

**BEFORE THE PENNSYLVANIA
PUBLIC UTILITY COMMISSION**

Implementation of the Alternative Energy
Docket No. M-00051865
Portfolio Standards Act of 2004

Rulemaking Re Electric Distribution
Docket No. L-00040169
Companies' Obligation to Serve Retail
Customers at the Conclusion of the
Transition Period Pursuant to
66 Pa. C.S. § 2807(e)(2)

Reply Comments of PV Now in
cooperation with the Mid-Atlantic
Solar Energy Industries Association
(MSEIA) and the national Solar
Energy Industries Association
(SEIA).
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PV Now, the Solar Energy Industries Association (SEIA), and the Mid-Atlantic Solar Energy Industries Association respectfully offer these reply comments in response to issues raised by various parties responding to the February 8, 2006 notice of the Public Utility Commission regarding implementation issues arising from The Alternative Energy Portfolio Standards Act of 2004 ("Act 213"), 73 P.S. §§ 1648.1 – 1648.8,. PV Now appreciates the opportunity to submit these reply comments regarding cost recovery and related issues.

PV Now is a national solar industry advocacy group comprised of manufacturers and integrators in the solar PV industry, including Sharp Solar, Shell Solar, PowerLight Corporation, Schott Solar, Energy Innovation, SunPower Corporation, and Evergreen Solar. MSEIA is a coalition of solar energy businesses such as installers, developers, manufacturers and designers that work and live in Pennsylvania, New Jersey and Delaware. PV Now and MSEIA are affiliated with the national Solar Energy Industry Association (SEIA).

Our reply comments will primarily focus on the issues regarding implementation of the solar share of the AEPS legislation and how some of the issues identified by various comments from interested parties impact on the successful implementation of the legislative intent of the Act. These issues include the following:

1. The importance of long term contracts
2. Cost recovery of the expenses associated with the solar requirement
3. The benefits of a separate procurement process for the solar share
4. Strict limitations on the use of force majeure, particularly economic force majeure.
5. Timing for implementing the act and ways to encourage early installations of solar projects.
6. Current state of solar technology and markets

THE IMPORTANCE OF LONG TERM CONTRACTS

A number of parties supported the idea that the Pennsylvania market will be better served if its underlying supply contracts are of varying lengths. We agree with PPL and others that “prevailing market price” does not necessarily equate to short term or spot market price. We also support the position of the Pennsylvania DEP that the AEPS legislation gives no particular weight to the Electric Competition Act, so there is no need to even apply “prevailing market price” concepts to implementation of Act 213.¹ Our position is that a combination of contract lengths and supply sources will provide a Pennsylvania supply portfolio that delivers electricity to Pennsylvania consumers at the highest value, balancing cost and the risks associated with fuel volatility. In the case of solar electricity, we have made the point that fifteen year contracts are critical for the achievement of Pennsylvania’s desire to develop a robust solar market. Since there seems to be overwhelming agreement, as least among a majority of commenters, that there should be a mix of contract lengths within the market structure, we believe the Commission has the ability to design the solar share procurement process so that fifteen year contracts are embodied in the process. We agree with the suggestion of DTE that one criteria for distinguishing between supply sources where long term contracts are enabled could be whether the generation resource is new or existing. New solar supply should be procured through fifteen year contracts at prices set through a competitive auction process.

In addition to the advantage of enabling project financing of solar projects, and hence, fulfilling the legislative intent of Act 213, the existence of long term contracts will provide the Pennsylvania consumer with the least cost solar resources to meet the solar share as mandated in the AEPS legislation.

COST RECOVERY OF THE EXPENSES ASSOCIATED WITH THE SOLAR REQUIREMENT

We support the comments of various parties that cost recovery of legitimate program costs should be provided. At the same time, those EDCs or EGS suppliers who fail to meet their minimum RPS requirements should be held to a strict accountability standard as to why they were forced to pay non-compliance penalties (make ACP payments). We support the concept of equal treatment for default suppliers and competitive suppliers in seeking cost recovery

We support the comments of the Pennsylvania DEP when they said, “Developing clear cost recovery rules quickly is vital to promoting alternative energy deployment in Pennsylvania.” (p. 4). By quickly promulgating AEPS rules, including cost recovery rules, Pennsylvania can begin to support the installation of new renewable resources in the State to meet the intent of the AEPS legislation.

