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BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
DOCKETED
AUG 05 2016
DOCKETED BY

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

IN THE MATTER OF THE COMMISSION'S INVESTIGATION OF VALUE AND COST OF DISTRIBUTED GENERATION.	DOCKET NO. E-00000J-14-0023 **ARIZONA PUBLIC SERVICE COMPANY'S POST-HEARING REPLY BRIEF**

A sustainable alternative to the status quo is needed. Currently, customers without rooftop solar pay the full retail rate through net metering for exported rooftop solar energy—a wholesale product that does not meaningfully occur during times of peak demand. Paying this retail rate for a wholesale product unnecessarily increases customers' costs. As more and more rooftop solar is installed, the consequences of this

net metering-caused cost shift will only deepen. And as it grows more pronounced, the cost shift will be more difficult to correct.

At the same time, some traditional cost of service study (COSS) methodologies exacerbate the cost shift. These cost allocation methods do not reflect that customers with rooftop solar take different services; have unique load profiles; and cause and pay for costs in ways that are different than customers without rooftop solar. The result is that all customers pay rates that do not fairly reflect cost causation, further contributing to the rooftop solar-caused cost shift.

None of this necessarily means that the entire problem must be solved at once. Transitioning from the status quo to a full fix to the cost shift might needlessly disrupt the proliferation and development of new and exciting distributed technologies. But the current policy of burying subsidies in rate design unfairly increases rates for non-DG customers and offers no end in sight.

APS's Initial Brief included a complete and detailed discussion of the topics raised in this proceeding, and APS will not repeat that here. Instead, this Reply Brief will focus on a few additional issues raised in other parties' initial briefs.

I. VALUE OF DISTRIBUTED GENERATION

A. TASC/Vote Solar

In their Initial Briefs, the Solar Interests claim that no methodology can be accepted unless it considers all benefits of rooftop solar. They then go a step further and assert that considering all benefits necessarily means (i) considering predicted benefits over the next 20-30 years; and (ii) actually quantifying these predicted benefits. Yet, there is no support for this claim other than opinion, and no way to implement it other than relying on pure conjecture. It is also contrary to well-settled legal principles, and unsupported by Commission practice or the practice of other commissions in the country.

1. The Solar Interests' insistence that speculation must be used in setting rates should be rejected.

The Solar Interests' opinion about the use of long-term hypotheticals is not enough to warrant setting rates using speculative and "inherently unknowable"[1] assumptions. The Solar Interests want to justify the current policy of subsidizing rooftop solar with net metering, but cannot do so based on actual data. Actual data overwhelmingly show that rooftop solar shifts costs to non-DG customers now—a reality that the Solar Interests cannot and do not refute. In fact, the Solar Interests concede the cost shift.[2]

To avoid having to justify "issue[s] of equity among ratepayers"[3] caused by the cost shift, the Solar Interests have turned to speculation. They rely on predictions of long-term benefits, and their ability to manipulate assumptions regarding those long-term benefits, to achieve their desired goal of justifying net metering. To give this approach a veneer of legitimacy, they then assert that the only legitimate methodology for establishing compensation for exported rooftop solar energy is to rely upon assumed long-term benefits. In other words, they equate speculation about future events with data about current events.

Speculation about future events, however, is not the same thing as data, and the assertion that long-term benefits must be quantified is meritless. There are no ***actual*** long-term benefits because they haven't happened yet. There are only predictions about the fact and magnitude of future benefits based upon an elaborate set of over 30 assumptions of what will happen during the next 20-30 years.[4] These benefits haven't happened. And we can't know if they will happen, when, or to what degree. To say that

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[1] Tr. 1938:1-21 (Beach).

[2] *See* R. Thomas Beach and Patrick McGuire, *The Benefits and Costs of Solar Distributed Generation for Arizona Public Service (2016 Update)* at 23 (attached as Exhibit 2 to Beach Direct Testimony) ("The primary costs of solar DG for non-participating ratepayers are the retail rate credits provided to solar customers through net metering, i.e., the revenues that the utility loses as a result of DG customers serving their own load.").

