

**BEFORE THE**  
**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Implementation of the**  
**Alternative Energy Portfolio Standards Act of 2004**

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**COMMENTS ON BEHALF OF METROPOLITAN EDISON  
COMPANY, PENNSYLVANIA ELECTRIC COMPANY AND  
PENNSYLVANIA POWER COMPANY –  
THE FIRSTENERGY OPERATING COMPANIES**

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## **I. INTRODUCTION**

Pursuant to the January 7, 2005 Notice of Technical Conference ("Notice"), the FirstEnergy operating companies of Pennsylvania Electric Company ("Penelec"), Metropolitan Edison Company ("Met-Ed"), and Pennsylvania Power Company ("Penn Power") (collectively, "FirstEnergy") submitted preliminary written comments on January 18, 2005 regarding the implementation of the Alternative Energy Portfolio Standards ("AEPS") Act of 2004 ("Act" or "Act 213") to the Pennsylvania Public Utility Commission ("Commission" or "PUC"). In addition, FirstEnergy provided oral comments during the Commission's Technical Conference. All interested parties were informed during the Technical Conference that the Commission is accepting reply comments and parties should submit their reply comments to the Commission on or before February 9, 2005. At the Technical Conference the Pennsylvania Department of Environmental Protection ("DEP") issued its Technical Guidance and invited comments by February 11, 2005. Accordingly, FirstEnergy submits the following comments:

## **II. BACKGROUND**

On November 30, 2004, Governor Edward G. Rendell signed into law the Alternative Energy Portfolio Standards Act of 2004 also known as Act 213. The Act provides the Pennsylvania Public Utility Commission ("Commission") and the Pennsylvania Department of Environmental Protection ("DEP") with certain responsibilities associated with implementing AEPS.

FirstEnergy appreciates the DEP taking the initiative to bring all interested stakeholders together at the Energy Advisory Board meeting held on February 2, 2005. FirstEnergy commits to working with the DEP, the Commission and other stakeholders to make Act 213 a success. It is with the belief that Pennsylvania can be a leader in alternative energy that FirstEnergy submits its comments.

**III. THE ENTITY PROCURING THE ALTERNATIVE ENERGY FROM A QUALIFYING NON-UTILITY GENERATOR IS ENTITLED TO THE ALTERNATIVE ENERGY CREDITS ("AECs")**

Contrary to the opinion of York County Solid Waste and Refuse Authority ("YCSWA") and ARIPPA, FirstEnergy, as well as other interested parties such as the Office of Consumer Advocate ("OCA"), the Office of Small Business Advocate ("OSBA") and Industrial Energy Consumers of Pennsylvania, believes that the Alternative Energy Credits ("AECs") associated with a qualifying Non-Utility Generator ("NUG(s)") belong to the utility and its customers that have been paying for the high priced output of the NUG. FirstEnergy purchases the output from a number of NUGs pursuant to Power Purchase Agreements ("PPA(s)") that were initially entered into in the 1980-1990 time frame. In the specific case of YCSWA, Met-Ed purchases the output from the facility pursuant to a PPA that was entered into by the parties in November of 1986. This PPA will terminate on December 31, 2016.

YCSWA claims that "public policy interests can only be met" if the "AECs created in relation to electric energy produced by such qualifying generating facilities MUST be owned by the generating facilities as of the instant of generation of the energy." YCSWA also states that "Any other result would be contrary to promotion of

investment in and operation of generating facilities capable of producing electric energy from alternative energy sources." These positions are not supportable.

