

## BEFORE THE PENNSYLVANIA PUBLIC UTILITIES COMMISSION

Implementation of the Alternative Energy  
Portfolio Standards Act of 2004

Docket No. M-00051865

Rulemaking Re Electric Distribution  
Companies' Obligation to Serve Retail  
Customers at the Conclusion of the  
Transition Period Pursuant to  
66Pa.C.S. § 2807(e)(2)

Docket No. L-00040169

### COMMENTS BY CLEAN POWER MARKETS, INC.

Clean Power Markets, Inc., a Pennsylvania corporation, respectfully offers these comments in response to the February 8, 2006 notice of the Public Utilities Commission regarding implementation issues arising from The Alternative Energy Portfolio Standards Act of 2004 ("Act 213"), 73 P.S. §§ 1648.1 – 1648.8. Clean Power Markets, Inc. appreciates the opportunity to submit these Comments in response to the questions regarding cost recovery.

Clean Power Markets, Inc. (CPM) focuses exclusively on the renewable energy industry. PennFuture and the Sustainable Development Fund of the PECO service territory provided financial and technical assistance to create Clean Power Markets, Inc. The company was incorporated in Pennsylvania in 2000. The company's mission is to provide the infrastructure that allows renewable facility owners to compete cost-effectively and efficiently. CPM currently serves as the Administrator for the Solar and Behind-the-Meter Renewable Energy Credits Program in New Jersey. CPM also is the Administrator of the Wisconsin Renewable Resource Credit Program for the state of Wisconsin's RPS program, and manages the renewable energy credits for behind-the-meter systems for the Connecticut Clean Energy Fund.

Pennsylvania's Alternative Energy Portfolio Standard (AEPS) has a specific solar component, similar to New Jersey. In light of this fact, CPM is submitting comments in response to **Question 4** on the Issues List,

**“Given that Act 213 includes a minimum solar photovoltaic requirement as part of Tier I, should these resources be treated differently from other alternative energy resources in terms of procurement and cost recovery?”**

Our comments focus on the procurement portion of this question. We offer suggestions on developing a solution that:

- 1) Produces a liquid and efficient, regional market for solar alternative energy credits

- 2) Encourages maximum participation in the market by solar owners
- 3) Provides necessary verification of solar alternative energy credits

### **1) Producing a liquid and efficient, regional market for solar alternative energy credits**

Pennsylvania has determined that procurement of alternative energy credits from photovoltaic facility owners is an acceptable mechanism for electric distribution companies (“EDC”) and electric generation suppliers (“EGS”) to demonstrate compliance with the solar share component of the AEPS. Additionally, the AEPS Act allows for photovoltaic facilities located in Pennsylvania, as well as in the service territory of regional transmission organizations serving Pennsylvania (PJM and possibly parts of MISO), to meet the geographic criteria of Pennsylvania’s AEPS. Thus all photovoltaic systems installed in Pennsylvania can sell alternative energy credits to EDCs and EGSs in Pennsylvania. Additionally, photovoltaic system owners in New Jersey that are currently participating in New Jersey’s Solar Renewable Energy Certificate (REC) Program and selling solar RECs to New Jersey load-serving entities could instead sell their RECs to Pennsylvania-based EDCs and EGSs.

There are currently over 1150 solar facilities registered in the New Jersey solar REC program database, with over 1000 account owners actively participating in the New Jersey Solar REC program. CPM administers this program<sup>1</sup>, and issues solar RECs monthly to the solar owners based on engineering estimates or reported production readings. These are deposited into the users’ electronic accounts, where they can then transfer<sup>2</sup>, retire, or bank, or their solar RECs. A great many users actively use the program’s electronic bulletin board to find buyers of their solar RECs. Monthly high, low, and cumulative average solar REC prices are posted on the public website to provide maximum price transparency to the market participants.

This easy-to-use system makes it possible for homeowners to actively participate in the market, even though they are not sophisticated energy professionals. During Reporting Year 2005 (March 2004 - May 2005), all of the solar RECs issued were sold by these solar owners to New Jersey load-serving entities. The load-serving entities then retired these solar RECs in their accounts. Once the solar RECs are retired, they are out of circulation and cannot be used for any other purpose. CPM provided a report to the New Jersey BPU on how many solar RECs were retired by each of the load-serving entities to show compliance with the solar portion of New Jersey’s RPS.

CPM is aware that the Commission has designated PJM-GATS as the credits registry for

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<sup>1</sup> The program website can be found at [www.njcep.com/srec](http://www.njcep.com/srec).

