

FILE IP E-00000A-99-0431



ARIZONA CORPORATION COMMISSION

UTILITY COMPLAINT FORM

4700

Investigator: Reg Lopez

Phone: [REDACTED]

Fax: [REDACTED]

Priority: Respond Within Five Days

Opinion No. 2006 - 54470

Date: 8/14/2006

Complaint Description: 08Z Rate Case Items - Other

Complaint By: First: Clark Last: Schaack

Account Name: Clark Schaack

Home: [REDACTED]

Street: [REDACTED]

Work: (000) 000-0000

City: Green Valley

CBR:

State: AZ Zip: 85614

is:

Utility Company: Trico Electric Cooperative, Inc.

Division:

Contact Name: 0000

Contact Phone: 0000

Nature of Complaint:

He called Trico and inquired about installing a photo voltaic system providing under 2 Kw. The person whom he spoke to related that the ACC frowns on such low producing systems that would allow net metering because it doesn't allow surplus generation going back into the grid. Is this so?

\*End of Complaint\*

Utilities' Response:

Investigator's Comments and Disposition:

I first advised that the ACC was very much in favor of renewable energy, thus I asked what application had Trico submitted to the ACC that they were basing this on. Customer replied he only received generalized information. I advised I could check our eDocket database if Trico has made such an application for photo voltaics and provided any info that we may have. Customer stated that he should have asked Trico for specifics but plans in calling them to obtain such info. I provided my name and tel# for call back if he obtains such info.

8-24 Customer called back and provided technically detailed information on why the ACC should endorse net metering. I asked and the customer agreed to send me an e-mail which detailed his opinion in this matter to avoid I incorrectly noting his comments. I agreed then forward his information thru the appropriate channels for docketing.

8-29 I received the following customer e-mail dated for today:

29 August 2006

To: Reg Lopez, ACC:

In discussions I have had online with Marsha Johnson of Trico, I was advised that the ACC may soon be

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considering a statewide net metering standard for Arizona photovoltaic systems.

At present, the Trico SUNWATTS program offers an incentive of \$4.00 per installed watt, up to 2,000 watts, for individual residential units. According to a communication with Marsha Johnson of Trico, the above incentives are derived exclusively from the Environmental Portfolio Surcharge attached to each individual's monthly electric bill. This means that the members of Trico Electric Cooperative are paying for the incentives for installed PV systems within the Trico Cooperative. Any excess power produced by a PV system within the Trico Cooperative is paid back to the system owner, by Trico, at their avoided cost rate, which according to Marsha Johnson is \$0.02 per Kwh. I am currently billed ca. \$0.108 per Kwh, plus office costs, cost of meter reading and the Environmental Portfolio Surcharge.

I went online to get the cost for installed residential PV systems. They have increased since I last looked. My source for these costs is American Solar Electric, Inc. of Scottsdale, AZ. This company can be reached either by phone [480-994-1440 ext. 103] or online @ < [www.americansolarpv.com](http://www.americansolarpv.com) >. The following is what I observed for a Pitched Roof [Kyocera System] from their table

2.5KW system [4,400Kwh/year] cost \$17,356  
3.5KW system [6,300Kwh/year] cost \$24,286  
4.2KW system [7575 Kwh/year] cost \$27,747

In 2005, we used 7351 Kwh. This would mean that I would need to install a PV system similar to the Kyocera System offered by American Solar Electric, Inc., if I was to satisfy all my electrical needs via PV. This would only work, from a financial position, if I was allowed to use net metering and be billed only on a yearly rather than monthly basis. If billed monthly, I would be paid only \$0.02 per any excess energy generated in the first several months and last few months of the year. If billed yearly, I would get full credit for all energy generated, and if my system was positioned in an optimum location, I would expect to either have no bill for electricity, or a very small bill for the small amount of energy used over what was generated by my system, for that year. It is even possible that I could produce excess energy for the year.

When you examine the costs above, you will see that the \$8,000.00 maximum offered by Trico, is not a sufficient incentive for someone requiring a 4.2KW system priced at \$27,747.00. It is then understandable that Marsha Johnson of Trico said that the few systems installed within this cooperative have been 2KW systems. The \$8000. incentive would offset ca. one-half of the cost of the 2KW system and might be affordable, though even here it would take a long time to recoup the investment by the homeowner. The homeowner must also pay an annual \$50.00 inspection fee and must pay for all required maintenance. As concerns the larger systems above, you will notice at the American Solar Electric Inc. web site that APS and SRP give greater incentives for the larger systems. Even when you consider these incentives, the homeowner must have net metering and payment for the generation of excess energy to offset the costs of these expensive systems. In our case, our total bill for electricity from Trico in 2005 was \$840.13. At this time, if I were to think of installing a PV system whose initial cost was ca. \$28,000., I would be better off placing those funds out at interest or some in interest and another amount in an utility that paid a good dividend. Until the cost of the PV systems fall or the incentives rise and the efficiency of these systems increase, the number of systems installed will be few. If the state and federal incentives were not just tax credits but actual dollar amounts, this would help.

As concerns the efficiency of PV systems, the Amonix cell has been reported in 2005 to have reached an efficiency of 38% and may reach, or exceed 40% in 2006. Amonix Inc. makes IHCPV generating systems. Apparently, they may produce 5KW systems, if there is enough interest. These small systems would be for residential and small business use, no doubt. If Federal and State governments were really concerned with lowering our dependence on oil, it is this technology, the technology offered by Tesla motors and the use of hydrogen as a fuel that could free us from this dependence. Hydrogen can be produced inexpensively in Iceland because of their unusual energy situation. They have been using hydrogen, as a fuel, for mass transit for years and also for personal vehicles, though they haven't weaned themselves entirely from use of oil products, yet. Interestingly enough, General Motors and Daimler/Chrysler were involved in helping folks in Iceland with this technology. The technology is already here. The question is why aren't our Federal and State governments

# ARIZONA CORPORATION COMMISSION

## UTILITY COMPLAINT FORM

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taking advantage and freeing us from dependence on oil?

Reg: The last part is my opinion. I hope the rest might be helpful when considering the problem of net metering and how folks in Arizona might be able to afford to install a PV system of their own. Given the costs to all involved, if the Federal and State governments don't do more, or utility incentives raised, I don't see much going on with solar even in the sun rich state of Arizona.

Sincerely,

Clark Schaack

8-29 I e-mailed Ray Williamson, per suggestion from Del Smith, the following e-mail:

Ray, where would I file the above referenced e-mail. In a nutshell the consumer is offering his opinion on the use of photovoltaics, problems with net metering and the raising of utility incentives for such. Would it be under the Docket No. E-00000C-05-0030? Thanks!

8-29 I replied back to the consumer with the following e-mail:

Dear Mr. Schaack:

I received your attached e-mail regarding net metering and its associated issues. I will proceed to have your OPINION noted for the record and forwarded to the appropriate Arizona Corporation Commission staff assigned to this matter.

Sincerely,  
Reg Lopez  
Public Utilities Consumer Analyst II  
Utilities Division-Tucson Office

8-30 Per Ray Williamson, he provided e-mail attachment dated 8-24-06 referring to Docket No. E-00000A-99-0431 which addresses Net Metering and also announces ACC Workshop On Net Metering on 9-7-06 at ADEQ building 1110 W. Washington from 9:30am-1:00pm. I called the customer and advised of the workshop information. E-mailed OPINION to John LaPorta to have this docketed under E-00000A-99-0431. File re-closed.

\*End of Comments\*

**Date Completed: 8/14/2006**

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