Simply because an Electric Distribution Company ("EDC") claims title to green attributes associated with a legacy PPA that it agreed to long before the contemplation of Act 213 and the creation of an AEC market, does not in anyway minimize the investment in new renewable generating facilities. The facilities that are subject to existing PPAs have already been built, so further incentives with respect to these facilities (like YCSWA) are not needed or even relevant. FirstEnergy recognizes "new" facilities that are not already subject to a PPA would be dealt with differently, which could allow for AEC-based incentives to encourage development of new facilities if it is determined that such incentives are warranted. FirstEnergy is only claiming the credits because its customers have been paying the full costs of power purchased, usually at above-market prices, as a result of Commission approved PPAs. Utilities were required to enter into the PPAs because the facilities qualified under Public Utility Regulatory Policy Act of 1978 ("PURPA") and the NUGs invoked the mandatory purchase obligations of PURPA. If the state had not approved the PPAs under PURPA, there would not be a long-term PPA nor would there be a question about AEC ownership. FirstEnergy submits that the public interest is best served by creating and defining AEC ownership in such a manner as to provide that the environmental attributes from existing PPAs between NUG QF's and utilities will be made available to the purchasing utilities and its customers at no additional cost.

As mentioned earlier in these comments, other parties have brought this issue to light as well. Both the OCA and the OSBA want to be certain that the cost

recovery provisions of the Act do not allow recovery of costs that are already in rates. They believe that contracts between utilities and NUGs that were signed as a result of PURPA were already included in existing rates cannot be recovered a second time under the new law.

The FirstEnergy Companies call to DEP's attention a recent decision by the New Jersey Board of Public Utilities ("BPU") at Docket No. EO04080879 unanimously approved the New Jersey Attorney General's recommendation that the Renewable Energy Certificates ("REC") (the equivalent of AECs in Pennsylvania) ownership from existing NUG facilities belong to the purchaser and not the NUG. FirstEnergy as well as other stakeholders recommend that this Commission reach the same conclusion: fairness and equity should dictate that customers receive the benefit of AECs resulting from the purchase of high-priced power under existing, facility-specific NUG PPAs with EDCs.

#### **IV. A COORDINATED REGIONAL SUPPLY ASSESSMENT IS NECESSARY**

While the Act obligates DEP to ensure that all qualified alternative energy sources meet all applicable environmental standards...", FirstEnergy encourages DEP to pursue a coordinated approach. Redundant permit submittals and reviews in multiple states should be avoided. We believe that a self-certification process that a source has met the renewable standards in another state within PJM, MISO and NY ISO would be an efficient permitting avenue that would encourage the development and use of alternative energy sources. As portfolio requirements develop, Pennsylvania should

coordinate within the region to establish a systematic inventory of resources used to meet portfolio requirement initiatives in the various states.

**V. PROJECTS WITHIN THE MIDWEST INDEPENDENT SYSTEM OPERATOR (“MISO”) ARE ALLOWED TO MEET EDCs’ AEPS REQUIREMENTS**

PennFuture in its comment to the Commission incorrectly states that an interpretation could be made that projects outside of PJM should not be allowed to satisfy mandates of Act 213 and would bar MISO related projects. This is in direct contradiction to the Act which states “energy derived only from alternative energy sources inside the geographical boundaries of this Commonwealth or within the service territory of *any Regional Transmission Organization (“RTO”) that manages the transmission system in any part of this Commonwealth* (emphasis added) shall be eligible to meet the compliance requirement under this Act.” MISO has Federal Energy Regulatory Commission (“FERC”) approval to operate as a RTO. Penn Power is an EDC serving customers within the Commonwealth of Pennsylvania. Penn Power is also a part of MISO. Therefore, under the direct and express language of the Act, projects within MISO should be allowed to meet Penn Power’s and other EDCs’ requirements under Act 213.

DEP asserts that “acquisition of credits or energy attributes alone is not sufficient to qualify as eligible generation” and recommends that eligible generation must be actually delivered to retail customers in the Commonwealth. However, Section 3(e)(4) of Act 213 clearly states that “one alternative energy credit shall represent one megawatt hour of qualified alternative electric generation, whether self-generated, purchased along with the electric commodity or separately through a tradable instrument...” FirstEnergy’s understanding of this issue during the legislative process

was that AECs could be traded as a bundled product with energy or traded separately as a financial instrument. Limiting the ability to trade AECs is counter to development of a vital alternative energy market.