[3] Beach Direct Testimony at 5.

[4] *See generally* APS Initial Brief at pp. 39-43.

the only legitimate methodology is one that quantifies and ***entirely depends*** on a complicated long-term projection of future benefits—benefits that haven't happened and might not ever happen—lacks credibility.

2. Using long-term forecasts introduces legally impermissible speculation in the ratemaking process.

Relying on long-term forecasts to set rates is also contrary to well-settled legal principles that forbid such speculation in ratemaking. In *West Ohio Gas Co. v. Public Utility Commission of Ohio*, the United States Supreme Court rejected an opportunity to rely on forecasts to set utility rates, and instead preferred a survey that generated actual data, stating "A forecast gives us one rate. A survey gives another. To prefer the forecast to the survey is an arbitrary judgment."[5] This brightline rejection of unchecked speculation in ratemaking has since been followed by courts across the country.[6] This includes courts in Arizona, which have held that testimony "full of speculative theories" and conclusions "based on surmise and conjecture" are insufficient to support a

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[5] *West Ohio Gas Co. v. Pub. Util. Comm'n. of Ohio*, 294 U.S. 79, 82 (1935); *See Missouri ex rel Southwestern Bell Telephone Co. v. Pub. Serv. Comm'n. of Missouri*, 262 U.S. 276, 288 (1923) (reversing a public utility commission decision to eschew actual data and rely on forecasts to set a fair return, stating "[e]stimates for to-morrow cannot ignore prices of to-day."); *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 164 (1934) ("Elaborate calculations which are at war with realities are of no avail.").

[6] *Citizens Action Coalition of Ind. v. Pub. Serv. Co. of Ind.*, 612 N.E.2d 199, 201 (Ind. Ct. App. 1993) ("Forcing ratepayers to bear the weight of a calculation based upon speculation is not within the purview of the IURC's authority."); *Mississippi ex rel Allain v. Miss. Pub. Serv. Comm'n*, 435 So.2d 608, 615-16 (Miss. 1983) (rejecting as too speculative a utility rate decision because it was based upon projected figures); *NEPCO Mun. Rate Comm. v. FERC*, 668 F.2d 1327, 1339 (D.C. Cir. 1981) (holding that coal burning costs should not be included in rates because the likelihood of burning coal was too speculative); *Michaelson v. New Eng. Tel. & Tel. Co.*, 121 R.I. 722, 734-36 (1979) ("To factor in changes of unknown magnitude would in most cases increase what speculation already exists in the ratemaking process and thereby tend to undermine the effectiveness of the test-year concept."); *Gen. Tel. Co. v. Mich. Pub. Serv. Comm'n*, 78 Mich. App. 528, 540 (1977) (holding that "the anticipated increases in directory advertising revenues extending beyond the test year were too uncertain to have been credited by the Commission."); *Pittsburgh v. Penn. Pub. Util. Comm'n*, 187 Pa. Super. 341 (361-62 (1958) (holding that evidence concerning events after test year and resulting impact on utility rates was too uncertain and speculative to use in rate setting); *Central Maine Power Co. v. Pub. Util. Comm'n*, 153 Me. 228, 242-43 (1957) (holding that using speculative forecasted costs "would destroy or seriously weaken the effectiveness of the test year, a valued and respected tool in rate making."); *Arlington Cnty. V. Va. Elec. & Power Co.*, 196 Va. 1102, 1118-19 (1955) (rejecting as speculative inclusion of projected savings caused by anticipated change to federal tax rate); *but see Narragansett Elec. Co. v. Harsch*, 117 R.I. 395, 416 (1977) ("in order to neutralize the negative effects of speculation and guesswork about future economic conditions, it is accepted practice to base future rates upon known past and present conditions through the use of data gathered during a specified test period.").

Commission decision setting utility rates.[7] Adopting a methodology that requires customers to pay certain amounts based on speculation about what will happen over the next 20-30 years would not only expose customers to significant risk, but also open the door to legal challenges in every utility rate case that uses the methodology.

