The April 28, 2015 Procedural Order asked one question: is there any portion of APS’s April 2, 2015 Motion to Reset that must be considered in a rate case. The answer can only be no. Nothing in Arizona law requires a rate case to make a revenue-neutral change to rates. Moreover, Decision No. 74202 expressly contemplated APS’s Motion before APS’s next rate case. APS’s proposal is also subject to true-up in APS’s next rate case, and would only apply to a small class of customers who voluntarily decide to install DG after the Commission’s decision in this matter. Accordingly, no part of APS’s April 2, 2015 filing must be heard in a rate case.

The first part of this brief provides a legal analysis of the Commission’s broad ratemaking discretion. It concludes that considering APS’s Motion to Reset outside of a
rate case falls well within that discretion. The second part of this brief addresses whether APS’s Motion should be heard in a rate case.

I. ARIZONA LAW PROVIDES THE COMMISSION WITH SIGNIFICANT RATEMAKING DISCRETION.

Based on Arizona’s Constitution, Arizona courts have articulated two ratemaking-related requirements that are relevant to this proceeding:

1) When the Commission sets rates, it must determine the fair value of a utility’s property; and

2) When the Commission increases rates, it must consider the impact of that increase on the utility’s overall rate of return.¹

Technically, neither equate to requiring a rate case, per se. Instead, they involve the Commission making and using specific findings in the process of setting rates.² With Arizona Revised Statute § 40-250(A), the Arizona Legislature codified the requirement that the Commission make certain findings before a rate increase.³ Within this statutory and common law structure, the Commission has wide discretion in how it processes rate changes.

The decision in Scates is widely viewed as the seminal Arizona decision on this topic. In Scates, the Commission approved an increase to the amount that Mountain States charged all of its customers for installing, moving, and changing telephones.⁴ As a result, Mountain States’ annual revenue rose by approximately $5 million, or a 2% increase to its Arizona revenue.⁵ In doing so, however, the Commission did not

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²See Simms v. Round Valley Light & Power Co., 80 Ariz. 145, 151, 294 P.2d 378, 382 (“the commission is required to find the fair value of the company’s property and use such finding as a rate base for the purpose of calculating what are just and reasonable rates.”).
³Importantly the legislature also codified two statutes that permit rate changes with no hearings: A.R.S. § 40-250(B) and A.R.S. § 40-367.
⁴Scates, 118 Ariz. at 533, 578 P.2d at 614.
⁵Scates, 118 Ariz. at 533, 578 P.2d at 614.
determine the value of Mountain States’ rate base, or make “any inquiry into the effect of this substantial increase upon Mountain States’ rate of return...”

The Arizona Court of Appeals subsequently rejected the Commission’s decision, holding that:

the Commission was without authority to increase the rate without any consideration of the overall impact of that rate increase upon the return of Mountain States, and without, as specifically required by our law, a determination of Mountain States’ rate base.

The court opined that the requirements to both assess a utility’s overall rate of return, and find the fair value of the utility’s property, are rooted in the need to ensure just and reasonable rates:

the rates established by the Commission should meet the overall operating costs of the utility and produce a reasonable rate of return. It is equally clear that the rates cannot be considered just and reasonable if they fail to produce a reasonable rate of return or if they produce revenue which exceeds a reasonable rate of return.

When the Commission did not consider the fair value of Mountain States’ property, or its overall rate of return, no basis existed to conclude that Mountain States’ rates were just and reasonable after the rate increase.

Notably, the phrase “single-issue ratemaking” never appears in Scates. In fact, Arizona law does not proscribe so-called “single-issue ratemaking.” Instead, Arizona law prohibits increasing a utility’s rates without “any determination of whether the increase would affect the utility’s rate of return.” Indeed, the court in Scates went further, leaving the door open for several different procedural paths that might otherwise be called “single-issue ratemaking” in other contexts, including:

- the setting of an interim rate “to be charged by the utility for products or services pending the establishment of a permanent rate”;
• a rate increase that applied to “a very small class of customers,” as opposed to “all customers who as of and after the date of the increase had phones installed, moved or changed”; ¹¹

• a new rate schedule that “was a modernization designed to produce the same revenue as had been earned under the old schedule”; ¹²

