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March 12, 2010

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

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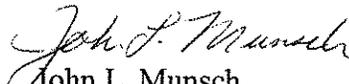
Re: **Implementation of the Alternative Energy Portfolio
Standards Act of 2004; Standards for the Participation
of Demand Side Management Resources – Technical Reference
Manual Update at Docket No. M-00051865**

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Dear Secretary McNulty:

West Penn Power Company d/b/a Allegheny Power appreciates the opportunity to review and comment on the Technical Reference Manual Update per the Tentative Order issued by the Pennsylvania Public Utility Commission. It submits an original and 15 copies of its comments. This filing is made by express delivery and is deemed filed today.

Very truly yours,


John L. Munsch
Attorney

JLM:sac

Enclosures

cc: Gregory A. Shawley at gshawley@state.pa.us
Kriss Brown at kbrown@state.pa.us

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

**COMMENTS OF
WEST PENN POWER COMPANY
d/b/a
ALLEGHENY POWER COMPANY**

Introduction

West Penn Power Company d/b/a Allegheny Power (“Allegheny Power” or “Company”) submits Comments in the above-referenced docket concerning the Tentative Order entered February 2, 2010 in which the Commission advanced the annual update of the Technical Reference Manual (“TRM”) to be applied beginning with the 2010-2011 AEPS Act and Act 129 Energy Efficiency and Conservation (“EE&C”) program compliance years. Allegheny Power supports the Comments filed by the Energy Association of Pennsylvania (“EAPA”) and provides additional comments on the draft TRM as discussed in more detail below. The Company hereby provides Comments on the application of the TRM including the retroactivity of the TRM, additional residential appliance measures, and specific attributes related to lighting, heating, ventilation and air conditioning (“HVAC”), and variable frequency drives (“VFD”).

Retroactive Application of the TRM

Allegheny Power believes that it is generally acceptable to adopt the changes in this draft TRM, with the possible exception of any waivers that an EDC may request, and to apply them retroactively to June 1, 2009, based on the proposed revisions in comparison to the current TRM and the timing of this change in relation to implementation of the Company's EE&C Plan, in order to support ease of administration, evaluation, measurement and verification of the Company's EE&C Plan. The proposed changes in the draft TRM are changes that the Statewide Evaluator ("SWE") prioritized given timing considerations of the TRM review in relation to the Act 129 program years and implementation activities. These primarily included changes to correct misinformation in the TRM, changes to support the EE&C Plans as approved and other changes that the SWE identified to support their role in verifying the savings of the EE&C Plans. In addition, Allegheny Power has been using the draft TRM for current program implementation activities and development of the Company's measurement and verification plans. Applying the proposed changes retroactively will simplify the Company's administration, measurement and verification of the energy efficiency programs. As such, it is acceptable to the Company to adopt the changes and apply them to the program year starting in 2009 and ending May 31, 2010, as well as for the program year starting June 1, 2010 and ending May 31, 2011.

The Company requests, however, that EDCs be permitted to request specific waivers for application of the draft TRM to June 1, 2009 and does not believe that any future TRM revisions should be made retroactively. Electric Distribution Companies ("EDC") have developed EE&C Plans and have, or are implementing, EE&C programs to meet the requirements of Act 129, based on the current TRM. Changes to the TRM could impact the ability of the EDCs Plans to meet the Act 129 requirements. Changes to the TRM must be carefully considered and EDCs

must have the opportunity to revise their Plans and programs going forward in order to ensure that their Plans continue to meet all requirements of Act 129. EDCs must also have the opportunity to obtain a waiver for previous program participation that was based on the current TRM given the potential of TRM changes to require program changes going forward that were not required based on the current TRM. Future revisions of the TRM in accordance with the Commission's TRM update schedule would apply beginning June 1, 2011.

