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BEFORE THE ARIZONA CORPORATION COMI

DOUG LITTLE
CHAIRMAN
BOB STUMP
COMMISSIONER
BOB BURNS
COMMISSIONER
TOM FORESE
COMMISSIONER
ANDY TOBIN
COMMISSIONER

VALUE AND COST OF DISTRIBUTED GENERATION (INCLUDING NET METERING).	Docket No. E-00000J-14-0023

RUCO'S REPLY BRIEF

The Residential Utility Consumer Office ("RUCO") hereby submits the following Reply Brief in the above captioned docket.

SUMMARY

RUCO recommends the following:

1. Adopt a 20 year long-term, but conservative (due to future uncertainties), avoided cost methodology similar to what Chairman Little proposed.
    a. Do not include hard to determine and de minimis cost/benefit categories
    b. Do not include controversial economic and societal cost/benefit categories
2. Allow whichever methodology ultimately adopted out of this docket to be applied to PV generation self-consumed or exported - as the Commission in individual rate cases see fit.

3. Regardless of the methodology ultimately adopted, allow room for a declining step down mechanism that can be easily adjusted based on locational value, technology advances, REST compliance, and solar cost trends.

THE VALUE OF SOLAR DOCKET HAS LOST ITS FOCUS

RUCO has reviewed the Closing Briefs of the parties in this docket and is concerned that the focus of this docket has shifted away from its original intent. This docket was meant to explore and derive a methodology to value solar. Whereas, the focus now seems be on deriving a methodology for valuing rooftop solar exports only. Among the concerns with limiting the inquiry to rooftop solar exports:

1. This limits actionable data to Commissioners
2. It does not help with rate design issues
3. Treating self-consumption different from exports is confusing to customers
4. It creates two complex regulatory pathways to adjust solar compensation
5. It can send potentially troubling price signals. (What if the retail rate is lower than the export rate? This can be the case for many rate plans.)

But of all of the concerns, perhaps the greatest concern is the confusion that will be left to linger on, in all the open dockets currently before the Commission, which rely on the valuation of solar. In the pending UNSE rate case (Docket E-04204A-15-0142) the ALJ in her pending ROO has recommended pushing off the resolution of the net metering and rate design portions of that docket until after the conclusion of the Value of Solar Docket. (See page 116 of the ROO in Docket E-04204A-15-0142). Here, the parties, except RUCO, are all advocating that the Commission only consider half of the rate design – the export rate. The self-consumption part of the solar equation is clearly a part of rate design – half of it in fact. The

end result will be a partial rate design analysis, which will not move the ball forward in the UNSE rate case – or any of the pending rate cases for that matter. The time has come to address the whole rate design equation for solar customers and provide all of the parties with direction. The Commission should address both self-consumption and the export rate in this docket.

If we do not address this issue in a holistic manner now, we will continually be punting this issue between rate cases, generic dockets or court rooms. For instance, say the export rate is set to the average PPA proxy of 10.9 cents/kWh, what if a utility (such as UNS did in the pending UNS docket - 5.9 cents) proposes a rate plan with a 5.9 cents/kWh volumetric offset for example (self-consuming rate)? The solar industry will likely say that 5.9 cents/kWh is too low because it is less than half the price of the export rate. The utility will likely say it is priced correctly because it is based on proper rate design principals providing time of day differentiated price signals. How will the Commission decide? By just setting the export rate, the Commission will only make the rate design process more difficult setting up a new battle over rate design for the self-consumption side of solar production.

Staff points out in its Closing Brief that all of the parties methodologies "...coalesce around a determination of value that is reflected in the "export" rate, or the energy put back on the grid by a DG solar customer, which is now part of the net metering equation." Staff Brief at 4. Nowhere in this docket has the Commission instructed that the scope of this value of solar docket is to focus or be limited to the export rate. Yet only RUCO, contrary to Staff's observations[1], has considered both the value of self-consumption and the export rate.

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[1] Staff also mistakenly represents that RUCO supports fuel hedge value as an avoided cost for DG solar. See Staff Brief at 18-19. Staff points to Mr. Huber's direct testimony at pages 18-19. Mr. Huber nowhere testifies that he or RUCO support fuel hedging as another avoided cost. RUCO does agree that fuel cost savings are a benefit of DG solar – see Huber Direct at 18. Staff has misread RUCO's testimony here.

