ORIGINAL

BEFORE THE ARIZONA CORPORATION COMMISSION

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~~

STAFF'S REPLY BRIEF

I. INTRODUCTION.

Initial briefs were filed by the Arizona Public Service Company ("APS"), Tucson Electric Power Company ("TEP") and UNS Electric, Inc. ("UNSE"), The Alliance for Solar Choice ("TASC"), Vote Solar, the Arizona Investment Council ("AIC"), Grand Canyon State Electric Cooperative Association, Inc. ("GCSECA") the Residential Utility Consumer Office ("RUCO") and the Arizona Corporation Commission ("Commission") Utilities Division Staff ("Commission Staff"). Following is Staff's Reply to the briefs filed by other parties.

II. EXECUTIVE SUMMARY.

Six parties proposed Value of Solar ("VOS") methodologies in this case: 1) APS; 2) TEP/UNSE; 3) RUCO; 4) Vote Solar; 5) TASC; and 6) Commission Staff. Staff responds in its Reply Brief to the concerns raised by other parties with respect to Staff's proposals. Staff also discusses its concerns (and others) with other parties' proposals. Staff urges the Commission to adopt both VOS methodologies Staff proposed in this Docket for use in rate cases to guide the Commission's rate design decisions involving rooftop solar or rooftop photovoltaic ("rooftop PV"). Staff's methodologies are consistent with much of the guidance provided by the Commissioners' letters to this Docket. Adoption of both of Staff's proposed methodologies (the avoided cost methodology and the Resource Comparison proxy methodology) would provide the Commission with maximum flexibility to address any necessary rate design modifications to respond to changes in the Solar Distributed Generation ("solar DG") marketplace.[1] The use of the two methodologies

[1] The terms "rooftop solar," "rooftop PV" and "solar DG" are used interchangeably throughout this Brief.

would also give the Commission an important comparison point with respect to the utility's actual weighted cost of solar generation versus the value developed by use of an avoided cost analysis. Use of both methodologies also provides an important back stop in a rate case. For instance, the Resource Comparison proxy methodology could be used if there are issues that need to be worked out with the more complex avoided cost methodology that otherwise would delay the rate case.

Two parties, APS and TEP/UNSE, put forth cost models for the Commission's consideration. The Commission has found in earlier orders that there is a cost shift, and Staff agrees with this finding. Nonetheless, substantive issues with the models and their assumptions were raised by primarily TASC and Vote Solar that are appropriate to address at this time. In addition, Staff along with TASC and Vote Solar raised a process issue about the transparency of the two models and their availability (or the availability of a spreadsheet) for use by other parties. Staff continues to support the notion of transparency and the availability of spreadsheets (with inputs linked to output) for all parties' use in rate cases. Resolving model transparency issues now will permit easier assimilation and use in a rate case.

The final section of Staff's brief addresses several important issues that arose in the course of or as a result of this proceeding. First, gradualism and flexibility will be key considerations in choosing among the various approaches. Second, the Commission should not accept the ill-advised invitations of some parties to address what are clearly rate design changes in this case rather than the rate case. Third, guidance should be provided in this case for the assimilation and use of the methodology(s) adopted in this case for use in rate cases. Finally, TASC's argument that the Commission is precluded from using the methodologies in a rate case until it concludes a rulemaking proceeding or adopts a policy statement should be rejected.

III. VALUE OF SOLAR METHODOLOGIES – STAFF.

A. The Commission Should Adopt Staff's Methodologies For Use In Rate Cases.

1. Staff's avoided cost methodology.

As discussed in Staff's Initial Closing Brief and the Initial and Rebuttal testimonies of Howard Solganick, Staff has proposed a traditional avoided cost methodology for use in this proceeding. Mr. Solganick favors a shorter term approach including one which would result in the

use of forecasted data no longer than the period of time between a company's rate cases, or approximately five (5) years, before it would be updated again. However, if the Commission decides upon the use of long-term forecasts, such as that proposed by TASC, RUCO and Vote Solar, then Staff witness Solganick agrees with RUCO that the use of such an approach should use only easily quantifiable long-term costs and benefits.[2] In addition, more frequent updates would lessen the risk of overpayment by non-solar DG customers.

While Staff is not opposed to the addition of costs/benefits to its avoided cost analysis so that it encompasses all of the well-recognized costs/benefits that have evolved over time, Staff is likely to routinely recommend in most cases the exclusion of: 1) environmental impacts that are already considered in operating costs and the IRP process;[3] 2) economic benefits which should only be considered "qualitatively" because they are difficult to quantify and are not included in the ratemaking formula for existing generation and other facilities;[4] 3) fuel hedging benefits/costs; and 4) grid security benefits unless they can actually be demonstrated.[5] Nonetheless, all benefits/costs should be included on the list for consideration.

Staff's methodology would also include various location adders for: 1) transmission where the deferral or elimination of certain assets and/or costs can be demonstrated; 2) distribution where the deferral or limitation of certain assets and/or costs can be demonstrated; 3) storage to the extent dispatched to increase output during hours of system peak; 4) use of smart inverters to the extent they are able to be used to allow the utility to curtail load or manage the grid; 5) systems located in areas where there are concerns identified as to future water shortage; 6) utility receipt of the customer's Renewable Energy Credits ("RECs") in exchange for the purchase of excess generation, and 7) west facing systems.[6] The Commission could add to this list as time goes on and new technologies and policy objectives are developed.