Additional Appliance Measures

A key design consideration for Allegheny Power's EE&C Plan was to develop a diversified portfolio of energy efficiency and conservation ("EE&C") measures that target the installation of higher efficiency appliances or equipment in homes and businesses. Several of these measures are prescriptive in their application and/or are higher tier efficiency levels, based on Consortium for Energy Efficiency ("CEE") Tier 2 or 3 ratings, and the Company requests that these be included in the TRM in addition to those meeting the minimum efficiency level for Energy Star (CEE Tier 1). Allegheny Power has submitted these to the State Wide Evaluator (SWE) requesting interim approval for deemed savings values. Including these in the TRM or, at minimum, obtaining approval for non-TRM deemed savings values will maintain the cost effectiveness for these measures. The measures that Allegheny Power respectfully requests be added to the TRM include:

Clothes Washer: Allegheny Power's EE&C Plan requires the purchase of a CEE Tier 2 or above clothes washer with a Modified Energy Factor (MEF) of 2.00 or higher. The federal minimum standard clothes washer has an MEF of 1.26, and

the Energy Star minimum and CEE Tier 1 standard is 1.80 MEF. The TRM only provides energy and demand savings for the Energy Star minimum clothes washers. Allegheny Power is requesting the TRM to include CEE Tier 2 and above in addition to Energy Star minimum and CEE Tier 1 for the Clothes Washer. The following table is from the CEE website www.cee1.org:

CEE Super Efficiency Home Appliances Initiative High Efficiency Specifications for Residential Clothes Washers

Effective January 1, 2007

Level	Modified Energy Factor (MEF) ¹	Water Factor (WF) ²
Federal Standard	≥ 1.26	No requirement
ENERGY STAR [®]	≥ 1.80	≤ 7.5
CEE Tier 1	≥ 1.80	≤ 7.5
CEE Tier 2	≥ 2.00	≤ 6.0
CEE Tier 3	≥ 2.20	≤ 4.5

¹MEF=Modified Energy Factor, a combination of Energy Factor and Remaining Moisture Content. MEF measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

²WF=Water Factor (number of gallons needed for each cubic foot of laundry). A lower number indicates lower consumption and more efficient use of water.

A listing of the current Energy Star clothes washers as well as those that meet the CEE Tier 2 and above ratings based on energy use and Modified Energy Factor (“MEF”) can be found at the following website:

http://www.energystar.gov/index.cfm?fuseaction=clotheswash.display_products_excel

A review of this listing shows that the average usage for CEE Tier 2 and above clothes washers to be 174 kWh verses the average of 208 kWh for Energy Star and CEE Tier 1 clothes washers.

Dishwasher: Allegheny Power's EE&C Plan requires the purchase of a dishwasher with an Energy Star rated annual energy usage of less than 324 kWh per year. At the time of the Company's June 30, 2009 filing, dishwashers with this requirement were considered "super efficient" and were rated higher than Energy Star units. On August 11, 2009, Energy Star changed its maximum annual energy usage requirement to be less than 324 kWh per year. The draft TRM, as well as the previous versions, provides energy and demand savings for Energy Star rated dishwashers based on the old Energy Star requirement. Allegheny Power is requesting the TRM value be updated with the current Energy Star values based on the new higher efficiency requirement. A listing of the current Energy Star rated dishwashers and their energy usage, last updated on March 3, 2010, can be found at the following Energy Star website link:

http://www.energystar.gov/index.cfm?fuseaction=dishwash.display_products_excel

Programmable Thermostat: The draft TRM does not provide energy and demand savings for programmable thermostats. Allegheny Power requires the installation of programmable thermostats with the Company's HVAC measures and is requesting the TRM include energy and demand savings values for the addition of a programmable thermostat. Estimates of energy and demand savings based on the Energy Star calculator for heat pump and central air conditioner installations with programmable thermostats are as follows:

Annual Energy Savings (kWh)

2,186 (Air Source Heat Pump)

327 (Central Air Conditioner)

Demand Savings (kW)

0.18 (Air Source Heat Pump)