• a waiver of the procedural requirements for rate cases in appropriate circumstances; ¹³

• the existence of “exceptional circumstances in which the Commission may authorize partial rate increases without requiring entirely new submissions” of a utility’s relevant financial information; ¹⁴ and

• referring to “previous submissions with some updating” or accepting “summary financial information.” ¹⁵

The point is not that these procedural avenues were in fact available in the Scates matter (although some of them might have been), or that they are available to APS now (although APS believes that some of them are). The point is that Arizona law does not prohibit the Commission from changing a single rate outside of a rate case. Instead, the Commission possesses wide latitude when it sets just and reasonable rates. When it sets rates, it need only consider a utility’s rate base. And when it increases rates, it need only consider the impact on a utility’s overall rate of return. Neither of these requirements necessitates a hearing (much less a rate case), and neither prompts a requirement that APS’s Motion to Reset be heard in a rate case.

¹¹ Scates, 118 Ariz. at 536, 578 P.2d at 617.
¹² Scates, 118 Ariz. at 536, 578 P.2d at 617.
¹³ Scates, 118 Ariz. at 537, 578 P.2d at 618; see Ariz. Administrative Code R14-2-103(B)(6) (permitting the Commission to waive the compliance with any or all of the requirements in R14-2-103 after “determining the existence of reasonable cause⋯”).
¹⁴ Scates, 118 Ariz. at 537, 578 P.2d at 618.
¹⁵ Scates, 118 Ariz. at 537, 578 P.2d at 618.
II. NO PART OF APS’S PROPOSAL MUST BE HEARD IN A RATE CASE.

APS’s request to reset the LFCR through means of the Grid Access Charge outside of and before its next rate case is entirely consistent with Arizona law. Unlike what happened in Scutes, resetting the Grid Access Charge would not increase APS’s revenue. It would only reallocate customer responsibility for annual LFCR revenue as shown by the following illustration of an annualized Grid Access Charge:

<table>
<thead>
<tr>
<th></th>
<th>$0.70 per kW Grid Access Charge ($M)</th>
<th>$3.00 per kW Grid Access Charge ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFCR from DG Customers</td>
<td>$0.9</td>
<td>$3.9</td>
</tr>
<tr>
<td>LFCR from non-DG Customers</td>
<td>$37.6</td>
<td>$34.6</td>
</tr>
<tr>
<td>Total LFCR Revenue</td>
<td>$38.5</td>
<td>$38.5</td>
</tr>
</tbody>
</table>

Whether the Grid Access Charge remains at $0.70/kW, or increases to $3/kW, APS will collect the same amount of annual LFCR revenue. As a result, the requirement in Scutes that the Commission consider the effect of an increase in revenue on a utility’s overall rate of return does not apply—there is no increase in revenue in the first instance.

That resetting the Grid Access Charge does not increase APS’s revenue similarly resolves any need to recalculate the fair value of APS’s rate base. In APS’s last rate case, the Commission found that the fair value of APS’s jurisdictional rate base was $8,167,126,000, and that a fair value of rate return of 6.09% on APS’s fair value rate base would produce just and reasonable rates. In issuing Decision No. 74202, the Commission invoked and relied on these fair-value findings. These findings are effective today and remain the basis for APS’s current rates.

Resetting the Grid Access Charge will not collect more revenue than is called for by these currently-effective fair-value findings. As a result, resetting the Grid Access Charge does not require new Commission findings regarding the fair value of APS’s

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16 See Decision No. 73183 at ¶ 35 & 39, respectively.
17 See Decision No. 74202 at Conclusion of Law ¶ 5.
property, or what fair value rate of return would result in just and reasonable rates. Moreover, resetting the Grid Access Charge is consistent with certain suggestions in *Scates* on how the Commission can proceed without making separate findings. Specifically, resetting the Grid Access Charge:

- would essentially be a new rate schedule designed to collect the same amount of revenue;
- will only apply prospectively, to a limited group of customers, who voluntarily elect to install DG after the Commission issues its decision on the Grid Access Charge;
- is subject to true-up in APS’s next rate case; and
- can be accomplished on the basis of previous submissions, particularly because the fair value rate base and fair value rate of return findings from APS’s last rate case continue to be effective today.