While some may think it laudable to support only renewable generation sources located in the Commonwealth of Pennsylvania, this view is contrary to the Act. It fails to recognize the inter-state configuration of the electric grid and fails to consider the overall environmental benefits of promoting renewables on a regional basis as well as the benefit to the programs' initiatives by enhancing a larger, more vibrant, regional marketplace.

## **VI. DISQUALIFICATION OF SOURCES**

DEP has stated in its draft technical guide that if a generation source reports that it has experienced a major environmental violation, alternative energy credits equivalent to the number of megawatt hours generated during the period of major non-compliance shall be disqualified from eligibility. FirstEnergy supports compliance with all environmental regulations. However, FirstEnergy is concerned about the retroactive application of this section. To the extent FirstEnergy has relied on AECs from a source that has been disqualified, FirstEnergy could find, through no fault of its own, that it now has an unexpected shortfall in meeting its requirements under Act 213. Therefore, any alternative compliance payments related to a shortfall as a result of this action by DEP, should be fully recovered by the EDC pursuant to the automatic energy adjustment clause as a cost of generation supply. Additionally, FirstEnergy suggests that should DEP be placed in the unfortunate position of disqualifying alternative energy credits, that this action could give rise to the force majeure provisions

of the Act. It is quite possible that a number of EDCs could be relying on AECs from the same source and disqualification could have a huge market impact. FirstEnergy also submits that what constitutes a major environmental violation needs to be further defined so as to afford notice and due process to all market participants. We support DEP's position as stated at the February 2, 2005 Energy Advisory Board meeting that major environmental violations would be of a "permit bar" magnitude and not of an administrative or minor equipment malfunction nature.

#### **VII. PUMPED STORAGE SHOULD BE COUNTED AS A TIER II ALTERNATIVE ENERGY**

There have been suggestions that only net generation from pumped storage facilities should be eligible as a Tier II resource. Pumped storage resources store off-peak generation until it can be used to meet electricity needs during on-peak periods. In so doing, existing capacity resources are more effectively utilized which provides an added benefit, a decreased need to construct new fossil power plants. It is on-peak demand that drives the need to add new power plants. **By utilizing off-peak generation to meet on-peak energy needs, pumped storage displaces the need to build new fossil power plants by the amount of on-peak capacity it provides.** This means that compared to a regional generation portfolio that excludes pumped storage, a generation portfolio that includes pumped storage can provide an identical amount of generation and can do so with a smaller amount of installed fossil power plant capacity. Since a level of fossil power plant additions is avoided, the corresponding environmental impacts associated with siting and building a fossil power plant are also avoided.

In addition, pumped storage offers extremely strong load following capabilities that help support the addition of renewable resources in a region. Many of

the popular renewable technologies are either intermittent in nature (such as wind resources) or non-dispatchable (such as landfill gas resources). The strong ramp-rates of pumped storage resources can cover and make room for renewable resources that are dispatch-constrained. This is important because a significant part of the PJM motivation to adopt a new capacity market design is to address the concern over sufficient load-following capability being available in the near future.

As another example of the potential benefit that pumped storage can provide to other renewables, Texas is looking at coupling energy storage with wind resources. Daily transmission problems in the state are affecting pockets of wind generation to the point that wind generation is forced to be cut. A study is being conducted to determine whether energy storage can economically be used to store and then release the wind energy when the transmission constraint eases. Along with avoiding the curtailment of wind generation, additional value is seen by essentially turning an intermittent wind resource into a dispatchable resource. Due to local site conditions, Texas is looking at compressed air energy storage ("CAES") as their storage medium. Pumped hydro would be the most-likely storage medium in PJM if similar or other such needs arise. In fact, pumped hydro may be considered environmentally friendlier than CAES since the CAES generation mode uses combustion turbines firing natural gas, where pumped storage relies on water.

