



0000162097

DOCKET NO. E-01933A-15-0100

RECEIVED

IN THE MATTER OF THE APPLICATION OF TUCSON ELECTRIC POWER COMPANY FOR APPROVAL OF A NEW NET-METERING TARIFF FOR FUTURE NET METERED CUSTOMERS AND A PARTIAL WAIVER OF THE COMMISSION'S NET METERING RULES

2015 MAY 18 A 11:03
AZ CORP COMMISSION
DOCKET CONTROL

Dear Chairman Bitter Smith and Commissioners,

I am a customer of Tucson Electric Power. I live in Tucson, and I have installed solar electric and solar water heating systems on my home. I am also an owner of Net Zero Solar, a renewable energy installation company serving southern Arizona, and have been a renewable energy professional working in Arizona since 2003.

ORIGINAL

I am deeply concerned with Tucson Electric Power's proposal to make significant changes to their net metering tariff. Arizona's Net Metering Rules have contributed to the availability of energy choice for Arizona consumers since 2009, and should not be rolled back.

As Commission staff has stated in their April 14th Request for Procedural Order, this matter should be properly examined in a rate case. A rate case provides the proper forum to discuss alleged cost shifts after evidence is introduced and significant stakeholder input is heard. It is certainly possible that solar electric systems provide a net benefit to the grid, as has been found in comprehensive studies in various states. If shown to exist, any proven cost shifts from solar electric systems should be properly weighed with respect to other existing cost shifts in TEP's rate structure, and with public policy goals.

Second, TEP's proposed grandfathering date of June 1st, 2015 will result in a de facto freeze of the solar market on that date. TEP customers who wish to install solar electric systems will not have the opportunity to interconnect under the current ACC-approved tariff. I ask that you consider immediately removing this artificial grandfathering date, allowing solar contractors to continue to serve TEP customers who want solar installed on their homes and businesses until a final decision regarding this matter is made.

Last, if approved and implemented, this proposal makes it extremely hard for potential solar customers to evaluate their potential investment in solar energy systems for the following reasons:

1. The variable nature "Renewable Credit Rate" as conceived in TEP's March 25th, 2015 application. A rate that may decrease year-to-year transfers unquantifiable risk to solar customers.

DOCKETED BY

MAY 18 2015

Arizona Corporation Commission
DOCKETED

2. The required complex modeling of minute-to-minute expected customer electric loads and solar electric system production due to variable nature of customer load profiles with similar total monthly use. This modeling would require a minimum of 15-minute interval load data for any potential solar customer, though more granular data would provide greater accuracy.
3. Uncertainty regarding future benefits from a solar electric system if a customer load profile changes. For example, if a customer who currently provides care to his or her children at home during the day returns to work and therefore uses less energy during the day, they would then receive a smaller economic benefit from their solar electric system, due to a greater amount of excess generation credited at the Renewable Credit Rate. Similar effects would come from increases in energy efficiency in the home.

On pages 8-9 of their March 25th application, TEP asserts:

"The impact of the partial waiver is likely to be minimal on DG customers that choose to install smaller rooftop solar systems that better match their basic usage pattern over the course of a year. Those customers will likely see a subsidy similar to what they would have enjoyed under the current net metering tariff."

It is conceivable that customers who choose to install extremely small systems that match their exact energy usage over the course of each *day* will have minimal lost savings under this proposal.

However, I have completed a careful analysis of the bills of eight customers who currently have solar electric systems, comparing monthly bills under the R-01 Residential rate, monthly bills under R-01 rate with current NM tariff, and monthly bills for a customer with an identical load profile under the R-01 rate with the proposed NM tariff. This actual customer data does not support that the assertion that customers with solar who match basic usage over the course of a year will face minimal bill impacts under TEP's proposal.

Table 1: Lost Savings for Selected Solar Customers Under Proposed TEP Net Metering Tariff

Customer Identifier	PV System Size (kW DC)	Percentage of Total Energy Use from Solar PV	Percent of PV Production that is Excess Generation	Annual Lost Savings with TEP Proposal	Percent Annual Lost Savings with TEP Proposal
1	1.880	56.3%	65.9%	\$124.36	31.0%
2	1.840	57.5%	58.2%	\$112.38	29.9%
3	11.200	86.6%	59.8%	\$752.99	28.9%
4	11.985	84.9%	45.2%	\$576.11	21.5%
5	11.648	72.7%	46.9%	\$670.16	24.1%
6	4.560	160.9%	79.1%	\$232.36	29.2%
7	2.400	48.3%	58.4%	\$138.79	27.4%
8	3.710	74.2%	56.2%	\$132.11	18.5%

As shown in Table 1, even customers who offset a relatively low percentage of their annual energy usage would still be heavily impacted by this proposal. Full details of this analysis are not included in these comments due to their length, but can be downloaded in PDF format at <http://bit.ly/1AZPmJL>¹. For example, Customer 7 has a modest 2.4 kW DC solar electric system on his home, with an annual net monthly excess generation of 2% of his total solar electric production. Unfortunately, a new customer with the same load profile and solar electric system would lose 27.4% of the potential savings from solar if TEP's proposal is approved and implemented.

More troubling, due to the variation of load patterns, customers offsetting similar amounts of energy with solar electric systems would have highly varying outcomes. Consider Customer 3 and Customer 4. Each provides about 85% of their energy needs from solar. But under this proposal Customer 3's annual lost savings would be 28.9%, while Customer 4's annual lost savings would be 21.5%. Across these eight solar customers, the average annual savings impact of this proposal would be 25%, as shown in Figure 1. This hardly qualifies as "minimal impact."