¹ P.3 DEP comments “Our initial comment is to emphasize that Act 213 was passed in full knowledge of the Electricity Generation Customer Choice and Competition Act. Therefore, full weight should be given to the provisions of Act 213, which should be read separately from the Electricity Generation Customer Choice and Competition Act. In other words, there is no language within Act 213 that gives particularly weight or deference to the Electricity Generation Customer Choice and Competition Act. As such, the Commission should not seek to artificially apply concepts such as “prevailing market price” to the requirements of Act 213. Instead, the Commission should adopt policies and rules relative to Act 213 that best meet the objectives of Act 213 to provide for the sale of electricity from alternative energy sources to retail customers in Pennsylvania.”

THE BENEFITS OF SEPARATE TREATMENT FOR THE SOLAR SHARE

The Pennsylvania DEP and others commented that solar should be considered differently than other sources. The DEP noted, "By carving out a specific solar share the General Assembly clearly provided a specific emphasis on solar photovoltaics (PV). As such, it is appropriate that solar PV resources be treated differently than other Tier I resources to ensure the fulfillment of the solar share in a timely and cost effective manner." (p.8) We agree with this comment and have provided replies to specific suggestions from various parties below.

PROCUREMENT

After analyzing other comments regarding procurement through RFPs by individual utilities or by not establishing any process and leaving it to bi-lateral, voluntary negotiations, we feel our solar auction approach remains the best alternative for a number of reasons:

1. The small size of the solar share suggests that further dividing it into individual utility procurements or bilateral negotiations will be inefficient and will have much higher transaction costs for both buyers and sellers than a central, state-wide auction.
2. The auction process can be set up with standard contracts and simple terms that encourage all size solar systems and owners to participate in the market. This process would support the position of a number of commenters that the procurement process should be open and transparent. The nature of the distributed, customer sided solar resource necessitates a different approach than negotiating a multi-megawatt wind contract, for example.
3. Since all auction participants will be using a standard contract with the same term (e.g. 15 years), the solar share will be procured at the lowest possible cost. (an argument on this point can be found in our original comments). This standardization will also facilitate the transfer and assignment of solar supply contracts by competitive suppliers who depart from the marketplace during the solar contract term.
4. Our approach for offering the successful bid price for the large system auction (in the form of a standard offer) to residential customers between auction cycles allows even the smallest customers to participate in the process.

A number of comments suggested an application fee be established for potential resource providers to encourage legitimate projects and deter purely speculative developers. We support the idea and would recommend that a solar auction application fee of \$10 per kilowatt be established. The fee would only be refundable if the auction bid of the applicant were not accepted.

We disagree with the approach of Conservation Services Group to establish a fixed bid price for a solar auction. We would prefer for the price to be established in the market during periodic solar share auctions as outlined in our original comments.

We agree with Penn Future's comment that the appropriate determination of comparable solar REC prices in the region must include an adjustment for any customer rebates that exist in states with a solar REC market since Pennsylvania has no

equivalent customer rebate program. We suggested a method for making such an adjustment in our original comments.

BANKING

The DEP suggested that “the Commission should also consider developing, to the extent allowed under Act 213, banking rules specific to the solar PV requirement...solar credits should be able to be banked over a minimum five year period so that those credits can be applied to each year in a single percentage step-up.” (p. 7-10). We agree with the DEP on this suggestion and support its implementation.

LONG TERM CONTRACTS

A number of commenters suggested that long term contracts be allowed, but not required, in the market. While not taking a position on the larger market, we believe that mandatory long term contracts should be a part of the structure of the solar share. In addition to providing financial stability during the market transformation period of solar electricity, long term contracts will allow solar resources to be built at the lowest possible cost to Pennsylvania consumers. Since solar resources will be developed without fuel volatility risks, it is appropriate that the resources be developed under long term fixed term contracts to help diversify the total resource portfolio of the electricity market in Pennsylvania.

Strategic Energy commented that Texas provides a model for a successful RPS market where there is no requirement for long term contracts. In the last legislative session in Texas, Senate Bill 20 was passed. The Bill provides for the introduction of 500 megawatts of non-wind resources into the Texas market between 2008 and 2015. The Bill was passed because the nature of the RPS market as it developed led to the installation of hundreds of megawatts of wind resources but little or no solar or other non-wind resources. Anticipating this market weakness, the Pennsylvania legislature proactively dealt with their desire to encourage a diversity of renewable sources by creating a Tiered AEPS program. In order to meet the goals set out in that legislation, it will be necessary to address each Tier (I, II and solar) in different ways. Requiring EDCs and EGS entities to offer long term contracts and procure resources through a state-wide auction process for solar resources is consistent with and necessary for, the successful implementation of the AEPS legislation.

