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PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

**Comments from the Mid-Atlantic Renewable Energy Association
regarding the Pennsylvania PUC Policy Statement Supporting Solar Development**

The Mid-Atlantic Renewable Energy Association (MAREA) appreciates the opportunity to comment on Annex A, Chapter 69, General Orders, Policy Statement and Guidelines on Fixed Utilities, 69.1901-1904 (the "Policy Statement").

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. Each year, MAREA presents the *Pennsylvania Renewable Energy Festival*, the largest in the region. In 2009 MAREA published the book *Pennsylvania Homeowner's Guide to Solar Electricity*, now in its third printing.

MAREA works closely with other organizations to promote policy and practices necessary for a successful solar economy in Pennsylvania that serves the citizens, businesses and environment of this beautiful place we are all fortunate to call "home." MAREA has reviewed and fully supports Comments on the Policy Statement submitted by the **Solar Alliance**, the *Mid-Atlantic/Pennsylvania Solar Energy Industries Association (MSEIA/PASEIA)* and the **Sustainable Energy Fund**.

Reflecting the general nature of our membership, MAREA's additional comments set forth in this document are in regard to residential-scale solar projects.

Discussion of Solar Barriers

With this Policy Statement, the Commission is addressing concern that "barriers still exist that prevent new solar projects from becoming a reality in this Commonwealth. EDCs in this Commonwealth, their customers and those interested in developing solar projects of any size are impeded in their economic analysis of those projects by the uncertainty of a price to assign the SRECs that would be generated by small or large-scale solar projects."

For sites smaller than 300 SRECs annually (about 250 kW), the immediate barrier for new projects is not uncertainty in SREC pricing but rather the complete lack of access to the EDC SREC procurement process. Small generators are complete blocked from participation. You cannot win, if you cannot play.

Demonstrated by PECO's Oct 2009 RFP. Response to Bidder Questions, number 97:

Q: "If PECO is not accepting bids from brokers representing facilities with less than 300 AECs/year, is there another channel for brokers to do business with PECO?"

A: No, not at this time."

► *At this time, there is no available channel for small-scale generators to sell SRECs to EDCs.*

Scale of the EDC RFP Barrier

Clean Power Markets, Inc., administrator for the Pennsylvania AEPS program, publishes summary data for all qualified renewable energy systems registered with the program. A review of this data reveals that of the currently registered solar generators, 92% of the facilities are less than 15 kW. An additional, 8% are less than 200 kW. Less than 1%, only 2 out of 964 registered systems are greater than 200 kW. (The Commission defines "small-scale solar" as systems with nameplate capacity less than 200kW.) Details are shown in Table 1.

The current EDC RFP process accommodates less than 1% of the registered systems.

In terms of capacity, systems <15 kW make up 41% of the total installed capacity. Larger systems but still smaller than 200kW represent 25% of installed capacity. Two systems greater than 200 kW make up 34% of total capacity.

The current EDC RFP process accommodates 34% of the total installed capacity.

► *Currently, 99% of facilities registered to sell RECs in Pennsylvania are blocked from the EDC SREC procurement process. This represents 66% of installed capacity.*

We understand that the Commission is looking for suggestions to remove barriers for *new* solar projects. Clearly, currently policy and its demonstrated exclusion of existing small-scale solar projects is a significant barrier to new small-scale projects under consideration.

Underlying Issues and Realities

The economic analysis of large- and small-scale solar projects varies considerably. For large-scale projects to secure funding, financing requires credit worthy off-take in the form of long-term REC contracts.

Homeowners, on the other hand, generally do not seek financing (if anything, a bridge loan) and do not require REC contracts to secure project funding. For them, the role of REC income is to improve the payback analysis, assuring the homeowner that the solar installation is a responsible

	Sites in PA	Sites Not in PA	Overall
Micro (<15 kW)			
# Facilities	495	388	883 (92%)
Avg Cap (kW)	5.5	5.6	5.6
Total Micro (MW)	2.7	2.2	4.9 (41%)
Small (>15kW, <200kW)			
# Facilities	37	42	79 (8%)
Avg Cap	35.1	39.9	37.7
Total Small (MW)	1.3	1.7	3.0 (25%)
Large (>200kW)			
# Facilities	2	0	2 (<1%)
Avg Cap (kW)	2,004	0	2004
Total Large (MW)	4.0	0.0	4.0 (34%)
Total			
Number of Sites	534	430	964
Percentage of total	68%	32%	
Capacity (MW)			
Percentage of total	55%	45%	

Table 1. Solar Generator Sites Registered to Sell RECs in Pennsylvania. Data source: “Qualified Generation Facilities Summary,” published by Clean Power Markets, Inc.

financial *choice*. Homeowners don’t require long term contracts, but do require reliable access to the SREC market.