0.11 (Central Air Conditioner)

Room Air Conditioner Recycling: Allegheny Power offers an incentive for the turn-in and recycling of an operating room air conditioner. The estimated lifespan of a room air conditioner is 9 years (Energy Star) and the federal minimum standard of a 10,000 Btu/hr room air conditioner manufactured before 1994 has an Energy Efficiency Ratio (EER) of 8.0. The TRM only provides energy and demand savings for the purchase of an Energy Star room air conditioner and not for the recycling of an operating unit. Allegheny Power is requesting that Room Air Conditioner recycling be added to the TRM. The Energy Star calculator provides the annual energy consumption of 921 kWh and demand of 1.25 kW for a 10,000 Btu/hr room air conditioner with an EER of 8.0.

Lighting

Inclusion of Additional Spiral CFL Wattages in Appendix C: Several Energy Star certified spiral CFLs are not included in the Expanded Prescriptive Lighting Wattage Table in Appendix C of the draft TRM. Based on the importance of CFLs to the EDCs' EE&C Plans and their contribution to the energy and demand savings, Allegheny Power requests that all Energy Star certified Spiral CFL wattages be included in the Expanded Prescriptive Lighting Wattage Table in Appendix C. The Energy Star certified CFL listing can be found at the following link:

http://www.energystar.gov/index.cfm?fuseaction=cfls.display_products_excel

Coincidence Factor for CFLs. Allegheny Power believes that the 5% demand coincidence factor for CFLs is too low. The 5% demand coincidence factor assumes that residential lighting is used less than 24-minutes between the summer on-peak period from June 1st through September 30th.

Allegheny Power also submits that the installation of an Occupancy Sensor should provide demand savings from the control of lighting fixtures. The theory is that the customer's overall demand will be reduced by reducing the number of consuming fixtures operating at any one time. The demand reduction is the end result of multiple fixtures being controlled during typical business hours. Allegheny Power recommends that the kW base and kW inst should not net to zero for lighting control measures and recommends that the kW savings value be based on values contained in the Expanded Prescriptive Lighting Wattage Table in Appendix C. Accordingly, the Company recommends that the last sentence of the second paragraph of section 6.2.6.4 be re-written as follows: *In either case, the kW_{inst} for the purpose of the algorithm is set to kW_{base} kW savings for lighting controls is based on the installed fixtures in accordance with Appendix C.*

Table 12 from May 2009 TRM: Allegheny Power requests that the Prescriptive Lighting Savings Table 12 be retained in the TRM for small and prescriptive type lighting projects. While many projects for lighting are custom in nature and will be effectively handled by the Expanded Prescriptive Lighting Wattage Table in Appendix C, the Company believes that small common lighting projects should not be encumbered with the additional rigor (and cost) of the larger or custom type lighting installations. Table 12 provides a nice tool to calculate the energy and demand savings for small and common lighting upgrades. To address any concerns with application of Table 12 to projects that are custom in nature, the Company agrees with limiting

its use to smaller lighting projects and offers that Table 12 be consolidated to focus on those lighting installations that are prescriptive and typical for smaller lighting projects.

HVAC

Alter Table 6-19 and 20: Allegheny Power recommends this table be consolidated and standardized to main categories similar, or equal to the Table 6-6, to reduce customer application confusion, EM&V costs, and EDC data tracking costs, and to provide a more uniform building type selection for program development and implementation purposes.

Table 6-7: This table defines IF values for conditioned space type. The space types do not correspond with refrigerated space type definitions in the ASHRAE Handbook for refrigeration. Allegheny recommends that the table include medium and high refrigeration temperature ranges indicated to classify project space types.

Table 6-17: This table fixes the demand coincident factor at 67%. Allegheny Power's EM&V contractor's experience is the demand coincident factor for cooling is higher than 67% because cooling equipment, by nature, is likely to operate at or near capacity during a significant portion of the 100 hours of EDC peak demand. Fixing the factor at 67% will limit peak demand savings. Allegheny Power recommends the option to increase the factor above 67% using EDC data gathering.