A relevant example of the Commission’s ratemaking discretion occurred in Decision No. 71635. There, the Commission set the customer charge for net metering customers in Navopache Electric Co-op’s territory at $25.25, higher than the standard customer charge of $18.30. In assessing the fair value implications of its decision, the Commission noted that “the proposed equipment charge on Schedule NM would have no significant impact on the Company’s revenue, fair value rate base, or rate of return, because the charge is cost-based and relatively limited in scope.” The Commission also concluded as a matter of law that “[a]pproval of Schedule NMS does not constitute a rate increase as contemplated by A.R.S. Section 40-250.”

With its Motion, APS seeks less than Navopache did in 2009. Navopache sought to increase the customer charge for net metering customers in a way that increased its revenue. APS, on the other hand, only seeks a revenue-neutral reset of an adjustment.

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18 See Decision No. 71635 (April 14, 2010).
19 See Decision No. 71635 at ¶ 11.
20 See Decision No. 71635 at Conclusion of Law ¶ 3.
that is subject to true-up in APS’s next rate case. And APS’s Motion seeks relief that
was expressly contemplated by Decision No. 74202. Approving APS’s Motion to Reset
outside of a rate case is within the Commission’s discretion.

III. ARGUMENTS BY OTHERS ONLY ADVOCATE THAT APS’S
MOTION SHOULD (NOT MUST) BE IN A RATE CASE.

The question of whether APS’s Motion to Reset should be heard in a rate case is only one of policy, not law. Although the April 28 Procedural Order did not request briefing on policy questions, APS nonetheless responds to these arguments to complete the record on this topic.

A. Sufficient Evidence is in the Docket Establishing a Cost Basis for APS’s Motion.

With its original application in 2013, APS submitted sworn expert testimony providing a detailed cost basis for the $67 per month cost shift. APS also filed extensive discovery responses into the docket, which became part of the record. Both Commission Staff and RU CO conducted their own analysis. No party sought an evidentiary hearing in the docket. As TASC correctly notes, certain parties requested that APS’s filing be dismissed and considered in a rate case. But this is not the same thing as requesting a formal evidentiary hearing, or asserting that a hearing in and of itself was necessary. The current procedural posture of APS’s Motion to Reset demonstrates the difference. If the intervenors in 2013 had wanted a hearing, rather than the perceived tactical advantage of a rate case, they could have sought one.

B. TASC’s Concession Regarding the Cost Shift Narrows the Range of Issues that Might Require a Hearing.

In its Response to APS’s Motion, TASC—for the first time—admitted the factual basis of the cost shift. In its Response to APS’s Motion to Reset, TASC acknowledges that with volumetric rate design, customers with DG contribute less to fixed costs because they purchase fewer kilowatt hours:

21 This figure was based on an average residential solar system size of 6.4 kW. APS notes that the average system size has increased and, therefore, the average cost shift has also increased since this calculation.
The Settlement Agreement starts from the premise of a potential rate design issue: a significant portion of APS’s fixed costs are recovered through volumetric charges (as part of energy rates). This has the potential to cause a rate recovery mismatch. Distributed Generation customers (including NEM customers) purchase fewer kWh from APS, and to the extent that their rooftop solar systems do not confer benefits in proportion to or in excess of the fixed costs they avoid paying, there is a possibility that an under-recovery of such fixed costs from DG customers may occur.22

Although TASC uses the label “revenue recovery mismatch,” this is only semantics. Fixed costs are collected through kWh charges. When customers install DG, they purchase fewer kWh. Thus, less revenue is collected to pay for fixed costs. As a result, the rates of non-DG customers will increase to account for the difference. This is the cost shift.

TASC appears to suggest that DG provides other, long-term benefits, and that those future, hypothetical benefits should be reflected in rates today. Although many rooftop solar companies have urged this position in the past, it has been increasingly shown to be a red herring. A growing number of respected academic institutions are publishing studies that more accurately characterize the costs and benefits of DG, and also confirm many of the facts that APS advanced in 2013 when it initiated this docket.