The transactional overhead of dealing with large- and small-scale solar projects also varies considerably. For large-scale projects, hundreds of SRECs are generated annually from a single site. One owner and one site is involved, making contractual agreements, oversight and transaction execution manageable for the EDC.

For the solar generators <15kW currently registered in PA, the average capacity is 5.6 kW. An EDC can procure about 300 SRECs per year from one 250 kW site. To purchase the same number of SRECs from generators in the <15kW range would involve about 45 sites. With each site, there is the risk of change of ownership (moving), litigation (divorce), contract default, system failure or damage, and so forth.

Business Drivers

Given the complexity of dealing with large numbers of very small sites, why would an EDC ever consider engaging this sector in the RFP process? Though short of revenue-producing business drivers, there is some rationale for EDCs to engage the small-scale solar segment, namely: “encouragement” from the PUC; opportunity for goodwill with their ratepayers; and avoiding the perception of treating small-generators in their service territory with disregard (while at the same time purporting EDC “greenness” for marketing purposes).

Another significant factor not yet widely understood by the public, but increasingly well known through HB80 publicity, is that SRECs for compliance purposes need not necessarily come from Pennsylvania generators.

An analysis of Clean Markets Summary Data shows that 44% of sites registered to sell SRECs in Pennsylvania are out of state, representing 32% of total registered capacity.

So now we have this situation:

- ▶ Under the AEPS provisions, EDCs buy out-of-state SRECs using PA ratepayer dollars, which is hard enough to explain... but now they are also doing it while SRECs *generated in their own service territory* are left in the lurch.

If the policy creating these circumstance are allowed to continue, the backlash will be negative for the solar industry, all it stakeholders and those who have worked hard to develop policy intended to grow the solar industry and benefit the environment.

Approach

We agree with the suggestions of others, including the Sustainable Energy Fund, to create a separate category for projects <15 kW and call it **micro-scale solar**. These projects have unique characteristics:

- The role of SREC income in economic analysis is to improve payback analysis, not secure financing. REC contracts are not required for project funding.
- The ratio of RECs-to-site is very low. A typical 5.6 kW site in Pennsylvania generates just under 7 SRECs per year.

Though it is tempting to request from the Commission a mandate that EDCs purchase a fair share of SRECs from micro-scale generators, we see this as a last resort. We believe there are more cost-effective ways of serving the public interest on this issue. We support the Commission's position in this regard, *as long as the end result is that micro-scale solar generators have fair access to the EDC SREC procurement process.*

We believe the first step is provide the EDCs with a simple, low-risk process to purchase SRECs from micro-scale generators in a manner that assures those purchases are clearly eligible for cost recovery. Then add to this some features that enhance the benefits to EDCs of engaging the micro-scale sector in its procurement process, while working for the good of ratepayers and micro-scale generators.

Scaling Micro-Solar

Using data from the U.S. Energy Information Administration "EIA-861 Final Data File for 2007" and "Electric Power Outlook for Pennsylvania 2007 – 2012" (August 2008), an analysis projected annual REC levels needed for AEPS compliance. This data is shown in Figure 1.

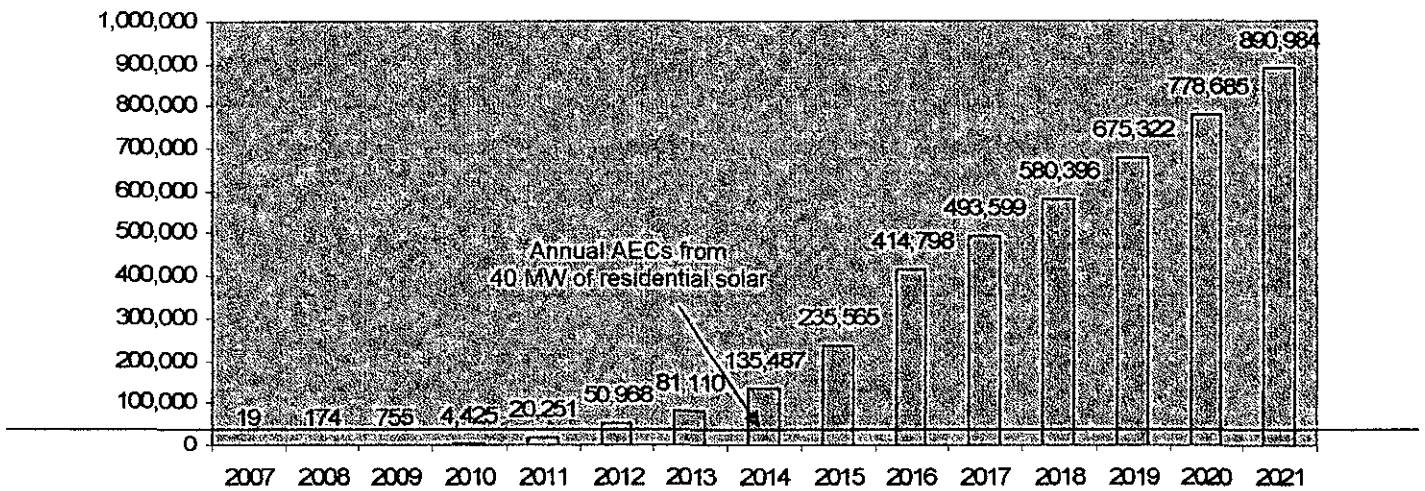


Figure 1. Pennsylvania Solar Share Requirement (annual RECs for RPS compliance).
Projected, for full analysis contact vera.cole@themarea.org.

