

September 3, 2014

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**Comments from the Mid-Atlantic Renewable Energy Association (MAREA)
regarding the Pennsylvania PUC Proposed Rulemaking Order amending regulations to
comply with the Alternative Energy Portfolio Standards Act**

The Mid-Atlantic Renewable Energy Association (MAREA) appreciates the opportunity to comment on the Proposed Rulemaking Order adopted by the Pennsylvania Public Utility Commission on February 20, 2014 amending regulations to comply with the Alternative Energy Portfolio Standards Act of 2004, including Act 35 of 2007 and Act 129 of 2008.

The Mid-Atlantic Renewable Energy Association is a registered 501(c) nonprofit educational organization in the Commonwealth of Pennsylvania. MAREA is dedicated to informing and educating the public on renewable energy production, energy efficiency, and sustainable living through meetings, workshops, educational materials, and energy fairs. MAREA's work includes publication of *Pennsylvania Homeowner's Guide to Solar Electricity* (2009) and production of the film *Saving Sunshine: Keeping the Lights on With Batteries and Solar Power* (2013).

Introduction

MAREA appreciates the PA PUC's willingness and effort to clarify aspects of the language in the Act for purposes of regulation. MAREA is a signer on "Comments of Joint Commentators" also filed in response to the Proposed Rulemaking Order in Docket No.L-2014-2404361. The Comments here are solely MAREA's and are meant to share additional supporting observations and argument.

MAREA supports many of the changes in the Proposed Order, including clarification of compensation for excess generation in §75.13(f), "In computing the compensation, the DSP shall use a weighted average of the price to compare rate with the weighting based on the rate in effect when the excess generation was actually delivered by the customer-generator to the DSP."

We are, however, strongly opposed to two of the proposed rule changes: a new condition limiting system size based on annual consumption and new language authorizing the PA PUC to approve special fees charged only to customer-generators.

Proposed 110% Condition Limiting System Size

Under §75.13(a)(3), a new condition is proposed to restrict the size of a net-metered system to that which would “generate no more than 110% of the customer-generator's annual electric consumption at the interconnection meter location when combined with all qualifying virtual meter aggregation locations.”

Actual Solar Electric Systems Sizes

In July 2014, MAREA released the report¹, “PA Sunshine Counts: Our Common Solar Wealth.” It is an analysis of records obtained from the Pennsylvania Department of Environmental Protection for more than 7,034 solar electric systems receiving PA Sunshine Rebates. The report finds the average size of these systems is 13.9 kW. The vast majority, 67%, are smaller than 10 kW. Only 4.5% are larger than 50 kW.

Within the residential sector, 74% of these systems are smaller than 10 kW and 99.8% of systems are smaller than 30 kW. The average residential system is 7.7 kW.

The Sunshine Program paid rebates on residential systems up to 10 kW and the federal tax credit has no limit on size. Yet, the average installed residential system was 7.7 kW. Even when directly incentivized to install systems larger than needed, homeowners chose not to do so.

Similarly, the Sunshine Program paid rebates on commercial systems up to 200 kW (in steps 1, 2 and 3) and the federal business energy tax credit has no limit on size. Yet, data from the PA DEP Sunshine Program shows the average size of commercial systems is 58.6 kW, with 41% smaller than 25 kW. Less than 18% are larger than 100 kW.

Again, even when incentivized to install systems larger than needed, business owners—like homeowners—generally chose not to do so, even leaving rebate money and tax credits on the table.

Current EDC Handling of 110% Limit

The 110% limitation would require that every homeowner and small business owner wishing to install a generation system prove to their utility company that he or she is not a “merchant generator.”

In Discussion, the Commission refers to 110% as a “design limit to be based on historical or estimated annual system output and customer usage,” but the proposed order itself offers no guidance for how the rule would be applied, leaving this apparently to individual EDCs.

In 2012, the Commission ordered that “customer-generators with third-party owned and operated systems shall provide with the interconnection application adequate supporting data to demonstrate that the alternative energy system is designed to provide no more than 110% of the customer-generator’s annual electric usage at all qualifying meter locations.” (Docket M-2011-2249441, March 2012)

Rather than speculate on how the EDCs may handle customer-generator applications under the proposed rule, an “experiment” was conducted to see how EDCs actually handle the current 110% size cap now and the guidance they provide. We put ourselves in the publics’ shoes.

The note below was submitted through the company’s public web pages or company-provided email addresses for each of the following: Citizens’ Electric Company, Duquesne, Met-Ed, PECO, Pike County Power and Light, PPL, Penelec, Penn Power, Wellsboro Electric, West Penn Power, UGI, and the Consumer Advocacy Office.