Most recently, the Massachusetts Institute of Technology issued an exhaustive, cross-disciplinary study of solar.23 MIT concluded, among other items, that installing DG (i) does not reduce fixed grid costs; (ii) might actually increase fixed grid costs; and (iii) shifts responsibility for paying fixed costs onto non-DG customers:

As the penetration of DG goes up, customers who have installed PV systems (thereby becoming prosumers) will consume a lower volume of electricity from the grid. Since network costs do not decrease with greater PV penetration — on the contrary, they may even increase, as we have seen — the tariff that has to be applied to each kWh consumed to recover network costs has to increase. The prosumers with PV systems, who are responsible for both the reduction in overall kWh sales and for the increase in network costs, avoid a big portion of the cost, as Figure 7.13b

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22 TASC’s Response to APS’s Motion to Reset at 10 (underlined in original, bold added).
shows. On the other end, customers without distributed generation systems fully absorb the impact of higher tariffs — an outcome that is likely to be perceived as unfair.

MIT’s study establishes that rooftop solar does not reduce, and in fact could increase, fixed grid costs. Resolving this factual dispute, however, is unnecessary. Using hypothetical, long-term benefits of DG to offset historical, cost-based rates as a ratemaking methodology is fundamentally flawed and does not merit serious consideration. The record in this docket has already examined this issue. APS explored these flaws on pages 16-20 of Charles Miessner’s testimony, which APS filed with its 2013 Application and attaches to this filing as Exhibit A. APS also discussed various related details in its responses to Staff data requests, which were filed in this docket in 2013. In the interest of time and space, APS will not repeat itself here.

TASC recently made this same claim before the Public Utilities Commission of Nevada to no avail. There, TASC, as part of a Joint Solar Group, asserted that separately studying the cost to serve net metering customers was unnecessary because of existing studies about the long-term benefit of rooftop solar. The Nevada Commission Staff and Nevada’s Bureau of Consumer Protection disagreed with TASC. And in its final decision, the Nevada Commission firmly rejected TASC’s position, ordering that NV Energy conduct a cost of service study for NV Energy’s net metering customers and rejecting the concept of developing rates based on DG’s long-term benefits:

Both the Joint Solar Group and IREC state that a cost of service study is unnecessary at this time. Both reference the results of the E3 Study calculating the long-term costs for generation, transmission, and distribution, concluding that the benefits of NEM solar generation for non-participating ratepayers will equal or exceed the costs.

The E3 Study was a cost/benefit analysis of NEM, not a cost of service study. These are not the same analyses. The former is appropriate for certain resource planning issues, the latter is appropriate for allocating a revenue requirement among customers on the basis of cost causation. The analyses are complementary, not identical.

\[24\] Id. at 170 (citations omitted) (emphasis added).

The Nevada Commission also ordered that a workshop be held on the fundamentals of cost of service studies to address apparent "confusion about cost of service studies for the purposes of ratemaking in Nevada" that emerged during the proceeding.26

APS agrees with the Nevada Commission. Studies evaluating the long-term benefits of DG are appropriate for resource planning. But they do not provide the type of cost-causation information needed to determine just and reasonable rates. TASC's only reason why the cost shift might not exist—the long term benefits of DG—is irrelevant for the purposes of setting rates and the evidentiary hearing in this matter should not include evidence regarding the long-term benefits of DG.

Solar plays an important, valuable role in APS's generation portfolio. The point is not about solar, but about cost. As a general matter, APS believes that a preference should be placed on acquiring the value of solar at the lowest price. This means including more utility-scale solar, which is available at a fraction of what APS customers pay for DG. Ultimately, questions about how and when to add more renewable energy are policy questions best considered in policy-related dockets, like the Integrated Resource Planning and Renewable Energy Standard dockets. The "value" supplied by a particular generation resource does not equate with its cost, and rates are set on costs.

C. Any Additional Evidence Needed to Assess APS's Motion Can Be Obtained in an Evidentiary Hearing in this Docket.

The primary factual issue that must be resolved in this matter is this: what amount of fixed costs do DG customers not pay each month after accounting for the immediate benefits provided by DG (like avoided fuel costs)? Substantial evidence has already been submitted on this issue. To the extent that further refinement is needed, an evidentiary hearing outside of a rate case is more than sufficient.