3. Using long-term valuation favors one technology and does not resemble the Commission's DSM or IRP processes.

Moreover, it is not credible to assert that hypothetical future benefits must be considered as a matter of fairness. Using long-term forecasts to establish how much is paid for exported rooftop solar energy is actually special treatment, not the other way around. No other group of customers receives this kind of treatment. That relying on long-term forecasts will increase rates for all customers without rooftop solar only compounds the inequity in the Solar Interests' position.

It is true that the Commission evaluates energy efficiency using cost effectiveness tests. But these cost effectiveness tests ***have been established by Commission rule***.[8] No similar cost effectiveness test was included in the Commission rules related to distributed generation. Moreover, the DSM cost effectiveness tests don't immediately translate into rates. Instead, they inform Commission policy on whether and how to fund specific DSM programs so that utilities can meet a ***certain and defined DSM standard***. The Solar Interests seek to rely on the aspects of the DSM cost effectiveness test that benefit them, and ignore the aspects that protect customers, including the underlying rulemaking process and the limiting nature of the overall DSM standard itself.

That long-term valuations occur in the IRP similarly does not help the Solar Interests. APS's Initial Brief addresses this argument on pages 45-46. The simple fact is that an IRP analysis is not a methodology that establishes rates or the amount customers pay. Instead, it identifies resource needs based on currently available information and

[7] *Tucson v. Citizens Utilities Water Co.*, 17 Ariz. App. 447, 481 (1972).
[8] *See* R14-2-2414 (setting forth parameters for demand side management cost effectiveness tests).

facilitates ongoing public discussions about how to fill those resource needs in light of policy goals. Moreover, utilities assess how to fill those resource needs by comparing the values and costs of various generation options in a continuous process. Just as they cherry pick aspects of the DSM rules, the Solar Interests ignore these critical protections built into the IRP process. And their need to rely on the IRP process to support their reliance on hypothetical benefits underscores something else: they lack real support for their proposed methodology in the ratemaking setting.

4. Value of solar studies in other states prove the point that long-term forecasts are used to engineer a predetermined outcome.

The Solar Interests also seek to indirectly bolster their case by referencing value of solar studies in other states. They assert that these other studies reflect "best practices" on how to value solar.[9] That these studies exist, however, does not reveal "best practices." Instead, their existence only suggests that the rooftop solar industry has orchestrated a well-funded national campaign to make long-term forecasts of rooftop solar seem more legitimate. Indeed, TASC witness Beach admitted that no Commission in the country has used a long-term value of solar study to set rates.[10] This shouldn't be a surprise. The fact is that the proposed method for valuing solar is not a credible way to determine how much customers pay. The inputs and assumptions are so complex that the "[s]tudy findings are easily distorted in subtle ways to match any agenda."[11]

These studies also fail to assess several related questions that a modicum of academic rigor would require. The IREC *Regulator's Guidebook*, a model for value of solar studies touted by Vote Solar, is a particularly egregious example of this failure, and exemplifies a "thumb on the scale" approach to valuing solar:

> IREC's criteria constitute a self-selected, self-serving, heavily-biased laundry list of subjects that, remarkably, fails to include costs and market prices, as well as attributes that might diminish value, such as subsidies/cross-subsidies, job losses as well as the job gains claimed, risks associated with using rooftop solar to reduce carbon, market distortions, etc. IREC's *Regulator's Guidebook* also ***fails to include other obvious***

[9] TASC Initial Brief at 5.
[10] Tr. 1932:14-19 (Beach).
[11] Brown Direct Testimony at 13.