¹ Full URL is

<https://www.dropbox.com/s/weeaxivg58q0h0/Woofenden%20Analysis%20Regarding%20Bill%20Impacts%20TEP%20NM%20Proposal%20%28E-01933A-15-0100%29.pdf?dl=0>

Average Annual Savings Impact of TEP Net Metering Proposal on Eight TEP Solar Customers

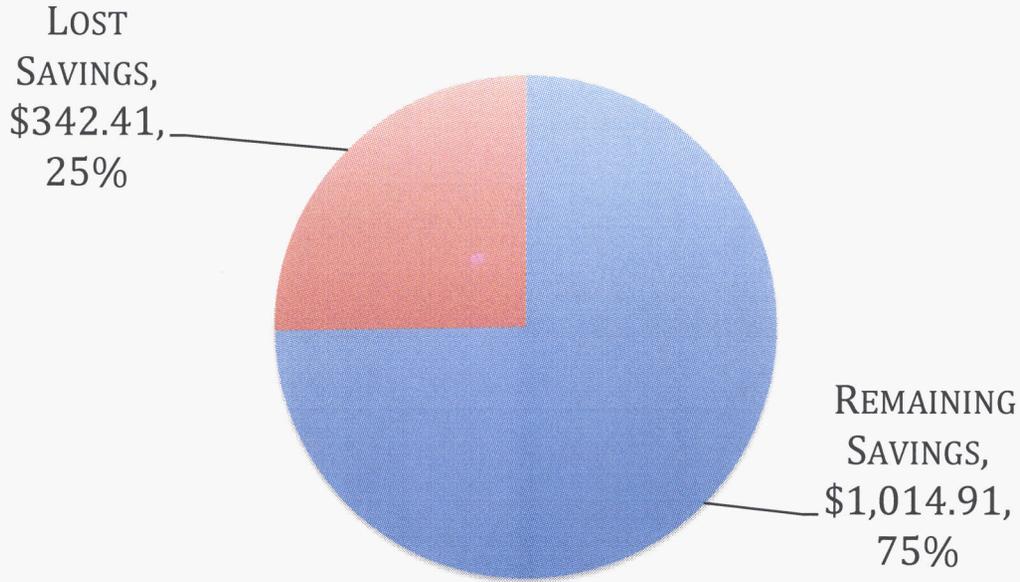


Figure 1

Percentage of Total Energy Use from Solar PV vs. Percent Annual Lost Savings for Eight TEP Solar Customers

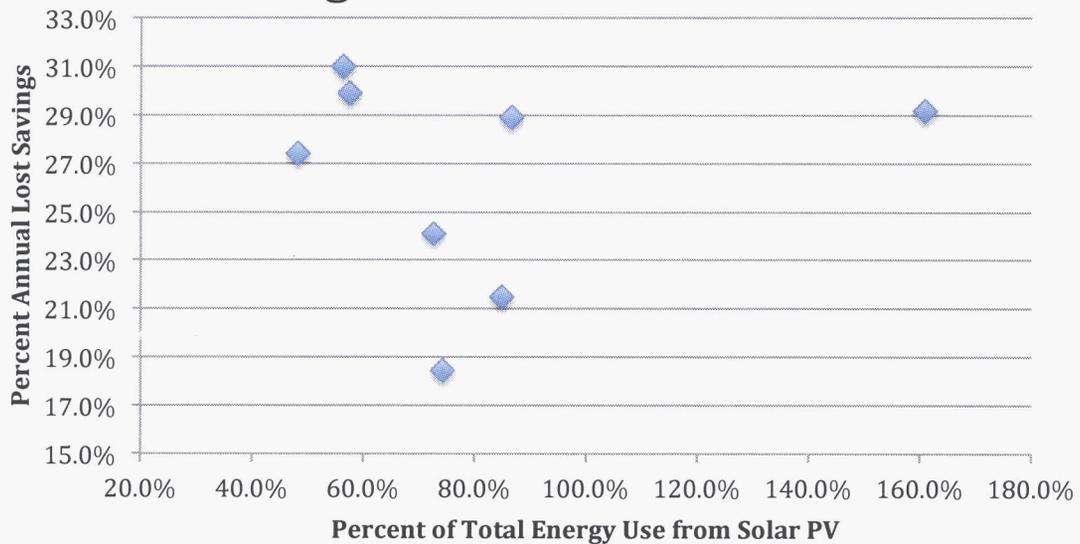


Figure 2

Considering the data shown in Figure 2, it is difficult to find a correlation between the percentage of total energy use offset by a solar PV system and the percentage of lost savings. Again, this variability of individual customer load profiles makes evaluation of the benefits of a solar electric system quite impractical under TEP's proposal.

In conclusion, I urge you to reject this impractical and ill-conceived proposal. Tucson Electric Power ratepayers deserve better.

Regards,

A handwritten signature in black ink, appearing to read 'Louis Woofenden', with a long horizontal line extending to the right.

Louis Woofenden

Engineering Director
Net Zero Solar, LLC
101. W. 5th St., Tucson, AZ 85705
Arizona ROC #248710, 259756, 259521

Phone: 520.207.4053 Ex. 2
Cell: 520.237.5040
Fax: 520.203.7230
E-mail: louis@netzerosolar.net

NABCEP Certified PV Installation Professional™
NABCEP Certified Solar Heating Installer™