#### **VIII. EXISTING LOW-IMPACT HYDROPOWER SHOULD QUALIFY AS TIER I ALTERNATIVE ENERGY SOURCES**

FirstEnergy believes that the DEP, in its draft Section II, Technical Guidance, incorrectly interprets Act 213's definition of low impact hydropower to restrict

Tier I project eligibility to only incremental hydroelectric development. The Act 213, Paragraph 5 under Section 2 states:

"(5) Low impact hydropower, consisting of any technology that produces electric power and that harnesses the hydroelectric potential of moving water impoundments, provided such incremental hydroelectric development:

- (i) does not adversely change existing impacts to aquatic systems;
- (ii) meets the certification standards established by the Low Impact Hydropower Institute and American Rivers, Inc., or their successors;
- (iii) provides an adequate water flow for protection of aquatic life and for safe and effective fish passage;
- (iv) protects against erosion; and
- (v) protects cultural and historic resources."

An equally reasonable interpretation of Paragraph 5 of Act 213 does not preclude existing low-impact hydropower facilities but simply sets forth additional eligibility requirements for incremental hydroelectric development. There is no public policy rationale for not including existing low-impact hydropower which would otherwise qualify as a Tier I source. In addition, the definition of "Alternative Energy Sources" states "the term shall include the following **EXISTING AND NEW** sources for the production of electricity . . . (5) Low-impact hydropower...".

**IX. A CUSTOMER SERVING ITS OWN LOAD TO MEET THE REQUIREMENTS OF AEPS WOULD GO BEYOND THE SCOPE INTENDED BY THE ACT**

The Industrial Energy Consumers of Pennsylvania ("IECPA") in their comments to the Commission suggest that customers who serve their own load or

serve as their own EGS should not be required to meet the requirements of an EGS under the Act. It appears that DEP supports this notion. It appears that DEP supports this notion. FirstEnergy is not opposed to this perspective, only to the extent that this obligation does not fall back on the EDC providing delivery service to the load. Should the Commission determine that such customers are exempt under the Act, then the EDCs should not be required to include the customer's load in the EDC's obligation under Act 213. However, the industrial customer shall be a licensed EGS with the Commission. In the event that the Commission does not intend to exempt this load from the Act and the requirement reverts to the EDC, the EDC must be entitled to collect from the customer(s) serving as its own EGS the costs the EDC incurred in order to meet the requirements of the Act for that customer(s).

#### **X. INTERCONNECTION AND NET METERING**

As indicated in our Comments filed with the PUC in the AEPS docket, FirstEnergy urges that the issues of Interconnection and Net Metering be considered independently of each other because they are fundamentally different, the former being largely technical and the latter, largely financial. The Commission, in its Advance Notice of Proposed Rulemaking ("ANOPR") on Interconnection of Small Generation, appropriately did not include Net Metering, which we applaud. While DEP has suggested that these issues be considered together since they both involve interplay with our customers, this could be said about a vast majority of the Commission's rulemakings. Nonetheless, since many of the commenting parties, including DEP, in the AEPS docket have considered these issues in tandem, we will therefore, also reflect that approach in these comments.

### **A. Consistent Rules**

In general, FirstEnergy supports consistency in the development of net metering and interconnection standards and, in particular, that the rules be consistent with procedures and regulations currently applicable to the PJM market. However, we have two important caveats in this respect. One is that it must be recognized that Penn Power is a member of MISO and will necessarily participate through that market. Therefore, some flexibility in the technical standards for net metering and interconnection may be necessary in order to accommodate other markets. This is important for the development of the trading platform and marketplace in general. Second, it is important that there be sufficient flexibility overall. Net metering rules must recognize that many EDCs have developed Net Metering tariffs as a result of settlements, etc., and until the generation rate caps are ended, should not be bound to provide otherwise than pursuant to its tariff (see comments to the PUC of Exelon and PPL in this regard, which we support). Such flexibility is also necessary in the interconnection rules with respect to EDCs' ability to perform the appropriate studies and require appropriate equipment necessary to meet the specific needs of its distribution system for purposes of system integrity and safety. This will also be covered in the section on Procedural Timeline below.