> ***subjects any credible study would have to examine***, such as impact on merit order dispatch, the energy resource mix in the state being studied, disparate social impact of rooftop solar subsidies, market effects, impact on energy efficiency, a comparison of costs with other resources that can accomplish similar objectives, environmental considerations beyond simply carbon, full cycle impacts (i.e., manufacture through generation) of solar panels and installations. An even-handed, disciplined, and thorough analysis would have to include these variables, along with an almost infinite host of others.[12]

Because they lack basic academic rigor, value of solar methodologies, like that contained in the IREC *Regulator's Guidebook*, can only be considered political tools. "Thus, what purports to be a methodological guide is, in fact, a transparent example of how to manipulate VOS studies to validate a predetermined outcome."[13]

The ability to engineer a predetermined outcome is exactly the danger with a regulatory policy that administratively moves future, predicted benefits forward in time and pays them now. The electric industry experimented with administratively determining costs under PURPA and the results were and continue to be disastrous—not for utilities, which were able to file rate cases and collect the highly-inflated costs for PURPA contracts—but for customers, who were required to pay those exorbitant costs.[14] This proceeding represents an opportunity to avoid the mistakes of the past, and APS urges the Commission to take that opportunity.

B. Staff

APS addressed Staff's value of solar methodologies, including Staff witness Solganick's explanation that Staff's proposal to forecast future benefits is limited to statistical and data-driven analyses.[15] One issue that appeared in Staff's Initial Brief that Staff did not raise in the hearing, however, concerns APS's proposal to cap any compensation for exported energy at the amount paid for grid-scale solar. Staff first states that it does not believe APS has offered sufficient justification for a grid-scale cap on compensation. Yet, APS witness Brown also testified that "most of the

[12] Brown Direct Testimony at 14 (emphasis added).
[13] Brown Direct Testimony at 14.
[14] Brown Direct Testimony at 8-9; Overcast Direct Testimony at 8-9.
[15] *See* Tr. 1356:19 – 1358:6 (Solganick); *see also* APS Initial Brief at pp. 47-48.

environmental and social benefits provided by PV systems can be achieve at a much lower cost at grid-scale than at residential-scale."[16] And APS witness Albert offered a considerable amount of testimony on the topic, including that "grid-scale solar PV project[s] can achieve similar benefits as rooftop solar projects"[17] and that because of operational characteristics, grid-scale solar facilities actually provide a more valuable solar resource than rooftop solar.[18]

APS's belief that the price for solar energy should be capped at the grid-scale price comes down to one fact: any cost that APS incurs to supply its customers with electric service is paid for by those customers. APS has a responsibility to carefully weigh and plan investments to avoid undue cost burdens on its customers. This protection of customers includes meeting resource needs with least cost alternatives:

> Simply establishing a value for rooftop solar attributes, without considering a full range of alternative means for obtaining those attributes, is a woefully deficient planning and procurement process. The first step in any VOS methodology should be to identify the resource need to be fulfilled by solar. The second step should be to analyze the available options for satisfying that resource need—for example, grid-scale solar, rooftop solar and conventional generation options. The value of a generating resource such as rooftop solar would be established by identifying the least cost alternative means of meeting that same resource need.[19]

A grid-scale cap on compensation for exported energy would introduce a measure of balance between the interests of customers with rooftop solar and those customers without rooftop solar.

The Commission created this proceeding so that parties can present evidence concerning the best methodology for establishing the value of solar. APS has urged that actual data should be used to determine the value of solar, and that value should be based on the market or actual cost. The price of grid-scale solar is derived from the

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[16] Brown Direct Testimony at 17 (citation omitted).
[17] Albert Direct Testimony at 27.
[18] *See* Albert Direct Testimony at pp. 27-32. Mr. Albert's discussion regarding the operational characteristics of grid-scale solar also addresses Staff's comments about any alleged geographic value of rooftop solar.
[19] Albert Rebuttal Testimony at 4.

market. Rooftop solar provides the "value of solar," but grid-scale solar provides an even higher "value of solar" at a significantly lower price. From the perspective of all customers, it is not clear why a higher price should be paid to obtain a lower value. Accordingly, APS believes that the price paid for grid-scale solar should be the cap on what is paid for rooftop solar.