---

[2] Staff's Initial Closing Br. (hereinafter cited as "Staff's Initial Br.") at 9.
[3] *Id.* at 15.
[4] *Id.* at 18.
[5] *Id.* at 19.
[6] *Id.* at 16-19.

Incentives could also be authorized by the Commission to attract solar DG in areas where they may meet a Commission policy objective such as those identified above.[7]

2. Staff's Resource Comparison Methodology.

Staff's second methodology is called the Resource Comparison methodology. It was described in the testimony of the Utilities Division Director Thomas Broderick at the June 13, 2016 hearing in this matter.[8] Foundational testimony regarding the utilities' responses to Staff's data requests and utility spreadsheets was also set forth in the June 8, 2016, June 9, 2016 and June 13, 2016 hearings by APS witness Bradley J. Albert[9] and TEP/UNSE witnesses Lewis[10] and Tilghman and in associated Staff exhibits.[11] Staff's data requests regarding this methodology were discussed by Staff witness Solganick at the hearing on April 27, 2016.

Staff witness Broderick described this method as an improvement over the single Purchased Power Agreement ("PPA") approach yet one which maintains much of the simplicity of the approach. When used together with Staff's avoided costing approach it will be informative to the Commission on its various value of solar determinations and may be something that parties could agree upon if a traditional avoided cost analysis becomes too difficult and time-consuming in the context of a rate case.[12]

Director Broderick described the Resource Comparison methodology as follows:

> I did think it would be of good value for the Staff to simply provide the performance of the utilities in this area. The utilities do make commitments that are binding on customers once they are passed through the various power adjusters or rate cases that cause customers to pay these costs for the long haul. So it is, in a sense, a type of value of solar. It is the value that those utilities placed on it. For whatever reason, good or bad, at the time they signed those agreements, it is the value that they placed on those resources.
>
> ...And, while...there is a market argument that the utilities are making, and that it – we should be looking at only the most recent, well, I think Staff's position is at this point the methodology should look at the universe that that utility has undertaken, and then whittle it down from there.[13]

---

[7] *Id.* at 17.
[8] Tr. at 2322-56.
[9] Tr. at 2084-87.
[10] *Id.* at 2186-2212.
[11] *Id.* at 2225-52.
[12] Tr. at 2323-24.
[13] *Id.* at 2325-26.

Staff supports the use of a spreadsheet such as that developed by APS for use in rate cases for this methodology. As noted by Staff in its Initial Brief, this methodology allows the parties to apply different weights to various factors, to include only those projects believed to be appropriate and allows for any adjustment to the results as the Commission may deem appropriate.

B. Response To Criticisms And/Or Comments On Staff's Resource Comparison Approach (Weighted Average Approach).

Several parties provided comments on Staff's Resource Comparison approach. For example, APS believes that the method could provide an "objective and transparent" valuation for exported energy.[14] However, APS suggests inclusion of the following factors:

(i) a weighting system that places a greater emphasis on more recent grid-scale solar prices;

(ii) an average of no more than five years, with older data rolling out of the calculation each subsequent year;

(iii) updating the analysis to reflect the most current available data and ensure that the price used in the calculation reflect the most current and available data each year to ensure that the price used in the calculation reflects current market conditions;

(iv) utilizing data and pricing for photovoltaic solar panels only;

(v) if prices of recent vintage are not available for the utility, use of pricing data from available industry sources for grid-scale solar PV projects should be utilized with priority given to projects in Arizona to the extent available; and

(vi) the use of adjustments which would recognize the value differences between grid-scale and rooftop solar.[15]

In response to the first point raised by APS, the spreadsheet allows for greater weighting or projects of more recent vintage. As to the second point, Staff's proposal is for updates to be made in the company's subsequent rate cases. Staff believes that APS's suggestion for older data to roll out of the calculation in each subsequent year, would provide too much uncertainty and variability in the value of solar proxy and the export rate from year to year, and thus would be unworkable. The third

[14] APS's Post-Hearing Br. at 48.
[15] *Id.* at 49.

point raised by APS would also require annual updates of the calculation between rate cases, and therefore, is not acceptable to Staff for the reasons just discussed. The fourth point would require the use of data for photovoltaic solar panels only. Staff's methodology considers the universe of solar utility scale PPA or owned facilities initially with a subsequent evaluation made as to whether a particular project should be included or not. Staff continues to support this approach. With respect to APS's fifth point, Staff agrees that it may be appropriate to consider pricing data from other industry sources (to the extent it would be an appropriate proxy for APS) if in subsequent rate cases, the Company has no projects or PPAs of its own to rely upon. Finally, Staff is not opposed to adjustments to recognize the differences between grid-scale and rooftop DG, but believes that if this methodology is used long-term, adjustments to reflect various geographic adders attributable to rooftop solar (if appropriate) should probably also be reflected.

In the end, APS states "Staff's blended grid-scale methodology does not rely on long-term forecasts, but instead derives a value of solar based on actual data that is verifiable and transparent," and APS could thus support it.[16]

TEP/UNSE argue that by using older PPAs and grid-scale facilities which they claim reflect outdated solar PV costs and would result in a higher export rate resulting in overpayment by non-DG customers.[17] AIC makes a similar argument.[18] TEP/UNSE also argue that export rate changes that result when new PPA's are added "creates uncertainty for DG customers and grandfathering issues."

