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July 24, 2009

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Honorable James McNulty
Secretary
Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

RE: Petition of PPL Electric Utilities Corporation for
the Approval of an Energy Efficiency and Conservation Plan
PUC Docket No. M-2009-2093216

Dear Secretary McNulty:

Please find for electronic filing the Petition to Intervene of the Commonwealth of Pennsylvania, Department of Environmental Protection in the above referenced matter. Copies have been served on all parties listed on the enclosed Certificate of Service.

Sincerely,

/s/ Aspasia V. Staevska

Aspasia V. Staevska
Assistant Counsel

cc: Service List

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities	:	
Corporation for Approval of an Energy	:	Docket No. M-2009-2093216
Efficiency and Conservation Plan	:	

**PREHEARING MEMORANDUM OF THE
COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Pursuant to Section 333 of the Public Utility Code, 66 Pa.C.S. § 333, and in response to the July 1, 2009 prehearing conference order issued in the above-captioned matter, the Commonwealth of Pennsylvania, Department of Environmental Protection (the "Department") provides the following information:

I. INTRODUCTION

Pursuant to Act 129 of 2008 and the Pennsylvania Public Utility Commission's ("Commission") Energy Efficiency and Conservation Program Implementation Order at Docket No. M-2008-2069887, on July 1, 2009, PPL Electric Utilities Corporation ("PPL") filed its Petition for Approval of an Energy Efficiency and Conservation Plan ("EEC Plan") with the Commission. PPL's EEC Plan includes energy efficiency programs, conservation practices, peak load reductions, renewable technologies, and energy education programs that are intended to meet Act 129's energy conservation and peak demand reduction requirements. Petition at 1.

On July 18, 2009 the Commission published a notice of PPL's petition in the *Pennsylvania Bulletin* which required Petitions to Intervene to be filed by July 27, 2009 and

answers, comments and recommendations to the EEC Plan to be filed by August 7, 2009. The Department filed its petition to intervene on July 16, 2009.

II. ISSUES

Act 129 establishes reasonable energy conservation and peak load reduction goals. Achieving these goals is absolutely necessary if Pennsylvania is begin to moderate market prices, enable consumers to lower energy costs and meaningfully address the impacts of climate change. To that end, the Department has consistently recommended that the Act 129 plans consist of energy efficiency and conservation programs that promote the most cost effective, sustainable and verifiable energy reductions possible.

The plan submitted by PPL does not meet the requirements of Act 129 in several ways. In its review of the plans submitted by the EDCs, the Department focused on assessing the proposals in terms of their relative alignment with the five core principles for which the Department has advocated, which are the first five items listed below. The Department supports an Act 129 program that reflects a rigorous commitment to these principles as the most effective path to achieving the energy conservation goals set forth in the legislation. It is important that all of these issues be addressed in order to effectively achieve the energy conservation goals of Act 129.

1. **Investment Equity in Claimed Savings.** The Department opposes the position of the EDCs on the question of whether an EDC may claim 100% of the energy savings realized from a measure in which the EDC has not made 100% of the investment. This type of accounting methodology, where one partner is awarded all of the investment rewards regardless of its level of economic participation, is unprecedented and goes against virtually every

economic partnership model. This approach creates the risk that EDCs will receive credit for results on paper while becoming free riders on other programs in fact.

Of particular concern are savings achieved as a result of incentives funded by State or Federal conservation programs, as those programs are also fiscally accountable to the ratepayer/taxpayer for achieving energy savings for the dollars invested. Further, such a policy determination leads to grossly inflated cost/benefit ratios, and provides incentive to allocate resources too thinly to be effective. The EDCs should only be allowed to claim credit for savings prorated on the basis of the dollars invested, or for installed measures that would not otherwise have occurred without the EDC investment.

This strategy for claiming program success is in direct conflict with the fundamental intent of Act 129 – that the plans be cost-effective, and that result be fundamental changes in how electricity is consumed. Initiatives that thinly spread incentive dollars over a large number of customers, such as equipment rebate programs, are very costly and rarely contribute substantively to results. EDCs should invest their efforts and ratepayer dollars into programs with lower administration costs and higher, direct long-term impacts.

2. **"Whole-Building" Approach.** These plans need to encourage residential, commercial, and government building owners to make substantive investments designed to achieve maximum long-term energy conservation goals. Such an approach would offer tiered incentives to building owners. First, the lowest incentives are for simple equipment replacement. Then, the highest incentives are reserved for audited whole-building projects that address the building envelope as well as the equipment and systems therein.

Extensive data exists to show that, in the absence of thorough air-sealing and insulation, much HVAC equipment will be unnecessarily large due to the inefficiencies of the building

itself. This produces the result of promoting unnecessary energy consumption within a conservation program. Additionally, a focus by the EDCs on cream-skimming through a focus on lighting and HVAC upgrades will effectively diminish the ability of a building owner to take advantage of an Energy Service Companies (ESCO) project at a later date, as the remaining conservation measures will offer a far less attractive cost/benefit scenario (much longer payback period) for a contractor relying on guaranteed energy savings.

Finally, the whole-building approach is among the most cost-effective measures offered, as overhead is reduced when fewer buildings are served in a more substantive manner. In addition, substantially increased efficiencies will occur if EDCs agree to offer these services using a single statewide infrastructure that ensures training, certification, marketing, and performance verification.