Everyone else, including Staff, has determined that the value of solar only concerns the export rate.

TEP/UNSE proposed a market value methodology and cost of service approach that calculates the short term avoided costs for determining the export rate. TEP/UNS Brief at 4. TEP/UNS performed an analysis of its solar generation resources, both utility owned and generation procured and determined the weighted average of the entire spectrum of project vintages of company-owned projects, is approximately 10.6 cents per kWh. Id. at 21. APS also proposed a cost of service methodology that focuses on short-term avoided cost or grid scale adjusted value. APS Brief at 2. APS determined the weighted average of its company-owned and PPA resources, and when considered together the weighted average cost is 10.9 cents per kWh. Staff Brief at 21. RUCO witness Huber has testified at length about why a utility scale proxy is not an optimal solution. Among the reasons, 1) it can over pay rooftop solar, 2) it ignores key differences between the two technologies, 3) the rate can unexpectedly change, and 4) it is confusing for customers. Moreover, linking the export rate to solar PPAs provides a disincentive for utilities to incorporate more expensive tracking or dispatchable solar. If a utility desires a solar plus storage PPA, it will in effect be paying non-firm rooftop solar at an artificially high rate.

Vote Solar hangs on to the disproven notion that the current net metering rate adequately compensates, or may even "undercompensates," solar customers for their exports. Vote Solar Brief at 2. Surprisingly, Vote Solar, like the utilities believes that the value of solar docket should only focus on the export rate. Vote Solar sees the result of the value of solar analysis as a way to determine whether solar customers are being compensated appropriately for the value of their exported energy. Vote Solar Brief at 12. TASC also believes the focus of this docket is the export rate. Company Brief at 21, Beach Direct Executive Summary at i.

RUCO questions how the parties have arrived at a point where all but one of the parties are leaving half the value of solar equation out of consideration. Surely there are costs and benefits to the non-solar ratepayer as well as the utilities related to the solar customers' self-consumption. One need not dive too deep to realize that the solar customer who produces and uses his own generation can reduce or increase overall demand on the system. Why should self-consumption not be considered in the value of solar? Perhaps it is as simple as the costs associated with self-consumption exceed the benefits, which would be counter to the interests of some parties or vice a versa. That might explain why some of the parties do not see the purpose in valuing self-consumption as part of the value of solar.

But speculation aside, it is still an important consideration that should not be ignored when considering the value of solar. It is also an easy fix – simply allow the outcome of this proceeding, in this case a valuation methodology, to apply to both the exports and self-consumption. This will give the Commission and parties a choice about how to apply the findings from this docket to a rate case. In terms of implementation, DG customers can simply elect to be compensated for either their entire solar production or just their exports, at the credit rate set in this proceeding. This approach, which RUCO is recommending, provides the solar customer with choice, and addresses the whole solar rate design – not half of it. It is also simple to explain, and very easy to administer. Perhaps this explains why RUCO is hard-pressed to find another state that has had a Commission led study that just focused on exports and disregarded 50% of the solar generation equation.

Chairman Little, in his letter of December 22, 2015, started out addressing the outcomes he expected from this proceeding:

1. Development of a methodology that would inform future proceeding as to how the value of and cost of solar should be evaluated and determined as part of a rate case. Since the specifics of each rate case are different and can vary widely for each utility

> and service area, *the methodology would not assign specific values, but rather provide guidance as to how values would be determined in the context of an individual rate case. (Emphasis Added)*

Chairman Little further discusses issues he is concerned with later in his letter including many aspects of the self-generation piece like the decline in the cost of panels, orientation of panels, intermittent nature of DG, and the degree that self-consumption is coincident with peak demand, to name a few. See Little letter at 2-3. These considerations go far beyond the focused approach of an export rate linked to a utility scale PPA proxy. See Chairman Littles letter to the docket of December 22, 2015.

Commissioners' Burns and Stump have expressed interest in a "deep dive" into methodologies and aspects of self-consumption. Commissioner Burns, in his letter of February 8, 2016 asks the parties to focus on the level of "water savings" that will result from the decreased need for fuel from traditional generators as the result of self-consumption. See letter of Commissioner Robert Burns, dated February 8, 2016. Commissioner Stump seeks analysis, among other things, of intermittency, non-dispatchability and high U.S. installation costs into the value of solar. See letter of Bob Stump dated February 19, 2016.