As to the first point made by both TEP/UNSE and AIC when new projects are added, earlier projects drop out of the calculation which will likely reduce the export rate. In addition, under Staff's proposed Comparison Resource methodology, heavier weighting may be applied to projects and PPAs of more recent vintage. Moreover, the alternative, use of a single PPA, while possibly resulting in a lower export rate, runs a great risk of not being representative of a utility's avoided cost. There are many factors that make one PPA much different than another. The most recent PPA is may not be representative of the utility's avoided cost.

---

[16] *Id.*
[17] TEP/UNSE's Initial Br. at 13.
[18] AIC's Post-Hearing Reply Br. at 12.

As to the second point, Staff sees no difference between Staff's proposal and TEP/UNSE's proposal. Under either the TEP/UNSE single PPA approach or the Staff Resource Comparison methodology, the rates would be locked in for a period of time. Under Staff's proposal the prices would be locked in until TEP/UNSE's next rate case. Thus, to the extent "economic uncertainty" is created, which Staff disputes, it would occur to the same extent under the Companies' single PPA proposal.

Vote Solar and TASC argue that value could vary dramatically depending on which utility-scale PPA is used and the parameters employed, making the result of the methodology "arbitrary."[19] They also argue that grid-scale facilities are not interchangeable with rooftop DG and therefore attempting to use them as a proxy for one another is inappropriate. Staff disagrees with both of these points. Staff's Resource Comparison methodology is not "arbitrary." It is based upon the electric utility's actual costs for the last five years (or whatever period the Commission decides to select) and includes the actual PPA prices and revenue requirements of utility owned grid-scale solar facilities. The variables incorporated into the spreadsheet used for this purpose allow for differences in weighting and selection criteria and other variables to ensure that a representative cost per kWh is produced. In the end, the methodology produces an accurate and reliable indication of the utility's costs associated with its solar generation facilities including both PPAs and utility owned facilities.

As to Vote Solar and TASC's second point, which would apply to all of the grid-scale alternatives offered in this case, grid-scale solar PPA's or utility owned solar facilities are the cost that would be typically avoided since they are the most likely to be used in place of solar DG. At the hearing, TASC witness Beach in fact stated that an apples to apples comparison was possible if you subtracted the long-run marginal costs associated with transmission since rooftop solar (as opposed to grid-scale) is on-site.[20] Mr. Beach stated that the calculation was not "particularly difficult.[21]

---

[19] *Id.*
[20] Tr. at 1001 (Beach).
[21] Tr. at _____(Tilghman).

Nonetheless, Vote Solar also states that if the Commission "were to endorse a utility-scale approach despite these significant flaws, Staff's weighted average approach is superior to the utilities' methodologies.[22]

RUCO argues that Staff's Resource Comparison methodology offers a viable alternative.[23] However, speaking in general about a PPA or grid-scale utility owned solar proxy, RUCO states that it does not offer predictability, solve the grandfathering issue, or address the moving nature of the DG market. RUCO's arguments/comments on the Resource Comparison methodology are simply not compelling. RUCO is concerned that the methodology may not reflect market changes over time. However, this is not the case since the weighted average will decline over time when newer (presumably lower cost) solar resources are added. As to "grandfathering issue," those issues should not be resolved in this case but they should be examined in a rate case. Beyond that, continued grandfathering through successive tranches of customers may ultimately be confusing to customers and present implementation and tracking problems for the utilities.

C. Response to criticisms and/or comments on Staff's avoided cost approach.

Several parties also commented on Staff's avoided cost methodology. For instance, APS states that it largely agrees with Staff's shorter term avoided cost methodology and cites with favor the fact that it would establish a price for exported energy based on actual data regarding energy savings and losses, and capacity savings based on an Efficient Load Carrying Capability ("ELCC") assessment.[24] While APS did express a concern with Mr. Solganick's suggestion that forecasted capacity through use of a statistical analysis of generation outage rates could be used in determining avoided cost,[25] APS states in its Initial Brief that it would not object if the forecast was trued up, or otherwise folded into a rolling average over a limited period of time (no longer than the period between rate cases) and ELCC was used as suggested by Mr. Solganick.[26]

---

[22] *Id.* at 33.
[23] RUCO's Closing Br. at 13.
[24] APS's Post-Hearing Br. at 47.
[25] *Id.* at 48.
[26] *Id.*

TEP/UNSE state that many of the elements of Staff's avoided cost methodology are similar to the elements that the Companies believe should be considered in determining avoided cost.[27] TEP and UNSE agree with Staff's use of the ELCC to identify any actual long-term generation, transmission or distribution cost savings.[28] TEP/UNSE state that with the current penetration of DG solar, there is likely no compensation needed. [29]

However, TEP/UNSE also state that Staff's avoided cost methodology approach is "somewhat complex and could overwhelm issues in a rate case."[30] They also state that the complexity may provide a challenge to a smaller utility with limited resources.[31]

While it is true that a traditional avoided cost analysis can be very complex and require much time, both short-term and long-term analyses of this nature have been done many times before and there are accepted methodologies for doing both of them, some of which are in the record in this proceeding and could be used depending upon the desires of the Commission. In addition, the geographic adder approach recommended by Staff relies in part upon already developed utility analyses and long-term planning methodologies that look at upgrades that may be necessary in the distribution and transmission areas.