3. **Measurement, Verification, and Continuous Improvement.** The plans are deficient to the extent that they rely solely on annual reporting by an EDC. Active oversight by the Commission will be necessary to ensure high quality outcomes. The Commission must be able to distinguish the quality of the results in sufficient detail, and in a timely enough manner, so that it can act promptly, where necessary, to direct an EDC to reshape its program. These objectives will not be achieved if the Commission relies solely on the data analyzed long after the fact and contained in the EDCs' annual reports.

Measurement and verification of data can be simplified and streamlined by requiring that all EDCs use the same measurement and verification protocols, ideally those associated with proven, nationally accepted standards. The Energy Star programs offer a readily available solution in this regard. The Department urges the Commission to require that the EDCs offer energy efficiency and conservation plans that utilize the data collection protocols of Energy Star

Portfolio Manager and Home Performance with Energy Star. This requirement ensures the consistency of data over time; provides a common database through which many sorts of analyses – particularly verification of energy savings – are supported; and offers a long-established and widely-used system supported by the U. S. Department of Energy and embedded in the Department's own energy efficiency programs. These tools will enable the Commission to track program results on an ongoing basis rather than only annually. This is an approach that will be particularly important in the first few years of the program.

Finally, the Department supports the Commission's reliance on the Technical Reference Manual (TRM) as a suitable resource to assist the EDCs in program design and initial implementation. However, the Act requires verifiable energy savings. To achieve this, the Commission should require ongoing actual performance data from the EDCs as a means of ensuring the ongoing validity of the TRM, and as a tool to allow timely program adjustment where necessary.

4. **Environmental Impact.** The Department is charged with the guardianship of Pennsylvania's land, water and air quality, and the need to balance that protection with the Commonwealth's goals of economic growth and technological advancement. In striving to meet the Act 129 goals, there are several pitfalls that must be avoided in order to advance the objects of energy conservation while continuing to sustain high standards for environmental protection.

These plans create the real possibility of negative environmental impacts by allowing diversion of demand from power plants where stringent controls exist to less-well controlled distributed generation units. More frequent use of these small, less stringently controlled distributed generation units may result in an increase in per unit emissions. Moreover, there is a high concentration of these units in areas where ozone and particulate matter concentrations are

already most likely to exceed health standards during peak hours. Grid demand reduction that is merely replaced by higher emitting distributed generation has negative air impacts, and is an unacceptable strategy for Pennsylvania.

It is the responsibility of EDCs to make sure that cumulative adverse air quality effects do not occur. In general the proposed plans do not provide enough detail and are not specific enough to draw any quantitative conclusions as to the net benefit or net detriment with respect to the Commonwealth's air quality and the impact on Pennsylvania's ability to meet ambient air quality standards promulgated by EPA.

Fuel switching is also a concern. To the extent that the plans promote conversion from a combustion appliance to an electric powered appliance, total emissions will likely increase. EDCs should instead focus on programs or measures that reduce base load consumption through conservation and source reduction strategies or which promote replacement of fossil fuel dependant technologies with renewables.

5. **Expedited Smart Meter Deployment.** Two key components to a successful energy efficiency and conservation program will be the early deployment of smart meters and implementation of the time of use rates and real time price plans that smart meters support. Smart meters and time sensitive price plans effectively use market forces to reduce consumption, shift some uses to cheaper times of day, save the consumer money and provide system-wide benefits to all consumers. These plans fail to implement those components.

Although Act 129 allows EDCs to take up to 15 years to fully deploy smart meters, the law clearly contemplates that the Commission could require EDCs to furnish the meters at a faster rate. To achieve Act 129's important goals, smart meters should be fully deployed within 10 years. The Commission can make this happen by reducing the service lives of existing

meters. This is a reasonable approach as the value of smart meters will climb relative to existing meter technology due to an anticipated rise in future prices.

6. **Financing Needs to be Offered.** EDCs should include financing mechanisms among the Act 129 offerings. Many consumers in the Commonwealth have limited access to low-cost capital with which to undertake whole-building efficiency projects. This is especially true for the government, non-profit and residential sectors. EDCs should provide customers with low-interest loans or fully-financed ESCO services as a critical means of attaining deep energy savings.

7. **Additional Issues.** Additional issues may arise as the Department further reviews PPL's filing and will be addressed in the Department's answer and comments.

III. WITNESSES

At the present time, the Department proposes to present the testimony, as may be necessary, from the following witness:

Daniel Griffiths
Deputy Secretary
Energy, Innovations, and Technology Deployment
Rachel Carson State Office Building
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717-783-0540

Maureen Guttman, AIA
Executive Director
Governor's Green Government Council
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Mr. Griffiths and Ms. Guttman will testify to the issues identified above.

If additional witnesses are necessary for any portion of the case, the Department will promptly notify Your Honor and all parties of record.

IV. SERVICE

All documents and correspondence related to this proceeding should be addressed to:

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The Department also requests that electronic copies of documents be provided to Aspasia V. Staevska at astaevska@state.pa.us and George Jugovic at gjugovic@state.pa.us.

Respectfully submitted,

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Dated: July 24, 2009

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document, Prehearing Memorandum of the Commonwealth of Pennsylvania, Department of Environmental Protection, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code Section 1.54 (relating to service by a participant), in the manner upon the persons listed below:

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Respectfully submitted,

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