APS notes, however, that the conversation need not stop there. In the past, the Commission has separately incentivized rooftop solar to encourage adoption. APS's position regarding grid-scale solar is not inconsistent with doing so now. It is within the Commission's discretion to decide that rooftop solar should be incentivized over and above the market-based value of grid-scale solar. In fact, in its Closing Brief, RUCO noted this same reality, stating that "when a value is determined, the Commission does not necessarily need to pay that level of compensation to a solar adopter," and that intangible benefits and values might justify taking "advantage of technology cost declines like previously done with incentive step downs and PBI payments."[20]

The most effective and fair way to achieve policy objectives through incentives is to do so transparently, so that the incentives can be calibrated to reflect market conditions and achieve Commission goals at the least cost to customers. The record supports a Commission decision to value rooftop solar at the market value of grid-scale solar, and separately deciding to establish transparent incentives that facilitate a smooth transition away from hidden rate subsidies.

C. RUCO

APS will not repeat its perspective on RUCO's proposal to establish a value of solar using long-term projections. In its Initial Brief, RUCO also referenced a framework that involves starting at one value and stepping down over time based upon pre-determined events. APS does not oppose this concept. The devil, however, is always in the details, and RUCO does not offer sufficient details to assess its proposal or

[20] RUCO Closing Brief at 2-3. PBI stands for production-based incentive and is a form of cash incentive tied to the amount of energy that a renewable facility produces.

evaluate the impacts on customers. APS also notes that postponing a decision on those details would only ensure future litigation, additional cost, and continued resource burden on Staff, the Commission, and the parties, in what has already been a heavily litigated and highly contentious topic. In addition, Staff's grid-scale portfolio methodology contains a built in method for downward adjustments that appears to capture the intent of RUCO's interest in a methodology that adjusts downward over time.

II. COSS

Other parties offered little discussion, and less evidence, regarding a COSS methodology. The primary criticism leveled by the Solar Interests concerns APS's use of total site load, instead of delivered load, to allocate costs. APS discussed this methodological choice, and TASC's conceptual endorsement of doing so, in its Initial Brief on pages 7-14, and will not repeat that discussion here.

Similarly, no party offered serious debate on putting partial requirements customers in a separate customer class. TASC offers no evidence that partial requirements customers, such as rooftop solar customers, are similar to typical customers. Instead, TASC's sole argument stems from the assertion that energy efficiency customers are also different than typical residential customers.

One need only look at the evidence to evaluate TASC's position. APS discussed this evidence, and TASC's false comparison between EE and DG customers, on pages 21-22 of APS's Initial Brief. The evidence overwhelmingly shows that full requirements EE customers are dramatically different from partial requirements DG customers. What is notable is that TASC's sole support for equating EE and DG customers is a ***simulation*** of how 20 customers in North Carolina ***reacted to price signals*** in rate design, an issue that has nothing to do with the inherent load characteristics of DSM customers.

A final note on the topic of putting partial requirements customers into a separate class is that TASC mischaracterizes the testimony of Staff witness Solganick. On page 22, TASC claimed that Mr. Solganick did not believe rooftop solar customers should be in a separate class. Mr. Solganick did initially say that during hearing, as reflected on page 1371 of the transcript. But almost immediately he made clear that this was a policy-related position based on a belief that cost of service issues related to rooftop solar customers should be resolved with rate design, not by putting them in a separate class.[21] And after several minutes of cross examination (and 3 more pages of transcript), Mr. Solganick acknowledged that "if costs are imposed, if they are large enough to be significant in terms of their impact, ta-da, ta-da, ta-da, yeah, then maybe you would have to go to a separate class."[22]

APS will also not repeat its discussion regarding the ability of other parties to access and assess APS's COSS methodology. APS will note, however, that proceedings before the Commission consistently involve complicated analyses. Private litigants, with their own sources of funding, intervene on a regular basis to contest various aspects of utility cases. If those private litigants desire, they have the right to contest a utility's COSS, and APS must and will provide the data in an accessible format. If intervenors choose to litigate a COSS, however, it is not clear why utilities should, in turn, be required to fund these private parties' litigation efforts. Private parties are able to spend their own funds to (i) get licenses from appropriate vendors, such as the COSS licensor UI in this instance; (ii) acquire their own cost-of-service model into which they could feed the inputs; or (iii) hire a third-party to perform a full COSS for them. History has shown that APS has always been willing to work with intervenors to help them understand and assess its COSS methodologies. But to the extent that other parties are able to fully assess, debate, and criticize utilities' methodological choices, it is not clear

[21] Tr. 1371:12 – 1372:6 (Solganick).
[22] Tr. 1374:6-9 (Solganick).

why utilities (and thus utility customers) should be required to fund the efforts of private parties to intervene and protect those parties' private interests.