Director Broderick acknowledged at the hearing that the Resource Comparison methodology would probably be a simpler method of producing a reliable proxy for avoided cost, and for this reason may be a more appropriate methodology initially. Adjustments could be made to make them even more comparable, such as the removal of transmission and/or interconnection costs, as well as other adjustments.

Of the two Staff methodologies, AIC expressed some preference for Staff's avoided cost methodology.

. . .

. . .

. . .

---

[27] TEP/UNSE's Initial Post-Hearing Br. at 12.
[28] *Id.* at 13; TEP/UNSE did not comment on Mr. Solganick's capacity forecast approach.
[29] *Id.*
[30] *Id.*
[31] *Id.*

IV. COMMENTS OF STAFF AND OTHER PARTIES ON THE OTHER VALUE OF SOLAR METHODOLOGIES PROPOSED IN THIS CASE.

A. Criticisms Of APS's And TEP/UNSE's Grid-Scale Solar PPA Proxy.

In addition to Staff, both APS and TEP/UNSE have proposed a utility grid-scale solar proxy methodology. TEP/UNSE propose to use the most recent solar PPA of either TEP or UNSE as a proxy for either Company's avoided cost. APS similarly proposes to use its most recent PPA, and in the absence of a recent PPA of its own, to use a publicly reported PPA of another western utility or the response to a recent RFP.

Staff has concerns with the use of the most recent PPA as a reliable avoided cost proxy for the reasons as set forth in its Initial Brief.[32] Vote Solar and TASC argue that a common flaw in all of these grid-scale benchmarking proposals is that they "would not fully and fairly value the benefits and costs of rooftop solar."[33] In order to do this, both groups argue that you would have to do a long-term benefit and cost analysis.[34] Vote Solar also points out that these methodologies run counter the methodologies used in most other jurisdictions.[35] Vote Solar calls these methods "narrow" and states that they would result in an undervaluation of solar.[36] Vote Solar also argues that these methodologies conflate and otherwise confuse the determination of the "the value of solar" with the determination of what the utilities believe the compensation should be for the export rate. Valuing rooftop DG using wholesale utility-scale prices is "unreasonable and would undervalue rooftop solar."[37]

Another argument raised by both TASC and Vote Solar includes their belief that rooftop solar and utility-scale are not interchangeable resources. Vote Solar argues that the smaller and decentralized nature of distributed solar sited at the point of customer service provides unique benefits that a utility-scale solar project does not.[38] Vote Solar argues that the Commission has recognized these differences by including in its REST a DG "carve-out" which requires affected

---

[32] *See* Staff's Initial Br. at 26.
[33] Vote Solar's Initial Br. at 25.
[34] *Id.*
[35] *Id.*
[36] *Id.*
[37] *Id.* at 32.
[38] *Id.* at 29.

utilities to meet 30% of their overall renewables requirements with distributed resources including rooftop solar.[39]

Vote Solar's and TASC's arguments do have some appeal, in Staff's opinion, however, their concerns can be addressed. As discussed above, the fact that grid-scale and rooftop solar are not interchangeable resources, does not mean that one cannot be an appropriate proxy for the other. Even TASC witness Beach recognized the similarities between the two and proposed an adjustment for transmission which would make them more comparable. Staff believes that Vote Solar's other argument while more difficult, can also be addressed. While it is true that in some respects that grid-scale approach conflates the notions of appropriate compensation with the value of solar, this does not mean that a grid-scale approach could not be an appropriate avoided cost proxy. In many respects it is, since a utility is likely to meet any renewable requirements by procuring solar PV through a PPA or construction of its own solar PV facilities. In addition, the grid-scale approach could be adjusted upwards or downwards to take into account the differences with rooftop solar.

In the end, Vote Solar states that if the Commission decides to adopt a grid-scale methodology as a proxy for avoided cost, it prefers Staff's Resource Comparison methodology.[40]

B. Criticisms of APS's And TEP/UNSE's Short-Term Avoided Cost Methodologies.

The avoided cost methodologies proposed by both APS and TEP/UNSE are short-term avoided cost methodologies. While APS witness Albert offered a third methodology based upon long-term avoided costs, APS did not discuss this methodology in its Initial Brief.

APS's short-term methodology would utilize reported market prices to determine a value for energy. It would begin with aggregated actual rooftop solar production from the meter data for residential system in 2015.[41] APS would then use the actual wholesale market energy prices from the California Independent System Operator ("CAISO").[42] APS witness Albert found that during the solar PV production periods, that CAISO energy prices were in the range of 1.0 to 2.5 cent/kW.[43] Other aspects of the analysis would look at benefits and costs on a short-term basis.

---

[39] *Id.*
[40] *Id.* at 33.
[41] Albert Direct Test., Ex. APS-5 at 17.
[42] *Id.* at 17-18.
[43] *Id.* at 18.