TASC disagrees, identifying three categories of information it claims are needed to assess APS's Motion: a cost of service study, "revenue requirement information," and

26 Id. at p. 26.
a full cost benefit study. TASC further asserts that these categories of information are
only available in a rate case. TASC’s assertions are incorrect. The categories of
information that TASC identifies are either already available, irrelevant, or can be
obtained in an evidentiary hearing on the Motion to Reset in this docket.

The cost of service information relevant to the Grid Access Charge has been filed
in this docket. This includes the cost to serve customers with DG and the costs they
permit APS to save. As the previously-referenced Nevada decision makes clear, an
entirely new cost of service study is not needed to accurately determine the relevant
facts.

It is not clear what is meant by revenue requirement “information,” but APS’s
revenue requirement is irrelevant for purposes of APS’s Motion. Not only is the Grid
Access Charge revenue neutral, but APS’s revenue requirement remains unchanged
from its last rate case for purposes of current rates and the Grid Access Charge. It is
unnecessary to find additional facts regarding APS’s revenue requirement. And even if it
were necessary to do so, an evidentiary hearing would suffice.

The final category of information that TASC identifies is a “full cost benefit
study.” As discussed above, however, the filed cost-of-service information already
incorporates the tangible short term benefits of DG. To the extent that long-term benefits
of DG exist, they are appropriate to consider in the resource planning context. But they
are irrelevant for the purpose of setting rates and should not be considered in connection
with the Grid Access Charge or in a rate case.

In any event, this issue may be moot. TASC has now sought much of this
information from APS through data requests it propounded on May 12, 2015. This
appears to be a tacit admission that a rate case is not needed to resolve APS’s Motion.

D. Although Rate Design Options Exist in a Rate Case, They Are Not
Needed Now and Waiting For Them is Against the Public Interest.

APS agrees with Staff that more comprehensive and permanent solutions are
available to address the cost shift in a rate case. These solutions include demand-based
charges, a type of charge that Staff has described as ideal for equitably distributing the
costs and benefits of DG. But waiting until all solutions are available is not necessary. In
Decision No. 74202, the Commission made clear that the Grid Access Charge could be
reset before APS’s next rate case. The Commission need not hold off taking action on
the cost shift until it can take action on the entire cost shift. Incremental progress can be
made now. The additional options available in a rate case will still be available if the
Grid Access Charge is reset now.

The inverse, however, is not necessarily true. Waiting to take any additional
action might hinder comprehensive and balanced solutions to the cost shift. A significant
issue to be resolved in connection with the cost shift is whether and how to grandfather
existing DG customers. APS is strongly inclined to prefer grandfathering. But the cost
shift continues to grow at a rapid pace. At some point, the cost shift might grow to such
an extent that grandfathering all existing DG customers will significantly increase rates
for all other non-DG customers. In that circumstance, it might not be feasible for the
Commission to grandfather current DG customers. Resetting the Grid Access Charge
now affords a greater opportunity to protect current DG customers. Although, delay
might permit third-party solar providers to install more DG in the short term, it would
also increase the likelihood of not being able to grandfather current DG customers in
APS’s next rate case.

In addition to posing a risk to current DG customers, waiting is unfair to non-DG
customers. In Decision No. 74202, the Commission found that the revenue allocation
between DG and non-DG customers was unfair, and that it was in the public interest to
take action. The original $0.70/kW Grid Access Charge did not resolve this unfair
revenue allocation; it was only a small initial step. And the public interest that drove
Decision No. 74202 continues today. It is in the public interest to continue addressing
the inequitable revenue allocation by making additional incremental progress. Costs are

27 Decision No. 74202 at ¶ 106.
being unfairly shifted to non-DG customers now in the form of monthly responsibility for LFCR revenue. It would simply be unfair to wait until the effective date of new rates following APS’s next rate case to provide relief to non-DG customers.

The reasons to take modest incremental action now outweigh any reason to wait. Taking action now is an incremental step towards fairness in the interest of gradualism. Although TASC has leveled claims of “abruptism,” the opposite is true. The Commission found that $3/kW per month was reasonable and that the Grid Access Charge could be reset before the next rate case. The Commission’s decision was filed in the public docket. And because it reflected a settlement negotiated by TASC, the decision’s language should not be a surprise. Moreover, the move from $5 per month to $21 per month is a gradual step towards addressing the actual $70 per month cost shift in APS’s next rate case.