III. SCOPE OF PROCEEDING

Having taken its best shot at proving its case, TASC has apparently realized that it is losing, that there is simply not enough evidence to support the outcome it seeks. As a result, TASC has turned to a new argument at the eleventh hour: that this proceeding should not actually result in a tangible outcome, but instead only culminate in some sort of policy statement.[23] In essence, what TASC seeks is more delay and not just one more bite at the apple, but a bite at the apple in each utility's rate case. This is contrary to the notice provided, the relevant law, and good policy.

A. The Public Notice was Broad Enough to Encompass any Outcome the Commission Believes Appropriate.

Under Commission rules, the form and manner of notice in a ratemaking proceeding is determined by the Commission through procedural order.[24] "Notice is sufficient for due process purposes if it is 'reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections' or claims."[25] Here, the Hearing Notice contained in the Procedural Order issued on December 3, 2015, easily satisfies this standard. The Hearing Notice explicitly states that the purpose of the hearing is to "produce a factual record that will be available for the Commission *to use in future proceedings for all Arizona electric public service corporations*."[26] This is consistent with both Staff's perspective on the purpose of this docket,[27] and the perspective of

[23] TASC Initial Brief at 23-27.
[24] A.A.C. R14-2-105 and R14-3-109(B).
[25] *Matter of Rights to Use of Gila River*, 171 Ariz. 230, 235 (1992) (citing *Mullane v. Central Hanover Bank & Trust Co.*, 339 U.S. 306, 314 (1950)).
[26] Procedural Order, issued December 3, 2015, Docket No. E-00000J-14-023 (emphasis added).
[27] Staff Comments, November 13, 2015, Docket No. E-00000J-14-0023 ("The proceeding should be designated at the outset to address both cost of service and value of solar rather than postponing one of these issues to a later phase of the proceeding.")

Chairman Little.[28] The reference to future proceedings for all public service companies in the notice that was provided to all utility customers in Arizona gave more than adequate notice of the Commission's intent to create a methodology that is broadly applicable in future proceedings, including future rate cases. The notice provided permits the facts found here to be binding in subsequent utility rate cases.

B. Establishing a Methodology is a Ratemaking Function and Falls Outside the Rulemaking Process of the Administrative Procedure Act.

TASC argues that the "sole means" the Commission has to adopt a DG methodology is through the rulemaking process set forth in the Administrative Procedure Act.[29] This is incorrect for two reasons. First, the Commission's authority is not nearly so limited. In *Arizona Corporation Commission v. Palm Springs Utility Co., Inc*, the court held that the Commission can accomplish "some goals by the use of rules and regulations of general applicability … [and] others by the use of orders pertaining to particular situations or to particular public service corporations."[30] The reason is the need for flexibility because rigidly requiring a rulemaking

> would make the administrative process inflexible and incapable of dealing with many of the specialized problems which arise. (Citation omitted). Not every principle essential to the effective administration of a statute can or should be cast immediately into the mold of a general rule. Some principles must await their own development, while others must be adjusted to meet particular, unforeseeable situations. In performing its important functions in these respects, therefore, an administrative agency must be equipped to act either by general rule or by individual order. To insist upon one form of action to the exclusion of the other is to exalt form over necessity.[31]

To accomplish its objectives, the Commission is permitted to act through general rulemaking, or through orders specific to each public service corporation, as the situation may require.

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[28] Letter from Doug Little, Commissioner, Arizona Corporation Commission, dated December 22, 2015, Docket E-00000J-14-0023 ("I envision the following outcomes resulting from this proceedings…Development of a methodology that would inform future proceedings as to how the value and cost of solar should be evaluated and determined as part of a rate case.")

[29] TASC Brief at 24.

[30] 24 Ariz. App. 124, 128 (1975).

[31] 24 Ariz. App. at 129 (citation omitted).