TEP/UNSE's short-term avoided cost methodology utilizes several models recently adopted by the Utah Public Service Commission.[44] Both are short-term cost methodologies; but according to the TEP/UNSE witness Tilghman, one can incorporate long benefits associated with a VOS analysis.[45]

Significant debate continues on the issue of whether to utilize a long-term or short-term analysis for purposes of a VOS analysis. RUCO, TASC and Vote Solar propose a long-term analyses which would utilize the economic life of the solar system (20-30 years). APS and TEP/UNSE recommend that the VOS determination be based upon a short-term analysis. The long-term analysis would incorporate forecasts and planning horizons comparable to an Integrated Resource Plan ("IRP"). A short-term analysis is more consistent with the historic test year concept. The proponents of the long-term approach suggest that it is the only appropriate way to determine the value of solar. They also argue that the purpose of the VOS methodology is not to set actual rates. The purpose of the VOS calculation is to guide the Commission's policy determinations regarding appropriate rate design change for rooftop solar. TASC and Vote Solar argue that a short-term methodology is but a snapshot of costs and benefits and does not account for the long-term benefits of resource supply options like DG export. They, and RUCO, argue that only through a long-term avoided costing methodology can one actually determine the "value of solar." Anything short of this will not be reflective of what the value of solar actually is, and will therefore not be useful to the Commission when making changes rates and rate design affecting solar customers.

While Staff prefers a more limited forecasting period, (i.e., no longer than the time between rates or approximately 5 years) it also acknowledged that if the Commission desires to utilize a long-term forecast to determine the value of solar, there are ways to address to some extent the inherent risk associated with longer term forecasts. First, limiting the analysis to those costs and benefits that more easily quantified as suggested by RUCO may be appropriate. Second, more frequent updates of the forecasted data could be another mechanism to address the risk that the forecast will likely change.

---

[44] Vote Solar Initial Br. at 26.
[45] Staff's Initial Br. at 25.

C. Criticisms Of The TASC, And Vote Solar Long-Term Avoided Cost Methodologies.

Vote Solar, and TASC advocate the use of long-term avoided cost methodologies that would extend out to encompass the economic life of a typical solar PV system (approximately 20-30 years). Their various approaches are set forth in the testimonies of RUCO witness Huber, Vote Solar witnesses Kobor and Volkman and TASC witness Beach.

RUCO's long-term methodology would also incorporate a step down in the export rate, the timing and amount of which would be at the discretion of the Commission. Staff's concerns regarding RUCO's step down approach were discussed in its Initial Brief.

APS argues that a long-term avoided cost approach is likely to rely on the forecasts that turn out to be wrong and will likely result in non-DG customers overpaying for the service they receive. APS argues that there are important differences between rooftop solar and utility resources that a utility procures as part of the long-term resource planning process.[46] A utility can exercise control over its long-term resources and can call on them when needed. There are penalties involved if a third-party fails to perform.[47] This is not the case with rooftop solar. Rooftop solar is not designed to fulfill a specific need by the utility and the utility cannot rely upon rooftop solar to remain available and capable of producing power over the life of its system.[48]

Staff's position on these issues was discussed in the section on APS's short-term avoided costing methodology. In addition, Staff witness Solganick addressed two issues with Vote Solar's proposals in this Docket. First, Vote Solar proposes using a current rooftop solar penetration level for an analysis that spans twenty to thirty years.[49] Staff opposes this and believes the penetration rate should be synchronized with the study period. Finally with respect to an appropriate discount rate, Staff witness Solganick agreed with the utilities that the Commission should use the Companies weighted average cost of capital rather than the inflation rate suggested by witness Kobor.

. . .

. . .

---

[46] Albert Direct Test., Ex. APS-5 at 19.
[47] *Id.*
[48] *Id.*
[49] *See* Solganick Rebuttal Test. Staff Ex. 3, at 15 citing to Kobor Direct Test. at 23).

D. Comments Of The Cooperatives On Any Methodology The Commission Adopts.

GSECA filed a brief on behalf of its electric distribution cooperative members (the "Cooperatives."

GSECA also asks the Commission to adopt a simple methodology for calculating the excess DG rate which is based on "true" avoided costs.[50] GSECA points out that Cooperatives do not provide their own generation, but receive their power pursuant to wholesale contracts that utilize fixed charges for generation capacity.[51] Thus, unlike the other utilities involved in this proceeding, any reduction in capacity requirements caused by DG does not reduce generation capacity costs for the Cooperatives.[52] The same is true with respect to distribution costs.[53]

Staff agrees that the Cooperatives are different in important respects from the other utilities participating in this proceeding. Given this, and the fact that many Cooperatives serve rural areas and have higher costs in general, any methodology(s) adopted by the Commission should allow for the unique circumstances of the Cooperatives to be taken into account.

V. COST OF SERVICE STUDIES.

Staff's primary concern with respect to the Cost of Service Studies ("COSS") – submitted by both TEP/UNSE and APS is that they are not capable of being utilized by other parties in proceeding to support their positions in a rate case. Staff believes that all parties should have access to a workable models or spreadsheets that they can use to produce their desired outcome based upon their own assumptions and theories.

Staff believes that resolution of these issues now will facilitate ultimate use of the models in rate cases. This proceeding alone involves multiple models or spreadsheets, only one of which is the costing model which is used by the utilities to determine the cost of DG. Model/spreadsheet and data availability are issues that should be resolved at this juncture to eliminate time-consuming disputes that will otherwise occur in the context of a utility rate case.