<sup>2</sup> In addition to transferring RECs to other account holders in the NJ Solar and Behind-the-Meter Renewable Energy Certificates Program, CPM is working with PJM-GATS to develop a protocol to transfer RECs issued in the New Jersey Solar REC Program into user accounts in PJM-GATS.

tracking all alternative energy resources in Pennsylvania, including the small solar and other behind-the-meter facilities. What CPM is proposing here is to handle Pennsylvania solar facilities similarly to New Jersey. Solar owners would be issued uniquely serialized solar RECs<sup>3</sup> through a Pennsylvania Solar REC program, and have the ability to transact the sale of their solar RECs to EDCs and EGSs through this program. If New Jersey provides an example, there will be hundreds, if not thousands of small solar facilities installed in Pennsylvania<sup>4</sup>, most of which will be smaller than 10 kW and will earn less than 10 RECs per year. Rather than having all these small facilities register and establish accounts in PJM-GATs, the small transactions can be completed between the solar owners and the EDCs and EGSs outside of PJM-GATS. Once the EDCs and EGSs have purchased the solar RECs, they can then transfer them into their PJM-GATS accounts (or alternatively claim compliance with the solar share of Pennsylvania's AEPS through retiring the solar RECs in the Pennsylvania Solar REC program).

CPM will facilitate the sale of solar RECs in both New Jersey and Pennsylvania through a regional solar REC bulletin board, thereby increasing the reach of the market for both buyers and sellers. Additionally, the information to determine the regional price for RECs will be readily available to Pennsylvania regulators who require this information to determine the solar share compliance penalty price.

Establishing a program similar to New Jersey's for solar RECs will accomplish three important objectives:

1 – Increase the liquidity of the overall solar REC market through more buyers and sellers, thereby increasing the efficiency of the market

- Buyers include Pennsylvania EDCs and EGSs, as well as New Jersey LSEs and market makers such as brokers and aggregators
- Sellers include Pennsylvania and New Jersey solar owners

2- Make it easy for Pennsylvania's solar homeowners to actively participate in the solar REC market

- Solar owners can participate in an active solar REC market and reach the interested buyers (EDCs and EGSs) through this marketplace

3 – Make it easy for Pennsylvania's EDCs and EGSs to meet their solar share requirements in Pennsylvania's AEPS

- The EDCs and EGSs will be able to draw from a large market of eager sellers and

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<sup>3</sup> The term "REC" is used to mean both Renewable Energy Credit and Alternative Energy Credit for purposes of discussion here.

<sup>4</sup> By contrast, the listing of qualified Alternative Energy systems issued by the Commission on January 30, 2006, under Docket No. M-00051865, most of which are larger than 2 MW, totaled 202 facilities.

- secure solar RECs at competitive prices through this marketplace
- Alternatively, the EDCs and EGSs can transfer the solar RECs they purchase through this market into their REC accounts at PJM-GATS (or EDCs and EGSs can retire their solar RECs through this program, with CPM providing a report to the Commission on the solar share compliance of the EDCs and EGSs)

CPM can work with the solar REC buyers and sellers to determine the REC terms that the market needs to work effectively, such as a combination of spot and multi-year REC product offerings.

## **2) Solar production verification**

CPM has developed a process to verify and audit the production of the New Jersey solar facilities, providing assurance to the market that the underlying electricity claims of these RECs is substantiated. Even though the quantity of solar RECs is small in comparison to the overall market, the high price these RECs command in the market require that a verification process be instituted. All systems reporting actual readings are physically audited annually. A statistically significant portion of systems using engineering estimates receive spot checks to verify that they are actually operating and that the estimates are within a reasonable range of the actual production. A protocol to handle variances outside a reasonable range is in place.

We understand the Pennsylvania is investigating the best approach to measuring solar output. CPM is interested in working with the Pennsylvania participants to come up with a reasonable solution. Some of the larger solar installations in New Jersey use data loggers that electronically submit their monthly production into the CPM system. Most small solar owners find it difficult to justify the relatively high cost of automated reporting systems. Having a dedicated utility-grade meter installed to measure the AC output of a solar installation is preferable so that accurate production information can be obtained. With the expected high value of Pennsylvania solar RECs, the extra cost this entails to the solar owner can likely be justified.

## **3) Customer service needs of hundreds of solar owners**

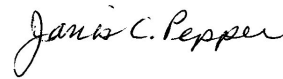
Because solar owners are not sophisticated energy professionals, and are not familiar with energy markets like the large renewable power producers, they require a high level of customer service to handle their many questions. Even though a solar owner may earn only 3 solar RECs in a year, the amount of time required to answer their questions can be the same as a power plant owner that earns thousands of RECs in a year. Multiply this by hundreds or thousands of solar owners to realize the extent of support that may be required. CPM provides a high level of support to the New Jersey solar owners responding rapidly to user phone calls and e-mails. Additionally, we conduct monthly training sessions to familiarize the new solar owners with the solar REC program and help them succeed in supplementing their income from their REC sales.

## Conclusion

Clean Power Markets, Inc. has years of expertise in working with behind-the-meter facilities and REC markets. Our comments here express our desire to help Pennsylvania achieve a vibrant and competitive market for solar alternative energy credits, that will both encourage the installation of additional solar systems in the Commonwealth and create a cost-effective and efficient method for EDCs and EGSs to meet the solar share requirements of the Alternative Energy Portfolio Standards.

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Respectfully submitted,



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