The Pennsylvania Sunshine program will fund 40 MW of residential solar. At full build out, these micro-scale solar sites can be expected to generate in total about 42,000 RECs per year. The program opened in May 2009. In the first 10 months, 6.2 MW of funding has been reserved for approved projects. A rough projection indicates a full build out no sooner than 2014.

Figure 1 puts into general perspective the role of micro-scale solar in the overall Pennsylvania compliance market.

SREC Procurement Process for Micro-Scale Solar

We do not believe that a competitive bid process using the same standards as large-scale RFPs addresses the unique characteristics of micro-solar projects.

For micro-scale solar projects, SREC contracts are not necessary to secure funding. Furthermore, the overhead and risk of managing contracts with micro-sites is excessively burdensome and will discourage any voluntary action by the EDCs to engage micro-scale generators. The use of an Aggregator in such contractual arrangements still exposes the EDC to risk of default, now related to both the generator sites themselves *and* the Aggregator’s business practices and solvency. To assuage these concerns, an EDC would reasonably seek steep security deposits thus discouraging, effectively blocking, Aggregators from participation.

Rather than a competitive bid process or bilateral contracts, we suggest a process for allowing the EDCs to purchase *existing* SRECs from micro-scale solar generators, physically located within the EDC’s service territory. Eliminating all risks and need for security in dealing with micro-scale generators, the EDC would only purchase SRECs after they are generated and are available in GATS. We suggest the following guidelines:

- a) The price paid for SRECs will “not exceed the Commission-approved average winning bid price in the EDC’s most recent RFP for large-scale solar projects,” in agreement with Commission’s Policy Statement paragraphs 69.2903, (2)(i) and (ii). And, the price paid should not be less than 15% of the average weighted price.
- b) In agreement with 69.2903, (2)(iv), the amount of small-scale [including micro-scale] project SRECs procured should not exceed the number of SRECs procured by the EDC in its last large-scale solar project procurement.
- c) An EDC may choose to exercise this process only within its service territory. (The price has been set through regional RFP, assuring ratepayers that the price paid for the SRECs is fair market value.) In doing so, the EDC will foster goodwill among its customers, provide a high value service for customers in the form of safe and simple access to SREC income, keep ratepayer dollars in the EDC’s service area fostering the local economy and address peak demand reductions with solar generation installed in the EDCs service area.
- d) Participation in the program must be equally available to all systems, new or old, between 1 and 15 kW throughout the EDC’s full service area, with no difference in service level or fees.
- e) SREC purchase transactions will occur on a first-come first-served basis.
- f) EDCs may set minimum transaction lot sizes (e.g. 100 RECs). EDCs may limit SREC age.
- g) Like all generators, micro-scale solar sites will need to be registered with the AEPS program and have a GATS account where SRECs accrue and are available for transfer. Once SRECs are transferred, funds will need to be distributed and tax forms issued. EDCs may contract with a third party to provide these services, provided that the cost of these services to the SREC seller is no more than 20% of the price paid by the EDC for the SREC.
- h) If an EDC procures any SRECs from micro-scale generators in its territory, it must purchase all SRECs available from micro-scale solar generators in its territory before procuring SRECs through other means (subject to the conditions in point b). This commitment is not onerous as demonstrated by Figure 1. It is suggested to prevent confusion on the part of homeowners by programs that arbitrarily open and close (perhaps for marketing or public relations purposes). To be helpful to the homeowner, the process must be reliable.
- i) The cost of SRECs acquired through this procurement approach may be recovered consistent with the provisions of the AEPS Act and other applicable law.

We believe a process along these lines could be a simple and effective solution for micro-scale solar projects. EDCs are not over burdened with administrative hassle and risks that outweigh the REC production value of this small sector. Micro-scale generators have the opportunity to participate in a process that gives them sufficient reliable access to income for their RECs.

In the interest of advancing these ideas, MAREA suggests that a **Small-Scale Solar Working Group** be established, including distinct representation for micro-scale projects in the Commonwealth. This Working Group would delineate the details necessary for the smooth rollout of efficient processes supporting the development of small-scale solar projects in Pennsylvania—good for local economies and contributing positively to a cleaner, healthier environment.

Thank you.

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