TASC also points to generic concerns about judicial economy as a reason to delay action. Once again, the opposite is true. Taking action now will facilitate the efficient resolution of the cost shift. APS’s Motion to Reset raises a narrow issue of allocating LFCR revenue responsibility between DG and non-DG customers. It is based on the fact of the cost shift—a reality that TASC now acknowledges—and the quantity of shifted costs. There are no factual issues to be resolved now that would need to be resolved again in APS’s next rate case. In fact, resolving factual issues now, and consequently resetting the Grid Access Charge, would facilitate balanced solutions in APS’s next rate case.

Ultimately, however, whether a small amount of judicial economy accrues by acting now, or by delaying, is irrelevant. Fairness to non-DG customers and the public interest weigh heavily against claims of judicial economy. The Commission should reset the Grid Access Charge now in the interest of fairness, and to improve the chances of a balanced solution in APS’s next rate case.
E. The LFCR Has Been and Can Be Changed Upon Appropriate Findings by the Commission.

Resetting the LFCR by increasing the Grid Access Charge to $3/kW would not violate the settlement agreement from APS’s last rate case. Nor would doing so violate Decision No. 73183 that implemented the agreement, or the resulting LFCR Plan of Administration. The Commission approved the settlement agreement in 2012 because it found the agreement to be in the public interest at that time. If the Commission were to grant APS’s Motion to Reset, it would again do so in the public interest at this time.

The Commission faced whether it could change the LFCR outside of a rate case when it implemented the initial $0.70/kW Grid Access Charge with Decision No. 74202 in 2013. In doing so, the Commission noted that paragraph 19.1 of the settlement agreement authorized the Commission to take action in the public interest. The Commission concluded that because of the LFCR’s defective revenue allocation, it was in the public interest to take action:

"We find that the presence of a defect in the method for allocating the revenue spread in the LFCR is such an ‘extraordinary event,’ and we believe that is it in the public interest for us to address it now. To conclude otherwise would be unreasonable, especially in light of paragraph 19.1.”

The Commission also considered Paragraph 9.11 of the settlement agreement, which expressly contemplates changes to the LFCR before APS’s next rate case:

“The LFCR shall be subject to Commission review at any time, the first to occur no later than APS’s next general rate case. If the Commission decides to suspend, terminate, or materially modify the LFCR mechanism prior to the Company’s next general rate case, and does not provide alternative relief that adequately addresses fixed cost revenue erosion, the moratorium for filing general rate case applications shall terminate.”

In discussing the effect of this paragraph 9.11 in creating the initial $0.70/kW Grid Access Charge, the Commission left no ambiguity that its action in Decision No. 74202 was permitted:

28 Decision No. 74202 at ¶ 106.
29 Settlement Agreement at ¶ 9.11, Attachment to Decision No. 73183, Docket No. E-01345A-11-0224 (emphasis added).
“Our order in Decision No. 73183 adopted the LFCR as proposed, and our adoption thereof was based on our understanding that the LFCR is an adjustor mechanism, subject to adjustments and mid-course corrections between rate cases. Our adjustments as adopted herein fall within the type of adjustments contemplated by Decision No. 73183 and the settlement agreement in that proceeding.”

The Commission has already found that resetting the Grid Access Charge in the manner contemplated in Decision No. 74202 is consistent with the LFCR, its Plan of Administration, the settlement in APS’s last rate case, and the Decision implementing that settlement. APS agreed with the Commission in 2013, and no other party disagreed with the Commission’s understanding of the relevant language. For the same reasons articulated by the Commission in Decision No. 74202, the Commission can permissibly reset the Grid Access Charge now.

IV. CONCLUSION

APS’s proposal is revenue neutral. Consequently, no legal barrier exists to taking action now. There are only two remaining questions. The first is factual: does a cost basis exist that justifies APS’s request? The second is a policy question: if a cost basis exists, should, as a matter of policy, APS’s proposal be approved? A rate case is not needed to answer either question. And given the information in the docket, the findings and conclusions in Decision No. 74202, and the growing size of the cost shift, the answer to both questions can only be yes.

APS requests that an evidentiary hearing be scheduled in this matter, and that it be afforded the opportunity to have its Motion to Reset heard on the merits.