Regarding the issue of consistency, there is one final point that should be addressed: DEP has urged consistency with New Jersey rules, but also suggests that the rules be consistent with IEEE standards. As we pointed out in our Reply Comments in the AEPS docket, this is in itself inconsistent. There are a number of requirements under the IEEE standards, such as the important requirement for the disconnect switch

that the New Jersey rules do not permit the EDCs to enforce. This is just one example of why we believe the adoption of the PJM approach, in that it incorporates the IEEE standards as they are from time to time modified, is the preferred approach. The IEEE standards are objective, well-reasoned, and peer-reviewed standards that are readily available to all existing and potential alternative energy facility owners and their engineers.

**B. Procedural Timeline**

New Jersey rules which DEP has supported require review with respect to a application for interconnection and metering requirements to be performed pursuant to a strict timeline. In general, while we believe that there may be opportunities for a more standardized approach and equipment pre-certification with respect to small inverter-based units of limited nameplate ratings, it is essential that the EDCs review of larger systems not be limited by such a cookbook approach at the potential expense of system integrity and safety. FirstEnergy urges that adequate time be afforded, especially for large inverter-based systems or rotating equipment systems, in order to perform system impact studies, determination of necessary distribution system upgrades and proper safety equipment, negotiation of a contract and finally, implementation of the interconnection. All of this is necessary in order to ensure the integrity of the system and safety of workers, customers and the public alike. FirstEnergy supports the approach that the Energy Association of Pennsylvania ("EAP") has recommended in its Comments to the PUC AEPS docket. While 30 to 60 days may in general be sufficient to collect and review data and install any necessary metering for smaller inverter units but with larger or unique applications, even getting all necessary information in order to

fully review requests can be problematic within a 90-day time period. Adequate time is essential.

### **C. Maximum Size of Net Metering Units**

The Act does provide some fairly specific guidance on facilities up to one megawatt, with limited availability for facilities up to two megawatts, and does not permit universal availability for facilities up to two megawatts as in New Jersey.

Within the definition of "Net Metering", the size of the generator is clearly limited to "when the renewable energy generating system is intended primarily to offset part or all of the customer-generator's requirements for electricity." This limitation curtails the customer generator from becoming a net exporter, under the Act, for sale to the EDC or wholesale sales into the market. In the event that is the intended purpose of a new facility which is often the case regarding units of such size, there are existing mechanisms for doing so.

The definition of Customer Generator further limits the size of the generator to a nameplate capacity 50 kW at a residential location or otherwise up to one megawatt or up to two megawatts if the facility meets one of two provisos. The first proviso applies to customers who offer to operate in parallel with the utility during a grid emergency, which is presumably when generation resources are reaching their limit or because of system constraints. It would seem apparent that in order to qualify under this exception, the generator must be contractually obligated to operate at capacity during such conditions. Understandably this is not the case with many of the listed alternate sources. The second proviso applies to customers who can export energy into a "micro-grid" in support of essential services, provided IEEE promulgates appropriate

technical standards. There are no such standards in place today. Because of the additional complexity associated with circumstances applicable to this second proviso, appropriate guidelines cannot be developed without these technical standards. The Commission should defer development of these guidelines until such time as IEEE develops the necessary technical standards.

DEP suggests that many residential farm customers will be prevented from installing digester generating systems because of the 50 kW residential limitation contained in the legislation and that many of the proposed systems are in the 60 kW to 200 kW range. There is nothing in the FirstEnergy Company's Tariffs preventing these customers from taking non-residential service. Further, as stated above and in the Act, and as supported by the DEP, the definition of net metering limits the size of the generation to meeting the needs of customer, which likely obviates this concern as well. As stated above, if the customer wants to become a net exporter of energy, there are mechanisms available for sale of excess energy into the wholesale market.

