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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

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

IN THE MATTER OF THE APPLICATION OF TRICO ELECTRIC COOPERATIVE, INC., AN ARIZONA NONPROFIT CORPORATION, FOR THE DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTIILTY SERVICE AND FOR RELATED APPROVALS.

DOCKET NO. E-01461A-15-0363

COMMENTS OF KEVIN KOCH

I am submitting comments regarding the proposed settlement agreement between Trico and ACC Staff. In particular, I take issue with certain assumptions and conclusions which Staff presents in its argument for supporting the settlement agreement, and I recommend, if adopted, certain changes be made in order to meet the goals that Staff supports.

ASSUMPTIONS

Staff witness Liu has developed a model to predict savings, payback and rate of return on the installation of new solar electric systems under the conditions of the proposed settlement. I was asked to testify regarding the installed price for a typical size system in Trico territory. I did not get the chance, however, to address the following assumptions in Mr. Liu's model which I believe are incorrect or misguided:

1. System Size: System size will likely be smaller under the proposed settlement, in order to maximize direct energy usage, which will have the impact of increasing the price per watt for an installed system.
2. System kwh Production: Systems will likely be installed at a lower tilt angle, and in some cases facing westerly under the proposed settlement, in order to maximize direct energy usage, which will have the impact of reducing the kwh/kwdc production for a system and will in turn increase the payback period.
3. Dollar per Watt Installation Cost: The number of installations occurring in the Trico service territory will likely drop significantly under this settlement, due to increased financial risk and decreased cost effectiveness, also increasing the price per watt for an installed system.

4. Winter Off-setting: Winter off-setting is very likely lower than 37% as used in Mr. Liu's model. During the winter when customers do not run their AC units, their direct solar utilization will likely be closer to 25% which will also increase the payback period.
5. Utility Escalator: Mr. Liu's model assumes a 2.5% increase in utility rates as they pertain to solar savings. This rate increase projection is unrealistic, and this proposed settlement agreement is a testament to the trend away from volumetric rate increases. The rate increase proposed in this settlement agreement is almost entirely in the fixed monthly charge. Volumetric charges do not change significantly. It is unrealistic to model that the savings from solar generated electricity will go up by 2.5%/year for solar adopters. The removal of this unrealistic assumption will negatively affect the IRR calculation presented by Mr. Liu.
6. Terms of the IRR Calculation: The IRR calculation is not used or understood by the vast majority of residential customers, but if it were, they would not use 33 years for the term because they are unlikely to own the asset for that period of time. Based on homeowner expectations, 7-10 years would be more realistic, since most homeowners accept this benchmark to measure their investment.
7. Net Metering Export Rate: The 7.7 cent export rate assumed in Mr. Liu's model remains consistent for 33 years in his IRR and 11.4 in his payback calculations. Yet the reality of this settlement agreement is that the export rate is subject to change in the future. If properly informed, customers will not have confidence in the stability of the export rate and therefore will want a better return on their investment due to its higher uncertainty. This further reduces the likelihood that customers will find solar to be cost effective.

CONCLUSIONS

Staff witness Liu attempts to demonstrate that the proposed settlement agreement will set rates in a way that can still be cost effective for new solar customers. I strongly disagree with that assertion, as well as disagreeing with the following conclusions made by Mr. Liu:

1. Cost Effective Payback Period: Mr. Liu suggests that 11.4 years is a cost effective simple payback period. In my experience of selling solar electric systems in the Tucson area to thousands of customers, one of two things is required: 1) The payback must be less than 10 years to constitute a cost effective decision through the eyes of customers or 2) There must be positive net monthly savings when the solar system uses a long-term loan or lease for financing.
2. Use of IRR: The IRR conclusion is off significantly due to factors listed above. If adjusted for those corrections, the IRR would be negative under the terms of this proposed settlement agreement. In any case, it is not an apples to apples comparison between IRR for a solar purchase

and a treasury bond, or mortgage rates. A treasury bond, for example, is the most secure investment on the planet at this time, and after 10 years of interest payments, the original investment is returned. All terms are known for the life of the treasure bond investment. In the case of a solar investment, at the end of 10 years, there is an unknown value of the solar asset. Additionally, under the terms of the proposed settlement agreement, the future export rate is unknown. In such circumstances the IRR cannot be accurately predicted. In short, I urge the commission to disregard the IRR calculations used in Mr. Liu's model.

IMPROVEMENTS TO THE PROPOSED SETTLEMENT

In the event the Commission chooses to adopt the proposed settlement agreement, the following changes should be made:

1. Fixed Export Rate: The DG Energy Export Tariff should create a fixed export rate for customers submitting an application for interconnection for at least 10 years from the date of commissioning. This would provide for enough assurance for the market to avoid collapse due to uncertainty.
2. RPS Credit Option: An RPS Credit Option similar to that proposed by RUCO, but amended to provide a $0.95/kwh rate, and no scheduled decline in the value of that rate, should be adopted side by side the changes in Net Metering. Should Trico find that adoption rates are exceeding the goals of the REST, they could petition that the rate be lowered.

OTHER ISSUES

The last two issues I find with the proposed settlement agreement are as follows:

1. Fixed Monthly Charge: The proposed increase to the fixed monthly charge is too high and should not be raised more than a few dollars per month. The current proposal will disproportionately impact lower energy and (often) lower income utility customers.
2. Grandfathering Date: The date of grandfathering should be based on the effective date of the Commission's order on this matter, in order to maintain the oversight capacity intended of the Commission. As I have stated in the Trico Net Metering Docket, the proposal of a grandfathering date early in this proceeding caused a unilateral freeze of the solar marketplace without the sanction or discretion of the Commission. This action on the part of the Utility had the effect of discouraging the majority of members from installing solar, which should be in the hands of the Commission, not the Utility. The utilities and the public should be sent a signal that the Commission will not support this type of market freezing action.

RESPECTFULLY SUBMITTED this 25th day of August, 2016.

Kevin Koch

Original and thirteen (13) copies of the foregoing filed this 26th day of August, 2016 with:
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