30 Decision No. 74202 at ¶ 107.
RESPECTFULLY SUBMITTED this 21st day of May 2015.

By: Thomas Loquvam

Attorney for Arizona Public Service Company

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Q. WHAT ROLE DOES THE NETTING OF EXCESS GENERATION PLAY IN THE COST SHIFT?
A. The netting of excess solar generation against the customer’s bill exacerbates the cost shift because it provides full retail bill savings for the 20% (on average) excess solar generation that is exported to the grid. Thus, it extends the cost shifting issue to this portion of rooftop solar generation as well.

VII. PERSPECTIVES OF ROOFTOP SOLAR COMPANIES ON COST SHIFTING

Q. WHAT ARE THE PERSPECTIVES OF ROOFTOP SOLAR COMPANIES ON THE COST SHIFTING ISSUE?
A. Rooftop solar companies offered their viewpoints regarding rooftop solar and Net Metering in the recent technical workshops and elsewhere. They typically assert, among other things, that: (1) rooftop solar does not shift costs to other customers; (2) rooftop solar is similar to energy efficiency; and (3) if there is a cost shift, it’s just one of many cost allocation issues in rates.

Q. DO YOU AGREE WITH THESE ASSERTIONS?
A. No. Although APS appreciated and learned from the frank and spirited discussions in the technical workshops, the Company does not believe that these conclusions are valid, factually correct or compelling from a policy perspective.

Q. PLEASE ELABORATE.
A. Concerning the claim that rooftop solar does not shift costs, rooftop solar companies typically claim that solar customers use less of the utility infrastructure, and that by using less, utilities don’t need to make as many investments in the future. According to rooftop solar companies, this will result in long term cost reductions that justify solar customers not paying for any infrastructure costs today. This claim lacks merit. As discussed above, customers with solar rely on and use the grid and APS power plants twenty-four hours a day. This use includes, but is not limited to, (1) supplying the customer’s electricity needs when their solar unit is not running—both at night and
intermittently during the day; (2) supplying the customer’s peak power requirements between 6 p.m. to 8 p.m., right when the solar system’s production drops off significantly; (3) maintaining backup generation at all times so that if the rooftop solar system fails, a cloud passes over or the production drops off for other reasons, the customer can continue taking power without even a momentary interruption; and (4) providing the voltage and VAR support required for the rooftop solar unit to function properly.

To the extent that customers with solar use the grid, they should pay for that use. Although rooftop solar customers do self-provide their own fuel and a portion of their utility power plant services, their use of the grid still requires utilities to make substantial infrastructure investments in power plants, transmission lines and distribution equipment.

Q. ROOFTOP SOLAR COMPANIES CLAIM THAT ALTHOUGH SOLAR CUSTOMERS USE THE GRID TODAY, THEY WILL NONETHELESS ELIMINATE FUTURE COST SHIFTS THROUGH A REDUCED NEED FOR INVESTMENTS. DO YOU AGREE?

A. No. Based on current projections, the cost shifting problem will persist into future years if left unresolved. In its 2013 Distributed Energy Technical Conference, both APS and rooftop solar companies presented studies that assessed the potential impact of rooftop solar on cost shifting and rates. APS presented two studies. The first study was conducted by Navigant Consulting and assessed the cost shifting issue under current costs and rates. The second study was conducted by SAIC and developed a long-run evaluation of the benefits of rooftop solar in terms of saving future utility fuel and infrastructure costs. Rooftop solar companies presented a study by Cross Border Energy that assessed the long-run impact of rooftop solar on APS’s costs and rates.
Q. WHAT WERE THE RESULTS?
A. The results are vastly different. The APS-sponsored studies reported utility marginal cost savings from rooftop solar for fuel and infrastructure that ranged from $0.034 per kWh today to $0.08 in 2025. These studies demonstrated that residential rooftop solar shifts costs to other customers both today and in the future. The Cross Border study, on the other hand, found that rooftop solar will save APS between $0.22 and $0.24 per kWh levelized over the next twenty years. Based on this range, Cross Border concluded that residential rooftop solar does not shift costs to other customers when assessed over a twenty year period.