Good afternoon, I am trying to understand the PUC requirement that customer-generators with third-party owned and operated systems need to provide "adequate supporting data" to demonstrate that the alternative energy system is designed to provide no more than 110% of the customer-generator's annual electric usage. The PUC says information is to be provided with the interconnection application. Can you please direct me to any guidance and examples you may have for what constitutes "adequate supporting data?" Thank you,

In some cases, no reply was received. In other cases, the reply directed to a web site (where in no case could this writer find the sought after information) and/or provided additional email addresses for directing queries. The two EDC replies that answered the question asked are listed below, along with response from the Consumer Advocate’s Office.

From Duquesne:

Attached the final order from the PUC which involves the 110% rule.

The Commission would like to clarify that the 110% limitation is to be part of the criteria used in designing a system that is installed as part of the third-party business model. This limitation does not apply to those systems directly owned or operated by a customer-generator who is not using the third-party owner or operator model.

If a customer plans on installing a net meter installation they do not follow this 110% rule. But residential customers are limited to 50kw. In Duquesne light’s territory you may install up to 50kw but if the transformer feeding the site cannot handle the generation being added you pay 100% of the cost to replace the equipment to the appropriate size. Furthermore if it’s a new installation and the generation is more than your estimated load and requires a larger transformer the difference in cost will be paid by the customer.

For any installation involving the third party installer and operator where the 110% is in affect you are required to fill out the Current annual consumption (KWH) and the proposed gross production (KWH). This is all that is needed in phase 1 from dlco to accept or decline an installation.

From Orange and Rockland (Pike County):

Thank you for your website contact.

We add up the last 12 months kWh usage and multiply it by 110%. The system cannot produce more than that in a year.

Adequate supporting data would be some sort of calculation, table etc. showing the anticipated output of the system.

From the Consumer Advocate office:

Thank you for your e-mail to our office regarding net metering. We do not have specific information regarding what would qualify as “adequate supporting data” to provide no more than 110% of the customer-generator’s annual electric usage. The Commission did address this issue in its March 29, 2012 Order. The Commission did not provide the exact information required in its Order, but it might provide you with some guidance on the issue. I have attached a copy of this Order to this e-mail.

For your information, all of the Commission’s Orders on net metering can be found at the following link:

http://www.puc.state.pa.us/consumer_info/electricity/alternative_energy.aspx

I would suggest that you contact the electric distribution company in the area of the generation to determine what they would require as “adequate supporting information.” You may also wish to contact the Commission’s Bureau of Technical Utility Services to see if they can provide further guidance.

I hope this information helps. If you have any additional questions, please let me know.

Of the EDCs contacted, two answered the question asked. In both cases, the response allowed system sizing solely on the basis of current or prior consumption.

Clearly this is an insufficient response. EDCs did not demonstrate a preparedness to inform the public or to deal with the reality of evaluating and approving system sizes, especially when consumption data (kWh) is either unavailable or inapplicable.

In addition to the obvious case of new construction, there are many credible circumstances where the amount of electricity needed in the future will be different from the electricity used in the past, *especially* when one takes into consideration the 20+ year system life of photovoltaic systems.

Even for mindful consumers, electricity consumption can increase for many reasons—change in number of occupants, change in usage, fuel shifting, additional electric appliances and cars, business expansion, to name a few.

Given that EDCs would have full authority to determine if a system is appropriately sized, what is a homeowner or small business owner to do? Surely it is not appropriate or necessary to discuss plans for a growing family, pending use change, home addition, new electric car or small business expansion with your utility company. The EDCs themselves give no indication of being willing or prepared to consider such factors. Yet, without doing so, a system that will generate more than 110% of last year's consumption in order to offset "part or all" of future consumption cannot be explained or justified.

The AEPS Act defines net metering as a means for a customer-generator to offset part or all of the customer-generator's requirements for electricity. Nothing in the Act limits this right to past electricity usage.

Furthermore, weather affects both electricity requirements *and* generation. If a system is sized using historical data from a year with good generation conditions and mild weather, it will fall far short of meeting all requirements in future years where generation conditions are poor and/or heating and cooling requirements are extreme. The AEPS Act does not exclude customer-generators from offsetting "all" electricity requirements in years of extreme weather conditions.

If the EDCs do use methods based on historical usage, prospective customer-generators who have the area and budget to install a system that will meet their future electricity needs will realize that paradoxically they should use more electricity, not less, before applying for interconnection approval.

Encouraging high and increased electricity consumption is clearly contrary to the letter and spirit of public policy in PA. Yet, if the 110% rule is implemented this is exactly what will occur.