Moreover, the APA was promulgated by the legislature, and the Commission's plenary power over ratemaking emanates from the Arizona Constitution.[32] Under its constitutionally-granted authority, the Commission is entrusted with setting rates and deciding all issues reasonably related to ratemaking.[33] The Commission's ratemaking role is subject to due process considerations, but is not subject to the legislature's oversight and is not a rulemaking under the APA.[34] The COSS and VOS methodologies are directly tied to rates, and fall well within the Commission's ratemaking authority. The APA does not apply to any outcome that could emerge from this hearing.

C. More Delay will only Harm Customers and Waste Resources.

When viewed in light of this proceeding's history, TASC's effort to cause even more delay is disappointing. In November 2012, APS identified the cost shift and urged the Commission to carefully consider DG-related policies and how they impact the rates of all other customers.[35] In the following year, the Commission acknowledged the cost shift.[36] With that acknowledgement, the Commission began addressing the customer harm caused by the cost shift with an LFCR DG Charge.[37] Although the initial Charge was modest, the Commission authorized periodic adjustments to the Charge.[38]

Over the next year, a series of technical conferences on distributed generation were held in this docket. Following those conferences, APS requested an adjustment to LFCR DG Charge in 2015. APS's request only sought what the Commission previously found reasonable—a reset of the LFCR DG Charge to $3/kW on a revenue neutral

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[32] *See Miller v. Arizona Corp. Comm'n*, 227 Ariz. 21, 25 (2011).
[33] *Phelps Dodge Corp. v. Arizona Elec. Power Co-Op.*, 207 Ariz. 95, 112 (Ct. App. 2004).
[34] *Id.*
[35] *See* Comments to Staff's Recommended Opinion and Order, In the Matter of Arizona Public Service Company For Approval of Its 2013 Renewable Energy Standard Implementation For Reset of Renewable Energy Adjustor, Docket No. E-01345A-12-0290 (November 15, 2012).
[36] Decision No. 74202 at ¶ 49 (December 3, 2013) ("In light of the record before us, we find that the proliferation of DG installations results in a cost shift from APS's DG customers to APS's non DG residential customers absent significant changes to APS's rate design.").
[37] *See* Decision No. 74202 at ¶ 85
[38] *See* Decision No. 74202 at ¶ 85.

basis.[39] In response, the Commission declined to act on its prior findings, but instead directed that a hearing be held regarding cost of service and cost shift-related issues.[40] The hearing that occurred in this docket, and gives rise to this Reply Brief, was that hearing about cost of service and cost shift-related issues.

This is the hearing that was intended to address and resolve numerous issues left unanswered in several regulatory proceedings since 2012. TASC's request to dilute the effect of this proceeding should be rejected. TASC has had every opportunity to introduce evidence on every aspect of DG, rooftop solar, net metering, the cost shift, and related cost of service issues. The time to act is now.

There is no credible reason to delay further, and TASC offers none. The truth is that TASC seeks delay because it simply doesn't want this issue addressed. Delay is a victory for TASC because it shields from scrutiny the massive subsidies being paid at the expense of customers. Each day more and more DG installations occur, and the magnitude of these unexamined subsidies continues to grow. The record contains abundant evidence supporting solutions to the resulting harm to customers, and TASC's desperate effort to preserve the current structure of rich subsidies should be rejected.

IV. CONCLUSION

The Solar Interests' position suffers from a significant flaw: the long-term benefits of DG have nothing to do with whether net metering should continue. The Solar Interests claim that rooftop solar is a net benefit to customers over 20-30 years, and because it is a net benefit, net metering should be sustained. Yet these two things—the long-term benefits of DG and net metering—have no inherent connection. Discussions regarding the long-term benefit of DG should not prompt a rubber stamping of net metering. Instead, this docket should prompt a question that the Solar Interests refuse to

[39] *See* Motion to Reset, In the Matter of the Application of Arizona Public Service Company for Approval of Net Metering Cost Shift Solution, Docket No. E-01345A-13-0248 (April 2, 2015). *See* Decision No. 74202 at ¶ 85 ("We find that among the range of Staff's and RUCO's LFCR DG Adjustments' proposals, a $3.00 per kW per month (which would be $21 for a customer's system of 7 kW) is reasonable for new DG customers.")

