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October 28, 2011

VIA OVERNIGHT FEDERAL EXPRESS

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Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

**PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU**

Re: Implementation of the Alternative Energy Portfolio Standards Act of Resources -
Technical Reference Manual Update Docket No. M-00051865

Dear Secretary Chiavetta:

Enclosed for filing are an original and three (3) copies of Comments of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company pursuant to the Commission's Tentative Order regarding revisions to the Technical Reference Manual entered September 23, 2010, in the above-captioned docket.

Please date stamp the copy and return to me in the enclosed, postage-prepaid envelope. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Kathy J. Kolich

Enclosures

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Implementation of the Alternative Energy :
Portfolio Standards Act of 2004: :
Standards for the Participation of Demand :
Side Management Resources – Technical : **Docket No. M-00051865**
Reference Manual 2012 Update :

COMMENTS OF METROPOLITAN EDISON COMPANY,
PENNSYLVANIA ELECTRIC COMPANY,
PENNSYLVANIA POWER COMPANY AND WEST PENN POWER COMPANY TO
THE TENTATIVE ORDER REGARDING THE
TECHNICAL REFERENCE MANUAL 2012 UPDATE

I. INTRODUCTION

On September 22, 2011, the Pennsylvania Public Utility Commission (“Commission”) adopted a Tentative Order in the above-captioned proceeding proposing revisions and recommended updates to the existing Technical Reference Manual (“TRM”), which is being used to help validate savings and provide support for the implementation of Act 129 of 2008 (“Act 129”)¹. The Tentative Order was subsequently entered by the Commission on September 23, 2011. A notice seeking comments to the Tentative Order and proposed revisions and updates to the TRM appeared in the *Pennsylvania Bulletin* of October 8, 2011, and invited interested parties to submit comments on the 2012 TRM Update within 20 days (or October 28, 2011) and reply comments within 30 days (November 7, 2011).

The Commission previously adopted an *Energy-Efficiency and DSM Rules for Pennsylvania's Alternative Energy Portfolio Standard, Technical Reference Manual*² to help implement the Alternative Energy Portfolio Standards Act (“AEPS Act”), 73 P.S. §§ 1648.1 –

¹ 66 Pa. C.S. 2806.1.

1648.8. Subsequently, the protocols for measurement and verification of energy savings and load reduction impacts associated with Electric Distribution Company (“EDC”) Energy Efficiency and Conservation (“EE&C”) Plans developed to meet the requirements of Act 129 were vetted through a collaborative process and specified in an updated TRM that was adopted in an Order in May 2009 (the “2009 TRM”)³. The Commission recognized the need to review and update the TRM on an annual basis and directed the Bureau of Technical Utility Services (“BTUS”), formerly the Bureau of Conservation, Economics and Energy Planning (“CEEP”), to oversee the implementation, maintenance and periodic updating of the TRM in accordance with *EE&C program requirements pursuant to Act 129*.

On January 28, 2010, the Commission adopted a Tentative Order regarding the 2010 TRM annual update. In an Order, adopted June 3, 2010, the Commission promulgated the 2010 TRM. On November 19, 2010, the Commission adopted a Tentative Order regarding the 2011 TRM annual update. In an Order, adopted February 24, 2011, the Commission promulgated the 2011 TRM. This current Tentative Order initiated the third annual update of the TRM to be applied beginning with the 2012-2013 AEPS Act and Act 129 EE&C program compliance years.

Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power (“Company”) (collectively “the Companies”) remain committed to Pennsylvania’s successful achievement of the goals of Act 129, and the furtherance of credible evaluation, measurement and verification (“EM&V”) supporting those goals. The Companies continue to support the development and improvement of the TRM and have been working

² *Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update*, Docket No. M-00051865 (Order entered October 3, 2005).

³ The TRM was adopted as a component of the EE&C Program in accordance with the Commission’s Energy Efficiency and Conservation Program Implementation Order (“Implementation Order”) entered on January 16, 2009, at Docket No. M-2008-2069887.

closely with the Act 129 Statewide Evaluator (“SWE”), the TRM Technical Working Group (“TWG”) and Commission Staff to address the complex and detailed technical issues related to EM&V. The Companies commend the Commission and Staff for their establishment of clear processes for review and update of TRM protocols, as well as the addition of protocols for new measures. In furtherance of these processes and in response to the Commission’s invitation, the Companies respectfully submit the following comments regarding the proposed revisions and updates to the TRM (“2012 TRM Update”).

I. COMMENTS RELATED TO DEMAND RESPONSE

The Companies have reviewed the Comments of the Energy Association of Pennsylvania (“EAP”) and generally support those comments.⁴ Therefore, rather than reiterating those comments, the Companies will limit their comments to two categories: Demand Response and several technical issues.