RUCO's point is less a point of criticism and more of an explanation as to why RUCO is making its recommendation. RUCO remains focused on the purpose of this docket - to inform future rate cases. RUCO's recommendation is that the Commission derive a value through a methodology that considers both the long term costs and benefits of solar. This can establish a compensation rate with predictable step-down schedules as market uptake increases and the costs of solar declines. Commissioner Stump identified the joint statement issued at the Commission's June 14, 2014 workshop on the Value and Cost of Distributed Generation.

They stressed a "forward-thinking,""customer-focused" approach, promoting "affordable and fair" service-as well as customer choice, an expectation of reliability, a desire for

transparent rate design, and an emphasis upon "accurately reflect[ing] the services and products that customers use and provide."

No party's recommendation is more aptly described by this mission statement than RUCO's recommendation.

RUCO'S RECOMMENDATION IS FORWARD LOOKING, PROVIDES STABILITY AND ACCOUNTS FOR THE CHANGING NATURE OF THE SOLAR MARKET

RUCO supports a conservative but long term valuation method that is implemented through a declining credit rate. RUCO's step-down proposal is criticized for being administratively difficult to implement. See for example Staff's Brief at 28. Grandfathering will also be difficult to implement but no one has raised the administrative aspect as a reason for rejecting it. No solution will be simple, no matter the policy chosen. Moreover, one can make the step downs as few, or as many, as the Commission so desires to reduce complexity. The truth of the matter is that the value of solar is changing and the Commission will need to address it in a manner that will undoubtedly result in administrative challenges.

At least one party, TEP/UNS seeks to use a market proxy of its PPA's to calculate the value of solar. Its approach would base compensation of exported DG energy on the most recent PPA, for a larger DG system, that is connected to the utility's distribution grid. See TEP/UNS Brief at 6. If this approach is approved, then the value of solar in these service territories will change with the next PPA that goes into effect. New solar customers will be subject to a "misvalue" of solar if the PPA price changes. Likewise, the cost of service approach is also constantly subject to change. For example, how will this approach work it the PPA is priced for both solar and storage? RUCO's recommendation is not to ignore it, because it will result in administrative challenges. Rather, RUCO seeks to address it in a way that RUCO believes is the least difficult to administer, while providing solar customers with rate

stability. Again, pursuant to the mission statement, RUCO addresses this in a "forward-thinking", "customer-focused" approach', "accurately reflecting" the value of solar.

THE COMMISSION SHOULD NOT INCLUDE COSTS/BENEFITS RELATED TO LARGER MACROECONOMIC IMPACTS OR COSTS/BENEFITS WHICH ARE UNMEASURABLE

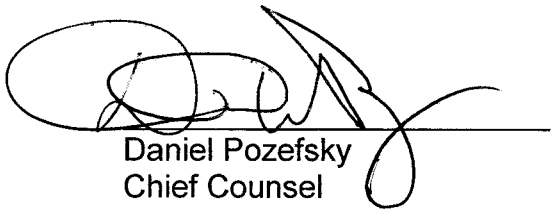
When considering the value of solar, TASC and Vote Solar believe that the costs and benefits associated with the economic impacts should be part of the valuation. While RUCO does not deny that there are costs and benefits associated with economic impacts, it would be very difficult, if not impossible to quantify these economic impacts. For example, how can the Commission quantify the impact of job losses and gains? Huber Direct at 26. At some point, for the sake of not only simplicity, but sound rate making, some factors need to be limited, if not excluded. The benefits/costs associated with the macroeconomic impacts should be excluded.

In a similar vein, TASC and Vote Solar also list such things as grid security as a benefit. See Vote Solar Brief at 24. Perhaps, but how could the Commission ever quantify it? Vote Solar does not disagree that the current Institute of Electrical and Electronics Engineer' standards require rooftop solar to disconnect from the grid during outages. Vote Solar Brief at 24. Vote Solar's response is that those standards are currently being amended which makes even the possibility of valuation, dubious at best. Id. Neither party is able to provide evidence showing the size of the benefit, nor demonstrate how one could even support such a quantifiable valuation. TASC admits that non-monetary benefits are by their nature "difficult to quantify." See TASC Brief 13-14.

CONCLUSION

For the foregoing reasons, RUCO requests that the Commission adopt its recommendations.

RESPECTFULLY SUBMITTED this 5th day of August, 2016.



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