[40] *See* Decision No. 75251 at ¶ 164 (August 31, 2015).

ask, much less acknowledge: ***what is the most effective way to encourage rooftop solar?***

It should be no surprise that the Solar Interests seek to preserve the status quo net metering subsidy—it offers certainty of profits while "shielding the rooftop solar industry from cost pressure...."[41] But evidence in this proceeding actually suggests that the artificially high retail rate might harm the development of solar:

> artificially high prices for a less efficient resource will inevitably lead to a reallocation of capital toward the less efficient resource, a development with adverse consequences. Significantly, VOS studies simply do not even consider what their valuation, and the pricing that follows from it, does to the future of solar; whether it would incentivize or disincentivize productivity gains, technological innovations, or enable rooftop solar to be more responsive to the needs of the overall system.[42]

The Solar Interests' silence on this topic is deafening. As APS witness Albert testified, DG certainly has value. ***But no party presented evidence that net metering itself is an independent source of value.*** The Solar Interests simply have not put forth any case—much less a compelling case—justifying the perpetuation of the status quo net metering subsidy itself.

The fact is that the net metering subsidy threatens the long-term health of solar. The subsidy shields a rooftop solar from the very cost pressures that could make it a permanent part of utility resource portfolios. The best strategy for ensuring the long-term sustainability of a particular technology is forcing it to compete, and win, on the basis of cost or price:

> VOS analyses tend to focus on preserving, and perhaps even enhancing, cross subsidies inherent in pricing such as net metering, and not on increasing productivity and efficiency in ways that will incentivize solar to be even more competitive. ***Shielding the rooftop solar industry from cost pressure, however, does not translate into increased deployment or productivity of rooftop solar, nor into customer benefits***. Often, it simply translates into increased rooftop solar industry profits. When we pay for something without market competition and/or cost based regulation, we aren't giving the technology incentives to maximize value, as discussed above, even by a simple measure such as ensuring solar panels are facing the right way. We are certainly not giving ***incentives to pursue more ambitious efficiency maximizing efforts, such as incorporating battery***

[41] Brown Direct Testimony at 62.
[42] Brown Direct Testimony at 60.

> ***storage, or leveraging the potential of smart inverters*** associated with rooftop solar installations to help regulate power flow.[43]

APS's proposals would do just that: ensure the long-term health of solar as a mainstream resource by transitioning it to a sustainable, cost-based compensation methodology.

This proceeding is an opportunity to advance the future of solar as a technology. A methodology for valuing solar that shields rooftop solar from pressure to innovate and improve, such as long-term valuations or net metering, ensures that solar will never take its place next to all other core generation technologies that comprise the foundation of utility resource portfolios. The better approach is to require solar to provide actual (not speculative) value, and then fully compensate that value. APS's proposals in this proceeding focus on just that—relying on actual data to verify value, and then recognizing that value in the COSS and value of solar methodologies. To make progress on the future of solar as a long-term sustainable resource, APS urges that the Commission find facts related to and adopt the following conclusions:

1) Rooftop solar customers are partial requirements customers and should be placed in their own separate class of customers;
2) APS's proposed cost of service study methodology—through which (i) costs are allocated using rooftop solar customers' entire load; and (ii) rooftop solar customers are fully credited for the verifiable energy and capacity benefits they supply to the grid—is appropriate and reasonable;
3) The amount paid for energy exported to the grid from rooftop solar should be based on market or cost-based data;
4) Either APS's short-term avoided cost or grid-scale adjusted value of solar methodologies should be used to determine the amount paid for energy exported to the grid from rooftop solar;
5) Rates should be based on a COSS; and

[43] Brown Direct Testimony at 62 (emphasis added).

6) Long-term forecasts should not be used to set rates or establish the amount paid for energy exported to the grid from rooftop solar.

RESPECTFULLY SUBMITTED this 5th day of August 2016.

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