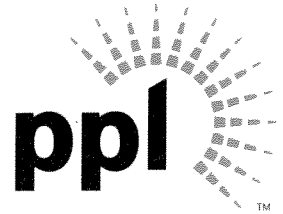


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**VIA FEDERAL EXPRESS**

March 12, 2009

James J. McNulty, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, Pennsylvania 17120

**Re: Implementation of the Alternative Energy Portfolio  
Standards Act of 2004: Standards for the  
Participation of Demand Side Management Resources -  
Technical Reference Manual at Docket No. M-00051865**

**Implementation of Energy Efficiency and  
Conservation Program at Docket No. M-2008-2069887**

Dear Mr. McNulty:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") are an original and fifteen (15) copies of PPL Electric's comments in the above-captioned dockets. PPL Electric is submitting these comments pursuant to the Public Utility Commission's ("Commission") Secretarial letter dated February 20, 2009.

PPL Electric is serving copies of this filing upon the Office of Consumer Advocate, Office of Small Business Advocate and the Commission's Office of Trial Staff. In addition, the Company is sending an electronic copy of its comments to the Commission's Act 129 e-mail account. Finally, PPL Electric is posting this filing on its Act 129 website. The URL address for that website, which is available to all interested parties and to the public, is [www.pplact129.com](http://www.pplact129.com).

Pursuant to 52 Pa. Code 1.11, the enclosed document is to be deemed filed on March 12, 2009, which is the date it was deposited with an overnight express delivery as shown on the delivery receipt attached to the mailing envelope.

In addition, please date and time-stamp the enclosed extra copy of this letter and return it to me in the envelope provided.

If you have any questions regarding this filing or PPL Electric's Act 129 website, please call me at (610) 774-4254.

Very truly yours,

A handwritten signature in black ink that reads "Paul E. Russell". The signature is written in a cursive style with a large, prominent "P" and "R".

Paul E. Russell

Enclosures

cc: Irwin A. Popowsky, Esquire  
William R. Lloyd, Esquire  
J. Edward Simms, Esquire  
Robert F. Young, Esquire  
Kriss E. Brown, Esquire  
Darren Gill  
Calvin Birge

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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Re: Implementation of the Alternative :  
Energy Portfolio Standards Act of 2004 :  
Standards for the Participation of : Docket No. M-00051865  
Demand Side Management Resources :  
– Technical Reference Manual :  
  
Energy Efficiency and Conservation :  
Program and EDC Plans – Technical : Docket No. M-2008-2069887  
Reference Manual :

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**Comments of PPL Electric Utilities Corporation**

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TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

**I. Introduction**

On October 15, 2008, Governor Rendell signed HB 2200 into law as Act 129 of 2008 (“Act 129” or the “Act”) with an effective date of November 14, 2008. The Act expands the oversight responsibilities of the Public Utility Commission (“PUC” or the “Commission”) and imposes new requirements on Electric Distribution Companies (“EDCs”) with the overall goal of reducing energy consumption and demand, enhancing procurement of generation supply for

default service, expanding the installation of smart meter technology, and expanding alternative energy sources.

In an Implementation Order entered on January 16, 2009 at Docket No. M-2008-2069887, the Commission established procedures for the implementation of Act 129. In particular, the Order established that the Commission would utilize a Technical Reference Manual ("TRM") to help meet the evaluation process requirements of Act 129. The Order further established that development of the TRM would use as its starting point the TRM initially issued in September, 2005 to support implementation of the Alternative Energy Portfolio Standards Act. Finally, the Order stated that it was the intent of the Commission to complete the TRM update early in 2009 to provide EDCs with ample time to incorporate TRM information in their Energy Efficiency and Conservation ("EE&C") Plans. These plans are to be filed with the Commission for review and approval not later than July 1, 2009.

By Secretarial Letter dated February 20, 2009, the Commission issued an updated TRM and requested comments on that document. The Secretarial Letter states that comments are due within twenty days (i.e., March 12, 2009) and that reply comments are due fifteen days thereafter (i.e., March 27, 2009).

PPL Electric Utilities Corporation ("PPL Electric" or the "Company") is an EDC serving approximately 1.4 million customers in central eastern Pennsylvania. PPL Electric was an active participant in the development of Act 129 and continues to be an active participant in the development of the rules and regulations necessary to implement Act 129. PPL Electric appreciates the opportunity to provide comments on the proposed updated TRM. PPL Electric looks forward to continuing to work with the Commission and all interested stakeholders to address issues associated with implementation of the Act.

Following are PPL Electric's comments on the proposed updated TRM. PPL Electric has divided its comments into two areas and has organized the comments in each section using the headings in the TRM. The first section includes comments of a more general nature that relate to the material in the first seven pages of the proposed TRM. The second section includes comments on specific measures and algorithms.