Homeowners and small business owners will be advised by installers, *correctly*, that to be approved for a system of the size they need and want, it is best to use as much electricity beforehand as possible. This will lead to delays in conservation and efficiency measures. It will also lead to timing interconnection applications to follow periods of extreme weather, where usage is driven higher, and to avoid filing after periods of mild weather.

Recommendations Regarding Proposed 110% Condition

Data shows the average size of residential solar electric systems receiving Pennsylvania solar rebates is 7.7 kW (even though incentives directly encouraged larger systems), with less than *half of one percent* above 30 kW, far below the cap of 50 kW. Similarly, commercial system sizes averaged 58.6 kW, well below the cap of 3 (or 5) MW. Over 40% of these systems are less than 25 kW. Just 18% are greater than 100 MW, in spite of incentives for larger systems.

This data strongly suggests that the “potential” risk of excess generation from oversized systems is unsubstantiated and that rate payers have little to gain from paying to enforce a rule that will challenge ALL new renewable energy customer-generation applications.

Whereas the benefits to rate payers of this rule are at best “potential,” the costs are real.

With very little to gain, all ratepayers will pay for the process of challenging every customer-generation application to prove it complies with the local EDC’s interpretation of the 110% rule.

The additional regulatory uncertainty and new EDC hurdles will discourage installers from working in our state and will intimidate prospective customer-generators into intentionally under-sizing systems. For prospective owners and installers who do persevere, and situations where “historical” consumption data is inapplicable, the process will become longer, more expensive and risky.

While this rule may stop an occasional excess generator and save ratepayers a little in excess generation compensation, it will *certainly* add costs and prevent, delay and downsize many sound renewable energy projects.

Across the board, the net effect of the proposed 110% cap will be less clean energy in Pennsylvania.

All ratepayers will lose the environmental benefits as well as stimulus to local economies.

As proposed, the 110% condition will also discourage energy efficiency and conservation, rewarding those with higher electricity usage, not lower. This is in direct opposition to conservation and efficiency policies throughout the state.

Finally, the 110% rule may also have a larger unintended consequence. By adding regulatory uncertainty and giving the EDCs largely unchecked authority to intervene in a customer’s private investment, this rule invites—some would say pushes—consumers and installers to consider other options, including grid defection entirely.

Advances in the cost and availability of storage coupled with lower solar costs are creating viable, cost effective options for off-grid solar with high reliability. During recent widespread outages, consumers saw micro-grids and battery-backed solar systems perform reliably while others remained without power and unable to obtain fuel for generators.

MAREA supports renewable energy and distributed generation and recognizes the importance and necessity of a grid that is resilient, smart and efficient. To remain efficient, operating costs must continue to be spread over large numbers of customers. Widespread grid defection will decrease this base, putting business models and infrastructure at risk.

Creating a regulatory environment that encourages privately funded clean energy investments *to choose* to be grid interactive is in the best interest of all rate payers. New regulations that are unneeded and give EDCs undue authority over private investment in clean energy will encourage consideration of grid defection entirely.

MAREA strongly opposes the addition of a 110% design limit on customer-generators. Current policy setting flat limits (50 kW for residential, 3 or 5 MW for commercial) is working. It is clear, fair and applies the same to everyone, offering the best arrangement for customer-generators and rate payers alike.

Authority to Approve Special Charges on Customer-Generators

Under General Provisions [(j)] (k) of the proposed rules, new language has been added that would authorize the PA PUC to approve an EDC (or DSP) request to charge customer-generators a special fee that is not charged to other customers.

No basis is given for the action of singling out one particular group of consumers for consideration of special fees.

MAREA would argue that if any customers are to be charged a special fee, it should be those who are *not* generating electricity at the point of use and those who are *not* using clean electricity sources.

The proposed language does not address the process or basis for determining how a special fee request from an EDC (or DSP) would be assessed for approval. Critical to such an assessment would be the consistent application of models for evaluating both the costs and the benefits of distributed generation. The logical outcomes of a truly balanced assessment could result in new fees charged OR new premiums paid to the customer generator.

Furthermore, the AEPS statute orders that “the customer-generator shall receive full retail value for the on-site generation.” Taking back any of this value through special fees or charges is contrary to the spirit and letter of the law.

Finally, we are entering an era where customer generators have more options, including grid defection. In the interest of maintaining a resilient, smart and efficient grid for all, Pennsylvania needs a regulatory environment that continues to encourage widespread participation. Singling out clean energy on-site customer generators for special fees will do just the opposite.

MAREA strongly opposes any changes to the rules that would permit EDCs to request special fees on customer-generators.

1. “PA Sunshine Counts: Our Common Solar Wealth,” Mid-Atlantic Renewable Energy Association, July 2014, <http://www.themarea.org>