This does not mean that the Commission could not address the substantive issues raised by various parties now involving the cost studies submitted by APS and TEP/UNSE. For instance, both

---

[50] *Id.* at 3.
[51] *Id.*
[52] *Id.*
[53] *Id.*

RUCO and Vote Solar opined on which costs should be looked at in such an analysis.[54] Additionally, Vote Solar stated that it believed the APS cost study was flawed because it relied upon not delivered load but on total load.[55] Vote Solar also took issue with APS's credit to account for the value of export.[56]

It continues to be Staff's position that regardless of any methodology adopted in this case, no party is precluded from raising issues in a rate case with respect to the cost study.

VI. KEY CONSIDERATION GOING FORWARD.

A. Gradualism And Flexibility Are Critical.

It is important that the methodology(s) adopted by the Commission recognize the concept of gradualism. RUCO perhaps stated this concept best in its Initial Brief. RUCO stated that there should be a window of time for solar companies to be "profitable with the subsidy," while providing time to develop a business model that better addresses the decreasing costs of solar in a profitable manner and which holds the non-solar customers harmless.[57] RUCO analogized to the UFIs, where there was a gradual 'ramp down' of the subsidy over time. The methodology should not be a "blunt instrument designed to cut off the subsidy all at once … but a common sense, gradual, proposal which is sensitive to the solar business model while at the same time addressing the changing DG market."[58]

The approach should also give the Commission maximum flexibility to address these issues in a fair and balanced manner.[59] Staff believes that adoption of both of its methodologies for consideration in rate cases would accomplish both of these important objectives.

B. Rate Case Process.

The purpose of the methodologies is to use them in rate cases to provide guidance to provide guidance to the Commission with respect to solar DG rate design issues.

---

[54] RUCO's Closing Br. At 11; Vote Solar's Initial Closing Br. At 39.
[55] *Id.* at 37.
[56] *Id.* at 38.
[57] RUCO's Closing Br. at 8.
[58] *Id.* at 8.
[59] *Id.*

In order to facilitate processing in a timely manner within a rate case, Staff recommends that the Commission set forth in detail the methodology(s) that are to be considered as a result of this Docket. Virtually all parties submitting proposed methodologies did so in a manner which defined the inputs to their avoided cost and benefits proposals in a very detailed fashion. Staff recommends that any decision of the Commission be specific with respect to the proposed methodologies it is adopting, including the list of inputs, and if they are to be calculated in a short-term basis, something in between short-term and long-term, or on a long-term basis. The methodology should also identify any appropriate adders or adjustments to the methodology.

To further facilitate timely processing within a rate case, Staff supports the adoption of the following guidelines with respect to the methodology:

1. It should be transparent in that all inputs, assumptions, and calculations should be clearly described and explained.

2. It should be accessible, i.e., the cost-benefit calculation should be made available to the public in the form of an electronic spreadsheet that is published on the Commission's website, and

3. It should allow for the ability to change inputs and assumptions used in the calculation which are likely to change over time.[60]

If there is underlying data of the utilities that the methodology relies upon, the Commission should require that the data be made available immediately for pending rate cases or within 30 day of the filing of a rate case.

The methodologies adopted by the Commission should have spreadsheets with links between inputs and outputs which are available to all parties. In the event this will take time to accomplish, the Commission should require the party whose methodology was adopted to perform the analysis within the required time period and make all assumptions and inputs of its analysis available to others. For long-term avoided cost analyses, there were studies identified in the testimonies of APS witness Albert and TASC witness Beach that could be used.

[60] *See* Huber Direct Test., RUCO Ex. 2 at 8.

Parties should then be given a specified period of time to develop their positions based upon use of the methodologies specified by the Commission. If the methodologies are available as Staff recommends and the utility has provided the necessary inputs, Staff believes this could be accomplished in 30-45 days.

An evidentiary hearing on the parties' positions would then be held. If the evidentiary hearing for a rate case has not been held yet, the issue could be incorporated into that hearing.

Vote Solar recommends that the utilities retain an independent third-party to conduct the analysis. Staff does not believe at this time, that it is necessary to enlist the services of a third party to perform the VOS methodology. If the Commission decides to enlist the services of a third party, the third party should be required to perform its work within the same timeframes set out above.

Finally, the Commission may want to specify any follow on proceedings that may be necessary and the timing of any of those follow on proceedings.

C. This Case Should Only Address Methodologies For Determining The Cost And Value Of Solar.

AIC, among others, ask the Commission to determine in this case that solar DG should be treated as a separate class for rate design purposes.[61] Staff does not believe that it is appropriate to address this issue in this case. This issue should be addressed in each company's rate case. It is not part of the methodology for determining either the cost or value of solar. It is a rate design issue that should be looked at in a rate case along with other rate design issues involving solar DG customers.

This Docket is also not the appropriate docket to make changes to a utility's rate design, such as the adoption of three part rates including a Demand Charge,[62] Energy Time of Use Rates[63] or Minimum bills.[64] These issues should also be addressed in each electric utility's rate case as they have an impact on the level of cost shift between DG and non-DG customers.

Finally, with respect to Net Metering, while it is true that the methodologies adopted in this case may ultimately affect the Net Metering equation, in particular the export rate for solar DG

---

[61] AIC's Post-Hearing Br. at 5.
[62] *Id.* at 7-8.
[63] Beach Direct Test., Ex. TASC-26 at 27.
[64] *Id.*

customers, decisions regarding Net Metering, including issues relating to the appropriate export rate, banking and netting should be determined in each Company's rate case. The VOS and cost methodology(s) adopted by the Commission in this case should inform the Commission's decision-making on DG solar rate design, net metering and cost issues.