## II. General Comments

### 1. Purpose

- PPL Electric recommends that the section titled "Purpose" should specifically state that the TRM is, in addition to its use in establishing the quantity of Alternative Energy Credits associated with certain standard measures, also to be used in establishing energy (kwh) and demand (kw) savings associated with those same standard measures for the implementation of Act 129. PPL Electric notes that the same recommendation also applies to the sections titled "**Resource Savings in Current and Future Program Years**" and "**Custom Measures**".
- PPL Electric strongly endorses the statement in the section titled "Purpose" that the TRM should be updated from time to time. The Company recommends that a schedule be established that will make TRM updates available in a timely fashion for use by the EDCs in the development of updates to their individual EE&C Plans. Also, to the extent that the Commission's evaluation contractor may make suggestions about possible revisions to TRM information, any resulting updates should be issued in a way and on a schedule that supports the development and updating of EE&C Plans by EDCs.

### 2. Algorithms

- PPL Electric is concerned that the "Coincidence Factor" referenced in this section and used elsewhere in the TRM may not be appropriate relative to

the demand savings objectives of Act 129. Those objectives are based on the top 100 hours of summertime demand and should reflect the operation of the measure coincident with those 100 hours. The Company is concerned that “Coincidence Factors” adopted from other jurisdictions, as well as algorithms that use such factors, may, instead, reflect operation of the measure coincident with a single or limited number of system demand hours. The Company notes further that in Table 1 (page 4) under the heading “**Electric Resource Savings**” the “Coincident Peak Demand Savings” should, consistent with the Implementation Order, apply to the period June 1 through September 30, and should not be limited to a specific range of hours of occurrence.

### **3. Baseline Estimates**

- PPL Electric agrees that for new construction or in circumstances in which there is no existing equipment being replaced, the correct measure of saving is the difference between the standard equipment and an appropriate high efficiency product. The Company recommends that the following statement be added: "In the circumstance of a replacement, the correct measure is the difference between the existing equipment and an appropriate high efficiency product." The Company notes that such a statement is consistent with the approach employed under the heading “**Refrigerator/Freezer Retirement**” on page 34 of the TRM.

### **4. Prospective Application of the TRM**

- This section includes the statement that “Updates (of the TRM) will not alter the number of credits, once awarded, by the Administrator.” The Company believes that this approach is appropriate in the context of the Alternative Energy Credits program. Under that program, a measure, once undertaken, is not revisited except to the extent that its cost and quantity of credits would be reviewed as part (and likely a very small part) of a reconcilable recovery charge. PPL Electric believes that prospective

application of TRM updates also is appropriate under Act 129. The Act requires that EDC plans be periodically evaluated and that ineffective measures be replaced with more effective measures. The Company believes that this review process may require that TRM updates be reflected in plan updates. Also, as noted above, it is expected that the TRM will be updated from time to time. The Company believes that plans should reflect the best available information. The Company would expect to increase spending on measures that show greater savings in a TRM update and to slow or end spending on measures that show lower savings. However, the Company believes that EDCs must not be exposed to any risk of having credit quantities resulting from past decisions in approved plans restated and, thereby, creating a risk of non-compliance.

## **5. Transmission and Distribution System Losses**

- This section states that the TRM is calculated at the customer level and needs to be adjusted to reflect transmission and distribution losses. (The section titled **“Calculation of the Value of Resource Savings”** also references a “T&D Loss Factor”). PPL Electric believes that these sections should be deleted. The purpose of the TRM is to calculate savings associated with measures at the retail level which can then be used in the Total Resource Cost (“TRC”) Test. In the TRC Test, the issues of resource savings, avoided costs, and retail level versus generation level need to be addressed. Also, to the extent that transmission and distribution losses are to be reflected, the Company believes that the Commission should not use a single composite loss factor as it appears is being suggested here. Rather, separate values should be used that reflect the customer class and voltage level that the measure is being applied to.

## **6. Custom Measures**

- This section defines custom measures as “measures that are considered too complex or unique to be included in the TRM.” The Company recommends that this definition be broadened to include measures that may be included in the TRM, but which may involve certain uniqueness that would alter the evaluation of the measures and/or the measurement of results. The Company believes that the EDC should have the burden of demonstrating, in the context of its plan, that custom treatment is appropriate. The Company also recommends adding a statement that the case-by-case determination of Alternative Energy Credits associated with custom measures is made by the Program Administrator. The determination of energy and demand savings under Act 129 associated with custom measures is made by the Commission in the context of its approval of an EDC’s EE&C Plan or Plan update.

### **III. Comments on Specific Measures**

PPL Electric and its consultant have reviewed the algorithms and assumptions regarding individual measures to a limited extent. The following are questions and comments based on that review. As the Company and its consultant further develop the Company’s plan, additional comments and concerns will arise. Presumably, this will also be the case for the other EDCs as well as for CSPs and other vendors and service providers who may have special knowledge about specific measures. PPL Electric has commented above regarding the need for a timely update process. The Company also recommends that the Commission establish a process to address such concerns as they arise between now and the filing of EE&C Plans. The Company recognizes and supports the objective to finalize the TRM as early as possible in order to provide certainty in EE&C Plan development. However, there may be a significant amount of Pennsylvania-specific knowledge that arises during this period of

intense effort and there should be a means by which that knowledge can be included in the EE&C Plans.