STRICT LIMITATIONS ON THE USE OF FORCE MAJEURE, PARTICULARLY ECONOMIC FORCE MAJEURE.

We support the following comment of Penn Future that the small nature of the solar share and its minimal economic impact generally should preclude any claims of economic force majeure.

“We urge the Commission to use even greater scrutiny when reviewing a force majeure claim for the solar share requirement. Some may argue that force majeure should be triggered through “rational economics” or a price trigger for the solar share. We strongly recommend that the Commission take into account both price per kilowatt-hour and the number of kilowatt-hours in making any decision on force

majeure. For example, Act 213 requires that in the first four years the total percentage sold from solar photovoltaic technologies equal 0.0013 percent, which translates to roughly 1 megawatt per year of installed capacity. However, this 1 megawatt will be distributed across each of the Commonwealth's utilities and will only equal approximately 150 to 200 kilowatts for each of the first four years per utility. At a cost of \$7.30 per watt, the cost of compliance should be minimal at only \$1.5 million per utility territory and cannot create a basis for force majeure." (Penn Future p. 9)

We also agree with the comments that pointed out that economic force majeure was never included in the AEPS legislation. There were many suggestions for criteria for evaluating claims of force majeure. While not specifically endorsing any one set of criteria we agree with commenters such as Pa. DEP, U.S. Steel, Conservation Services Group and others that force majeure should only be accepted after an open process with public input has been undertaken by the PUC. We particularly support the suggestion by U.S. Steel that all claims of force majeure be published in the Pennsylvania Bulletin.

We agree with the many parties who commented that the primary mechanism to address availability and price concerns in the REC marketplace is the Alternative Compliance Payment (ACP). This is the mechanism that was established in the AEPS legislation to limit the total economic exposure that any supplier might have in meeting their requirements. Force majeure is not meant to be an alternative to ACPs, but rather a secondary, emergency measure to address totally unforeseen circumstances.

TIMING FOR IMPLEMENTING THE ACT

PV Now supports the DEP comment, "We encourage the Commission to begin the development of a solar program immediately and to review the banking rules associated with solar to allow for maximum flexibility for credits produced in the early compliance years to count towards future compliance requirements. Taking these steps can smooth the transition to each percentage ramp-up by encouraging the early year investments necessary to successfully meet the Act's long-term solar PV compliance requirements. (P. 7-10)

CURRENT STATE OF SOLAR MARKETS

Finally, we would like to provide some facts to refute the claim of Duquesne Light in their comments that, "PV is virtually non-existent as an alternative energy resource at this time, and thus appropriate claims of force majeure may need to be made with respect to PV." (p.13)

In fact, the global market for solar PV in 2005 was approximately 1500 megawatts and is projected to increase to 3200 megawatts in 2010². This represents an increase from annual sales of 300 megawatts in 2001. The world wide solar market has been growing

² Solar Buzz 2006

at 25-35% per year for the last few years. New supplies of polysilicon are being developed so this growth rate can be sustained over the next ten years. Global manufacturing capacity is now 1.5 gigawatts.

In the United States, approximately 90 megawatts of PV were installed in 2005. 95% of installations were made in states such as California and New Jersey where innovative state policies are in place to support the development of local industry (solar dealers, designers and installers). In both these states, local companies have opened their doors and/or expanded to meet consumer demand. In New Jersey, there are now over 95 companies selling and installing solar PV in the State, with over 9 megawatts installed since 2002 (from a base less than existing solar installations in Pennsylvania³).

The increase in scale and scope of the PV industry has helped reduce the price that consumers are paying for solar electricity. For example, the cost of solar modules has been reduced by a factor of 30 in the period 1996-2005. For every doubling of cumulative output, prices have decreased by 20%. Total system prices declined by more than 5% per year over the last ten years. This steady progress toward parity with grid electricity prices depends on a continuing market transformation process. This will be driven by innovative public energy policy such as the Pennsylvania AEPS legislation, increased expansion of manufacturing scale by the PV industry and the development of a local marketing, sales, installation and service infrastructure within Pennsylvania.

By establishing appropriate rules for implementing the solar share of the AEPS legislation, the PUC will enable Pennsylvania consumers to participate in, and contribute to, a program that will benefit all Pennsylvania ratepayers.

³ According to DEP comments, p.8 , there is nearly one megawatt of solar installed in Pa. today.