Q. WHAT ARE YOUR COMMENTS ON THE ROOFTOP SOLAR COMPANIES' RESULTS?
A. APS strongly disagrees with the Cross Border results and conclusions. Without getting into too many technical details, the rooftop solar companies have provided a grossly inflated depiction of the benefits of rooftop solar in terms of the timing and magnitude of utility infrastructure cost savings, as well as other purported benefits. Additional benefits claimed from rooftop solar, such as long term fuel hedging, impacts on national and regional commodity prices, employment benefits from solar jobs and compliance costs for the renewable portfolio standard are either double counting, spurious, unproven or all three. These flaws are so fundamental in nature that APS believes the Cross Border study does not merit serious consideration.

Q. ARE THERE ANY WAYS TO PROVIDE A THRESHOLD REASONABLENESS CHECK FOR THE STUDY RESULTS?
A. Yes. I believe that there are a couple of ways to assess whether the Cross Border study results fall within a reasonable range. The first indication that the rooftop solar companies' estimates of utility cost savings from rooftop solar appear to be beyond the realm of reason is that they are roughly twice the current level of retail rates for residential customers. In other words, Cross Border concludes that
the solar savings of rooftop solar will grow so much over the next 20 years that
the levelized annual savings will be 200% of APS’s total costs, costs that include
all of APS’s power plants, transmission lines, substations, distribution lines,
meters, service trucks, operating buildings, computer systems, furniture and
everything else. This result just does not seem plausible.

Second, as discussed below, APS could currently purchase solar energy
for a twenty year period from large solar power plants (called utility scale solar),
at a cost that is far below the value of rooftop solar cited in the Cross Border
study. Importantly, this utility scale solar could be located at or near a load
center, and thus provide most, if not all, of the rooftop solar benefits claimed by
rooftop solar companies. Why should customers effectively pay a rooftop solar
customer $0.24 per kWh when they could obtain the same benefits from utility
scale solar for $0.08 to $0.09 cents per kWh? The answer is they shouldn’t. This
comparison further suggests that the Cross Border study results are beyond what
any reasonable study could possibly conclude. Compensation for rooftop solar
should never be higher (much less three times higher) than the price to purchase
an equivalent, or near equivalent, alternative.

Q. DOES APS BASE ITS RATES AND BILLING POLICIES ON LONG RUN
PROJECTED COST STUDIES?

A. No. APS performs rate impact studies and other long-range cost studies as part
of our financial and rate planning. They are used for strategic planning and for
setting direction and policy. However, they are not used to determine overall rate
levels, rate design, or otherwise influence a customer’s monthly bills. APS’s
rates are set to recover historic test year costs as determined by the Commission.
Therefore, even if residential rooftop solar passes a long run rate impact test
(which it doesn’t), it isn’t appropriate to design rates or otherwise justify that a
customer not pay for utility services that they still receive based on this information.

Q. WHY NOT?
A. APS believes that a customer should pay for the services they are receiving from the utility. If, however, they can self-provide some of these services, then their bill savings should be based on the current prices for the services they self-provide, not a prediction of what those services might be worth over the next twenty years. To the extent that the services provided by rooftop solar actually do become more valuable over time, the bill savings will grow to reflect this increased value. But it is not appropriate or fair to base a higher level of compensation for rooftop solar today based on hypothetical marginal costs in the future. What happens if the events upon which the future savings are based never occur? In that case, non-solar customers would have been paying all along for a predicted benefit, only to have that benefit never materialize.

Q. DO ANY UTILITIES SET RATES OR BILLING POLICIES BASED ON THESE TYPES OF LONG-RUN MARGINAL COST STUDIES?
A. No. None at all to my knowledge. Some utilities have forward test years where rates are set to recover projected average costs one or two years in the future. Other utilities perform near term marginal cost studies as part of their rate analysis. However, even in these cases, the utility sets rates to recover near term average costs, not long term projected marginal costs.

Q. ROOFTOP SOLAR COMPANIES CLAIM THAT IF SOLAR IS A SUBSIDY IT'S JUST ONE OF MANY SUBSIDIES THAT OCCUR IN THE RATE MAKING PROCESS. DO YOU AGREE?
A. No. Not at all. Their assertion seems to be twofold—there are numerous subsidies built into current rates, and that because there are many subsidies, it's unfair to try to solve any of them. Neither assertion is valid.