While the Companies appreciate the details set forth in Section 4 “Demand Response” and commend the Staff for its efforts in addressing the many issues surrounding this topic, the Companies anticipate many challenges when trying to put this section into practice and therefore urge the Commission to be patient as all Electric Distribution Companies proceed. Further, Section 4 contains several references to “PJM Business Rules” which the Companies believe are intended to address use and review of protocols for calculation of customer baselines (“CBLs”) and hourly load impacts during Act 129 events. The Companies suggest that a footnote be added to clarify that the reference is for that purpose, (e.g., “References to PJM Business Rules in this section address computation of hourly load reductions during Act 129 load reduction events, rather than other events under PJM programs.”). Without this footnote, the context of the

⁴ Any distinctions between the general comments of EAP and those of the Companies will be addressed in Reply Comments on November 7, 2011.

references may cause industry confusion as to whether or not hours of Act 129 events that fail to clear PJM economic markets due to the financial criteria in PJM's Business Rules are included under Act 129.

II. COMMENTS ON PROTOCOL DETAILS

The Companies also make the following suggested corrections or revisions to the details of the protocols in the Draft 2012 TRM, identified by Section and Table numbers.

§2.9 Low Flow Faucet Aerators: The Companies supported the development of the Low Flow Faucet Aerators protocol and in review, discovered a typographical error in the Unit Peak Demand Reduction value. The Unit Peak Demand Reduction value should be .0056 kW rather than .056 kW.

§2.22 Refrigerator / Freezer Recycling and Replacement and §2.26: ENERGY STAR

Lighting: Footnotes 87 and 96 ("Subject to adjustment based on evaluation results") significantly undermines the principle of prospective application of the TRM (see §1.5), review processes associated with the TRM, and the utilities' ability to reference TRM values with confidence. The Companies request that the Commission clarify that the reference to adjustments based on evaluation results is intended to adjust future generations of the TRM, or, in the alternative that the Commission strike the references to adjustment to prescribed values based on evaluation results.

§2.24 Residential New Construction: The Company supports amending the TRM to reference the 2009 International Residential Code (IRC 2009). With that change however, further consultation with the Companies' evaluator and program administrators identified several revisions in Table 2-39 which are necessary so as to better align the reference

home used for modeling and savings impact calculations with the provisions as set forth in IRC 2009:

- **Air Infiltration Rate** - The Air Infiltration Rate in IRC 2009 is specified as a range. The 0.3 air changes per hour (“ACH”) referenced in Table 2-39 is at the lower end of the range specified in IRC 2009 and would be very “tight” (i.e., involve very low levels of air infiltration) for a reference home. Further, infiltration specifications include test conditions (i.e., indoor/outdoor pressure differential in pascals). The Companies recommend 7 ACH50 (7 air changes per hour at 50 pascals), which is consistent with the 2009 IRC and applies across all Pennsylvania housing types.
- **Duct Leakage** - The Companies recommend 8 cfm25 (cubic feet per minute at 25 pascals) of duct leakage to outside per 100 square feet of conditioned floor area, to be consistent with the 2009 IRC.
- **Duct Insulation** - This language is consistent with the 2009 IRC and, therefore the Companies so we recommend no changes here.
- **Duct Location** -The location of the ducts in the reference home has a significant impact on energy usage. The Companies recommend that the location be specified as 50% of the ducts located inside the conditioned space. This will discourage builders from designing homes with the majority of the duct system located in unconditioned attic space.
- **Programmable Thermostats** - The Setback Thermostat references code technical requirements for thermostat capacity, but should add guidance that for modeling

purposes the reference home should have a heating set-point of 70 degrees F and a cooling set-point of 78 degrees F.

- Heating System Baselines - The baseline heating system for geothermal heat pumps (“GSHP”) is 3.0 COP, the minimum efficiency for geothermal systems, whereas customers make a significant investment to upgrade to GSHP from alternative technologies. A more appropriate baseline would be a standard efficiency air source heat pump (i.e., 7.7 Heating Seasonal Performance Factor (“HSPF”) as is applicable to new homes with air source heat pumps). Based on the same rationale, an appropriate standard efficiency baseline for cooling for Geothermal would be the same as for air source heat pumps -- a 13.0 seasonal energy efficiency ratio (“SEER”) SEER with an equivalent 11.2 energy efficiency Ratio (“EER”).

§3.18 Geothermal Heat Pumps: Table 3.62 cross-references Table 3-21 for baseline SEER, EER and HSPF values. The correct reference should be to Table 3.20: HVAC Baseline Efficiencies.

VII. CONCLUSION

The Companies again thank the Commission for the opportunity to provide comments on the Commission's proposed revisions to the TRM and look forward to continuing to work with the SWE, TWG and Commission Staff on this critical aspect of Act 129 compliance.

Respectfully submitted,

Dated: October 28, 2011.



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

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I hereby certify that I have this day served a true and correct copy of the foregoing document upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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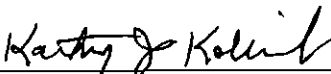
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SECRETARY'S BUREAU**

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Dated: October 28, 2011



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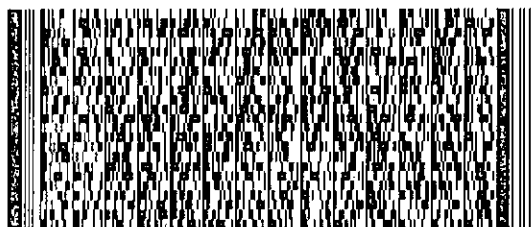
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