The DEP states that "These kinds of on-farm net meter systems can supplement farming income...". While this may be true, one of the primary drivers behind the installation of methane digesters is to dispose of animal waste and avoid the associated expense. The farms are urged to factor in the savings associated with such installations and not rely on subsidies from ratepayers throughout the Commonwealth to improve profitability.

#### **D. Cost and Cost Recovery**

Existing or new customers that develop alternative energy resources nonetheless are customers on the EDC distribution system, and both benefit by that

system as well as impose significant obligations on the distribution system. For some alternative energy resources, this is more significant than for others. For example, intermittent generators (wind and solar, for example) still require the full support of the distribution system to be on standby when they do not generate. Commenting parties proposing that there be no additional "standby, capacity, interconnection, stranded costs or other fee or charge" are simply socializing those costs on all ratepayers in order to provide the alternative energy provider a free ride. This is unnecessary. If the alternative energy generator has the opportunity to place energy on the system and be compensated fairly for that energy because the Act creates a trading platform and a marketplace for the megawatts the generator creates, this is a sufficient economic incentive to do so. FirstEnergy submits that the generator should absorb the costs of equipment necessary to implement the interconnection, costs of system upgrades and/or installation of additional metering in order to properly capture the amount of energy generated into the system. It is fundamental that these costs be borne by the party benefiting by the transaction.

**E. Meters and Metering**

DEP suggests using a single, non-ratcheting, bi-directional meter. The vast majority of the residential meters installed do not meet the regulatory accuracy requirements for such usage. As a practical matter, many of the EDC's billing systems are not capable of recognizing reverse registration on a single meter. In the event a customer's alternative energy system produces more energy over the course of a month than the customer consumed, a single meter allowed to run backwards would produce a register reading at the end of the month that was less than the reading at the beginning

of the month. Rather than interpret the readings as an indication excess energy delivery into the EDC's system, many billing systems will interpret the readings as energy consumption approaching 100,000 KWH, causing confusion and billing issues for EDC and customer alike.

The Act specifically requires that "All qualifying alternative energy systems must include a qualifying meter to record the cumulative electric production to verify the advanced energy credit value." In order to qualify for marketable credits under the Act, the output of the generator must be metered, which would be the generator's responsibility.

The DEP also comments that EGSs and EDCs should prepare an annual report with several estimated quantities included. With the appropriate configuration of the meter installation required under the Act, none of these quantities need be estimated. The FirstEnergy Companies are willing to install an additional meter in a customer supplied and installed meter base in order to meet the necessary metering requirements in the most efficient manner to meet the customer's need but at the customer's expense. However, we further suggest that we work with the Commission to develop metering standards and protocols that may help mitigate expense and confusion.

#### **F. General Interconnection Provisions**

The DEP suggests that each EDC should provide review procedures for applications for interconnection. FirstEnergy suggests rather that all of the EDCs be given the opportunity to develop reasonably uniform procedures that will appear consistent throughout the Commonwealth.

While there may be merit to having a single point of contact as the DEP suggests, FirstEnergy advocates that the documentation mentioned be posted to a state-sponsored website.

The DEP advocates that the interconnection standards developed as a result of this proceeding are intended primarily for customers eligible for net metering. We believe that interconnection standards developed should be applicable to all customers, not just those eligible for net metering. It is appropriate and correct to permit the interconnection and parallel operation of a customer-owned generator based on the review of the installation meeting the appropriate technical and safety standards. The business rules between the parties related to the transfer of energy and its associated value has no bearing on the ability to interconnect the facility. The financial issues associated with net metering are a rate-making concern and should be addressed in a separate proceeding.

## **XI. CONCLUSION**

FirstEnergy appreciates the opportunity to provide these comments and assist the DEP, Commission and other stakeholders in identifying the issues related to the implementation of Act 213. We look forward to participating in future rulemaking and technical conferences regarding this matter and urge the DEP to consider issue-specific workshops or working groups to focus on the many issues that need to be addressed in order to effectively implement the Act.

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Respectfully submitted,



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