delaware Public Service Commission's Workshop on Standard Offer Service [August 2004]

APPENDIX B: CALIFORNIA CONSUMER PROTECTIONS GOVERNING THE MOVE TO TIME BASED RATES

The California Public Utilities Code Section 745(c) sets for the criteria that govern a residential customer's move to a time-based rate plan:

1. Section 745(c)(1) requires that customers enrolled in the Medical Baseline program, customers who have enrolled to receive third party notifications of disconnection and non-pay notices, and customers who cannot be disconnected without the mandated premise visit, cannot be defaulted to a TOU rate "without their affirmative consent."

2. Section 745(c)(2) required the Commission to "ensure that any time-of-use rate schedule does not cause unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones"; and in Decisions 16-09-016 and 17-09-036 the Commission determined that all CARE and FERA-eligible customers in hot climate zones should be excluded from default TOU.

3. 745(c)(4) requires that residential customers be provided with at least one year of "bill protection" in which the total amount paid by the customer must not be greater than the amount the customer would have paid on "that customer's previous rate schedule."

4. Section 745(c)(6) requires that all customers "have the option to not receive service pursuant to a time-of-use rate schedule and incur no additional charges as a result of the exercise of that option." Complying with this directive requires that customers be informed of their rate options and be provided with adequate means of choosing an alternative optional rate that is not time-differentiated.

5. Section 745(c)(5) requires the utilities to provide each customer a summary of available tariff options with a calculation of expected annual bill impacts under each available tariff not less than once per year and using a reasonable delivery method of the customer's choosing.

Pursuant to Public Utilities ("P.U.") Code Section 745(c)(1) and (4), several customer groups are excluded from the transition to default TOU rates. In Decision 16-09-016 the Commission addressed several foundational definitional issues related to the implementation of these Section 745 requirements, and found that customers who must be excluded from the transition to default TOU include:

(1) Customers enrolled in the Medical Baseline program;

(2) Customers who have enrolled to receive third party notifications of disconnection and non-pay notices;

(3) Customers who cannot be disconnected without the mandated premise visit;[67]

(4) Existing customers with less than one-year of interval usage data;

[67] P.U. Code Section 745 (c) (1) states that "customers who the commission has ordered cannot be disconnected from service without an in-person visit from a utility representative (Decision 12-03-054 (March 22, 2012), Decision on Phase II Issues: Adoption of Practices to Reduce the Number of Gas and Electric Service Disconnections, Order 2 (b) at page 55)" along with several other customer categories, "shall not be subject to default time-of-use rates without their affirmative consent." See also Decision 16-09-016 (September 19, 2016) for a summary of the applicable consumer protections:
http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M167/K246/167246364.PDF

APPENDIX C: CURRENT APS RESIDENTIAL BILL ON DEMAND CHARGE RATE

Charges for electricity services

Cost of electricity you used

Customer account charge	$2.12
Delivery service charge	$5.27
Demand charge on-peak - delivery	$13.20
Environmental benefits surcharge	$2.75
Federal environmental improvement surcharge	$0.12
System benefits charge	$1.32
Power supply adjustment*	-$0.22
Metering*	$5.83
Meter reading*	$2.09
Billing*	$2.35
Generation of electricity on-peak*	$3.00
Generation of electricity off-peak*	$11.01
Demand charge on-peak - generation*	$27.19
Federal transmission and ancillary services*	$5.23
Federal transmission cost adjustment*	$1.20
LFCR adjustor	$1.69
Tax Expense Adjustor	-$4.01
Cost of electricity you used	$80.14

Taxes and fees

Regulatory assessment	$0.19
State sales tax	$4.59
County sales tax	$0.61
City sales tax	$2.25
Franchise fee	$1.61
Cost of electricity with taxes and fees	$89.39

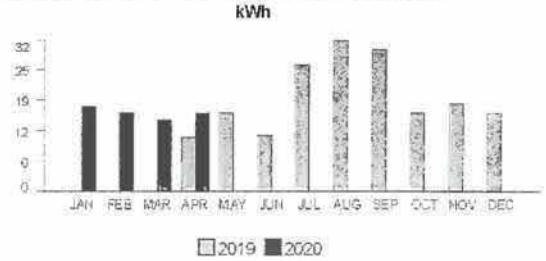
Total charges for electricity services **$89.39**

** These services are currently provided by APS but may be provided by a competitive supplier.*

Amount of electricity you used

Meter reading on Apr 8	28994
Meter reading on Mar 10	28517
Total electricity you used, in kWh	**477**
On-peak meter reading on Apr 8	6290
On-peak meter reading on Mar 10	6213
On-peak electricity you used, in kWh (3 pm - 8 pm Monday - Friday)	**77**
Off-peak electricity you used, in kWh (8 pm - 3 pm Monday - Friday and all day on weekends and 10 holidays)	**400**
On-peak demand meter reading	3.39
Your billed on-peak demand in kW	**3.3**

Average daily electricity use per month



Comparing your monthly use

	This month	Last month	This month last year
Billing days	29	29	32
Average outdoor temperature	47°	44°	48°
Your total use in kWh	477	437	362
Percentage of on-peak use	17%	16%	18%
Your billed demand in kW	3.3	4.1	3.1
Your average daily cost	$3.08	$3.40	$2.65