## **1. Refrigerator Early Retirement**

- On page 34, the TRM assumes a 55% Net-to-Gross (“NTG”) Adjustment factor for refrigerator recycling, but no NTG factor is used for any other measure. PPL Electric understands that NTG factors are typically used to adjust the results of a particular program (both the estimated results and actual results) for free ridership in an effort to arrive at a more accurate estimate of behaviors and savings that are actually attributable to the program. PPL Electric also understands that such factors are highly dependent upon the nature of the program and the characteristics of the audience to which the program is being marketed. Consequently, the use of a factor that is being used to evaluate a program in southern California implicitly assumes that the program instituted by the Pennsylvania EDC is the same program, marketed in the same way, and marketed to an audience with the same characteristics (i.e., income, education, exposure to efficiency programs, sensitivity to electricity prices or environmental impacts, etc.). In particular, the Company believes that programs undertaken in Pennsylvania will have a significantly greater impact on Pennsylvania consumers because those customers have been shielded from the true cost of electricity by caps on their electric rates that have been in place, in most instances, for over ten years. Accordingly, the Company believes that it is inappropriate to include any NTG adjustments in the TRM. The Company believes that the TRM should focus on technology-related matters and that marketing and implementation matters, such as the application of an NTG to the savings determined by the TRM, should be addressed in individual EDC’s EE&C Plans.

## **2. Residential Energy Star Lighting**

- The average saving for CFL wattage is assumed, on page 31 Table 11, to be 48.7 watts, based on a 2003 study of several Northeastern states. The original TRM had specific values for specific wattages. PPL Electric believes that the original values should be retained, considering the continued maturity of the CFL market and detailed comparisons of lamps and fixtures later in commercial lighting section of the TRM.
- The in-service rate for CFL fixtures, on page 31 Table 11, is 84%, based on the 2003 study. PPL Electric believes that this figure should be examined further to determine if the in-service rate is higher in a rebate program as compared to a give-away program.
- PPL Electric requests that the Commission clarify whether the savings for a Ceiling Fan with an ENERGY STAR Light Fixture, on page 31 Table 11, include savings from heating/cooling or just lighting.
- The “Light CF”, on page 31 Table 11, needs to be confirmed relative to the “100 hours of highest summertime demand” approach to demand reductions.

## **3. Residential Equipment**

- It is not clear how the EFLH (page 12) was determined for Air Source Heat Pumps. The heating energy savings appear to be approximately one-third below expected savings, compared to values determined through previous work done by PPL Electric’s consultant, when modified based on heating degree days.
- Deemed savings for dishwashers on page 27 appear relatively low compared to the ENERGY STAR Calculator. PPL Electric requests that the Commission clarify what assumptions were used to develop this deemed value.

- Deemed savings for Tier 2 and 3 ENERGY STAR clothes washers on page 27 appear quite low, if the baseline is federal code as opposed to Tier 1. The ENERGY STAR calculator reports savings of 258 kWh from federal code to Tier 1. Tier 2 savings should be even higher, but they are listed as saving only 111 kWh in the TRM. PPL Electric requests that the Commission clarify what assumptions were used to develop deemed values for these measures.
- The time period allocation factors provided on page 27 may be inconsistent with the “100 hours of highest summertime demand” approach to demand reductions.

#### 4. Commercial Equipment

- It is not clear why the ELFH values for lighting for any individual application in Table 15-a vary so widely across the state.
- References to on-peak and off peak values in Tables 15 and 16 may be inconsistent with the “100 hours of highest summertime demand” approach to demand reductions.
- The baseline values presented for Unitary HVAC and Air Source Heat Pumps in Table 26 do not appear to be correct. The TRM notes these should be based on ASHRAE 90.1-2007, but PPL Electric’s consultant believes there is a discrepancy between IECC 2006/ASHRAE 90.1-2004 and the listed values, as follows:

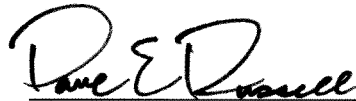
<b>Unitary HVAC</b>	<b>TRM</b>	<b>ASHRAE 90.1-2004</b>
5.4 to 11.25 tons	10.1	10.3
11.25 to 20 tons	9.5	9.7
20 to 63.3 tons	9.3	9.5
> 63.3 tons	9.0	9.2
<b>Air Source Heat Pump</b>		
5.4 to 11.25 tons	9.9	10.1
11.25 to 20 tons	9.1	9.3
> 20 tons	8.8	9.0

- The TRM notes that the EFLH for motors in Table 23 are fixed based on audit data for each region. It may be more appropriate to apply motor savings on an individual basis from actual operating hours.

#### IV. Conclusion

For all of the reasons stated above, PPL Electric Utilities Corporation recommends that the Public Utility Commission proceed with development of the TRM consistent with PPL Electric Utilities Corporation's comments.

Respectfully submitted,



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Paul E. Russell

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PPL Electric Utilities Corporation

Two North Ninth Street

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(610) 774-4254

Dated: March 12, 2009  
at Allentown, Pennsylvania