D. TASC's Arguments Regarding Use In A Rate Case Should Be Rejected.

TASC argues that certain parties, namely Commission Staff, believe "that the purpose of the Docket should be to adopt a definitive framework for valuing DG that essentially would be utilized in every docket going forward as the sole means of valuation of DG.[65] TASC states that such an outcome is "outside the bounds of the Hearing Notice" and that such a "plug and play" methodology cannot be binding on all parties going forward in rate cases.[66] TASC further states that any framework advocated must be treated as "advisory only" and "merely as information that may be considered when valuing DG in any particular rate case."

Staff is perplexed by TASC's argument in this regard. The whole purpose of this proceeding was to adopt methodologies to determine both the value and cost of rooftop solar. In fact, TASC and other solar advocates have been arguing for some time that the Commission could not make any changes to rooftop solar rate design without first doing a VOS study. Now that the Commission has engaged in a lengthy proceeding to determine those methodologies, TASC appears to be saying that the Commission cannot now use the results of this proceeding in any rate case unless it revisits all of these issues over again in the rate case itself, or 1) uses the evidence for a future rulemaking; and/or 2) the adoption of an advisory substantive policy statement."

TASC's argument in this regard is disingenuous at best. First, Staff has never espoused the position that having developed a VOS methodology based upon the methodologies adopted in this case, that parties couldn't raise issues in a rate case. Second, to suggest at this time that the results of the proceeding cannot be used except in a future rulemaking or for the adoption of a policy statement is at best a misstatement of the Commission's authority to act on the issues in this generic docket. The Commission is not limited to acting, through its rulemaking proceedings or policy statements. In

---

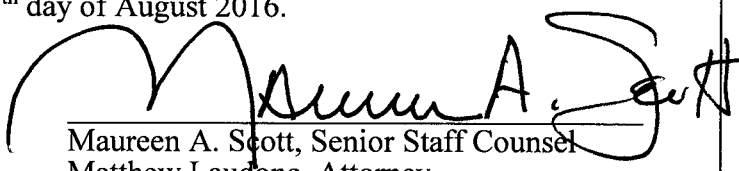
[65] *Id.*
[66] *Id.*

proceedings or policy statements. In this case, while a waiver of the Net Metering Rules may be necessary, the Commission also often times acts through its orders on various matters. While this proceeding could be the predecessor to a rulemaking proceeding, this does not mean that the Commission would have to wait until the conclusion of that rulemaking proceeding in order to act in each of the electric utility rate cases as TASC appears to suggest. The Commission can act in rate cases on these issues based upon the findings in this Docket.

VII. CONCLUSION.

Staff respectfully requests that the Commission adopt Staff's recommendations in this proceeding as set forth in Staff's testimonies and brief in this matter.

RESPECTFULLY SUBMITTED this 5th day of August 2016.



Maureen A. Scott, Senior Staff Counsel
Matthew Laudone, Attorney
Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
(602) 542-3402

SERVICE LIST FOR DOCKET NO. E-00000J-14-0023

On this 5th day of August, 2016, the foregoing document was filed with Docket Control as a Utilities Division Brief, 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 dates 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.

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
HearingDivisionServicebvEmail@azcc.gov

Dillon Holmes
CLEAN POWER ARIZONA
9635 N. 7th Street #47520
Phoenix, AZ 85068
dillon@cleanpoweraz.org
Consented to Service by Email

Garry D. Hays
LAW OFFICES OF GARRY D. HAYS, PC
2198 East Camelback Road, Suite 305
Phoenix, Az 85016
Attorney for Arizona Solar Deployment Alliance

C. Webb Crockett
Patrick J. Black
FENNEMORE CRAIG, PC
2394 East Camelback Road, Suite 600
Phoenix, AZ 85016-3429
Attorneys for Freeport Minerals and AECC
wcrockett@fclaw.com
pblack@fclaw.com
Consented to Service by Email

Court S. Rich
ROSE LAW GROUP PC
7144 E. Stetson Dr., Suite 300
Scottsdale, AZ85251
Attorney for the Alliance for Solar Choice
crich@roselawgroup.com
Consented to Service by Email

Richard C. Adkerson
AJO IMPROVEMENT COMPANY
333 N. Central Ave.
Phoenix, AZ 85004-2189

Timothy M. Hogan
ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST
514 W. Roosevelt St.
Phoenix, AZ 85003
Attorneys for Vote Solar and Western Resource Advocates
thogan@aclpi.org
rick@votesolar.org
briana@votesolar.org
ken.wilson@westernresources.org
cosuala@earthjustice.org
mhiatt@earthjustice.org
Consented to Service by Email

Craig A. Marks
CRAIG A. MARKS, PLC
10645 N. Tatum Blvd., Suite 200-676
Phoenix, AZ 85028
Attorney for Arizona Utility Ratepayer Alliance
Craig.Marks@azbar.org
Consented to Service by Email

Meghan H. Grabel
OSBORN MALEDON, PA
2929 N. Central Ave., Suite 2100
Phoenix, AZ 85012
Attorneys for Arizona Investment Council
mgrabel@omlaw.com
gyaquinto@arizonaic.org
Consented to Service by Email