Variable Frequency Drives

Allegheny Power believes that the pre-measurement and verification measurement requirements for small variable frequency drives ("VFD") which fall outside the defined prescriptive measures and deemed as a custom application in the draft TRM should not be

required. The Company is concerned with the added cost of performing pre-physical measurements for small VFD applications and the impact that this would have on the cost-effectiveness of the program.

Another viable option Allegheny Power believes should be available is the use of software estimating tools. The Company believes that the VFD program is ideally suited for many applications where software estimating tools, which are available from governmental agencies and VFD manufacturers (see below), provide acceptable estimates for the energy savings for small VFD applications. This software is often utilized by businesses to justify the project based in part on the energy savings and this tool should be leveraged to ensure the cost-effectiveness and future viability of this program to our small and large, commercial and industrial and governmental customers.

Allegheny Power recommends that customers applying for VFD installations of 100 Hp or less, should be able to utilize the recognized industry software tools to establish the energy savings. The VFD manufacture, distributor of the VFD manufacturer, qualified Architectural/Engineering firm or qualified engineer/ contractor can perform the calculation of the energy savings of VFD applications by utilizing the estimating software and providing the software output/printout as justification and documentation for the project. Several calculators that can be utilized for this include:

Governmental Agency Calculators:

Bonneville Power Administration: Provides an ASD calculator for fan and pump applications.

The ASD calculator is a software program that provides the user with an easy to use tool for estimating the energy savings and simple payback for Adjustable Speed Drive (ASD)

installations on fans and pumps. The calculator also allows end user to enter measured data.

Link: <http://www.bpa.gov/Energy/N/industrial/audit/index.cfm>

U.S. Dept of Energy – Energy Efficiency and Renewable Energy: The Pumping System Assessment Tool (PSAT) is an online software tool to help industrial users assess the efficiency of pumping system operations. PSAT uses achievable pump performance data from Hydraulic Institute standards and motor performance data from the MotorMaster+ database to calculate potential energy and associated cost savings. The tool also enables users to save and retrieve log files, default values, and system curves for sharing analyses with other users.

Link: http://www1.eere.energy.gov/industry/bestpractices/software_psat.html

U.S. Dept of Energy – Energy Efficiency and Renewable Energy: The Fan System Assessment Tool (FSAT) is an online software tool that helps industrial users quantify energy use and savings opportunities in industrial fan systems. Use FSAT to understand how well your fan systems are operating, determine the economic benefit of system modifications, and establish which options are most economically viable when multiple opportunities exist for system modification.

Link: http://www1.eere.energy.gov/industry/bestpractices/software_fsat.html

Manufacturer Calculators:

Square D: Drive Calculator - Schneider Electric has been providing Adjustable Frequency Drive solutions for HVAC fan and pumping applications for over 30 years. This tool provides an estimate of the cost savings that adjustable frequency drives can provide.

<http://www.squaredleantools.com/tools.cfm/CFID/115879173/CFToken/92924318>

GE: GE calculators compute an estimate of energy savings for fan and pump applications.

<http://www.geindustrial.com/cwc/marketing/drives/energySavingsCalculator.xls>

<http://www.geindustrial.com/cwc/marketing/drives/calculator.htm>

Ceruss Industrial: Provides two calculators as follows:

<http://www.cerusind.com/VFDEstSavingsCalc.asp>

http://www.cerusind.com/catalog/documents/Calculators/VFD_FP_Calc2.xls

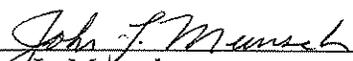
Vacon:

<http://www.vacon.com/Default.aspx?id=450399>

Allegheny Power appreciates the opportunity to submit Comments concerning the update of the TRM.

Respectfully Submitted,

Date: March 12, 2010



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