Daniel W. Pozefsky, Chief Counsel
RESIDENTIAL UTILITY CONSUMER OFFICE
1110 W. Washington, Suite 220
Phoenix, AZ 85007
dpozefsky@azruco.gov
Consented to Service by Email

Lewis Levenson
1308 East Cedar Lane
Payson, AZ 85541

Jennifer A. Cranston
GALLAGHER & KENNEDY, PA
2575 E. Camelback Rd., Suite 1100
Phoenix, AZ 85016
Attorneys for Grand Canyon State Electric Cooperative Association, Inc.
jennifer.cranston@gknet.com
Consented to Service by Email for Grand Canyon State Electric Cooperative Association, Inc.
Also Attorney for AEPCO and Dixie Escalante Rural Electric Association, Inc. who have not consented to Email service

Michael W. Patten
Timothy J. Sabo
Jason D. Gellman
SNELL & WILMER, LLP
One Arizona Center
400 E. Van Buren St., Suite 1900
Phoenix, AZ 85004
Attorneys for Ajo Improvement Company, Morenci Water and Electric Company, Trico Electric Cooperative, Inc., Tucson Electric Power Company, and UNS Electric, Inc.

Gary Pierson
ARIZONA ELECTRIC POWER COOPERATIVE, INC.
P.O. Box 670
1000 S. Highway 80
Benson, AZ 85602

Thomas A. Loquvam
Thomas L. Mumaw
Melissa M. Krueger
PINNACLE WEST CAPITAL CORPORATION
P.O. Box 53999, MS 8695
Phoenix, AZ 85072
Attorneys for Arizona Public Service Company
thomas.loquvam@pinnaclewest.com
Consented to Service by Email

Charles C. Kretek, General Counsel
COLUMBUS ELECTRIC COOPERATIVE, INC.
P.O. Box 631
Deming, NM 88031

LaDel Laub, President and CEO
DIXIE ESCALANTE RURAL ELECTRIC ASSOCIATION
71 East Highway 56
Beryl, UT 84714

Nancy Baer
245 San Patricio Drive
Sedona, AZ 86336

Steven Lunt, Chief Executive Officer
DUNCAN VALLEY ELECTRIC COOPERATIVE, INC.
379597 AZ 75
P.O. Box 440
Duncan, AZ 85534

Dan McClendon
Marcus Lewis
GARKANE ENERGY COOPERATIVE, INC.
P.O. Box 465
Loa, UT 84747

William P. Sullivan
LAW OFFICES OF WILLIAM P. SULLIVAN, PLLC
501 East Thomas Road
Phoenix, AZ 85012-3205
Attorneys for Garkane Energy Cooperative, Inc., Mohave Electric Cooperative, Inc.; Navopache Electric Cooperative, Inc.

Than W. Ashby, Office Manager
GRAHAM COUNTY ELECTRIC COOPERATIVE, INC.
9 W. Center St.
P.O. Drawer B
Pima, AZ 85543

Tyler Carlson, CEO
Peggy Gillman, Manager of Public Affairs
MOHAVE ELECTRIC COOPERATIVE, INC.
P.O. Box 1045
Bullhead City, AZ 86430

Vincent Nitido, CEO/General Manger
TRICO ELECTRIC COOPERATIVE, INC.
8600 West Tangerine Road
Marana, AZ 85658

Roy Archer, President
MORENCI WATER AND ELECTRIC COMPANY and AJO IMPROVEMENT COMPANY
P.O. Box 68
Morenci, AZ 85540

Charles R. Moore
Paul O'Dair
NAVOPACHE ELECTRIC COOPERATIVE, INC.
1878 West White Mountain Blvd.
Lakeside, AZ 85929

Patricia Ferre
P.O. Box 433
Payson, AZ 85547

Jeffrey W. Crockett
CROCKETT LAW GROUP, PLLC
2198 E. Camelback Rd., Suite 305
Phoenix, AZ 85016- 4747
Attorney for Sulphur Springs Valley Electric Cooperative, Inc.
jeff@jeffcrockettlaw.com
kchapman@ssvec.com
jblair@ssvec.com
Consented to Service by Email

Bradley S. Carroll
TUCSON ELECTRIC POWER COMPANY
P.O. Box 711
Tucson, AZ 85701-0711
mpatten@swlaw.com
bcarroll@tep.com
docket@swlaw.com
Consented to Service by Email

Susan H. Pitcairn, MS
Richard H. Pitcairn, PhD DVM
1865 Gun Fury Road
Sedona, AZ 86336

David G. Hutchens, President
Kevin P. Larson, Director
UNS ELECTRIC, INC.
88 E. Broadway Blvd., MS HQE901
P.O. Box 711
Tucson, AZ 85701-0711

Tom Harris, Chairman
ARIZONA SOLAR ENERGY INDUSTRIES ASSOCIATION
2122 W. Lone Cactus Dr., Suite 2
Phoenix, AZ 85027
Tom.Harris@AriSEIA.org
Consented to Service by Email

Nicholas J. Enoch
LUBIN & ENOCH, P.C.
349 North Fourth Avenue
Phoenix, AZ 85003
Attorneys for IBEW Locals 387, 1116 & 769

By: Karyn Christine
Karyn Christine
Assistant to Maureen A. Scott