



**Duquesne Light**

*Our Energy...Your Power*

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October 15, 2013

**VIA Electronic Filing**

Ms. Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, Pennsylvania 17120

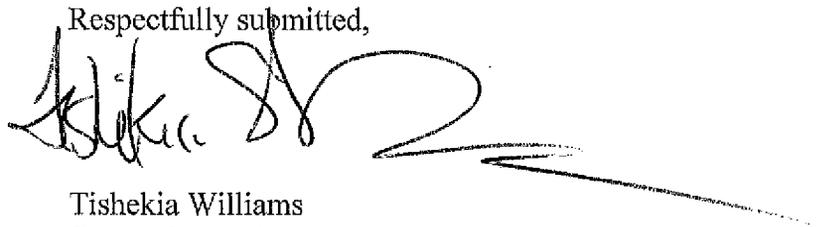
**RE: Implementation of Alternative Energy Portfolio Standards of 2004: Stands for participation of Demand Side Management Resources - Technical Reference Manual 2014 Update  
Docket Nos. M-2012-2313373, M-00051865.**

Dear Secretary Chiavetta:

On August 29, 2013, the Commission issued the draft 2014 Technical Reference Manual ("TRM") and Tentative Order soliciting comments from interested stakeholders within 30 days after notice is published in the *Pennsylvania Bulletin*. Duquesne Light Company's comments regarding the 2014 TRM are enclosed for consideration.

Should you have any questions, please do not hesitate to contact me or Mr. David Defide at (412) 393-6107.

Respectfully submitted,



Tishekia Williams  
Senior Counsel

Enclosures

Cc: Certificate of Service  
Dave Defide

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Implementation of Alternative Energy Portfolio :  
Standards of 2004: Stands for Participation of :      Docket No. M-2012-2313373  
Demand Side Management Resources- :                   M-00051865  
Technical Reference Manual 2014 Update :**

**COMMENTS OF DUQUESNE LIGHT COMPANY**

Duquesne Light Company (“Duquesne” or “Company”) hereby submits comments in response to the Pennsylvania Public Utility Commission (“Commission” or “PUC”) 2014 TRM Annual Update Tentative Order.

**INTRODUCTION**

On October 15, 2008, Governor Edward Rendell signed HB 2200 into law as Act 129 of 2008 (“Act 129”), with an effective date of November 14, 2008. Among other things, Act 129 requires Pennsylvania electric distribution companies (“EDCs”) such as Duquesne to develop and implement Energy Efficiency and Conservation (“EE&C”) plans. The Commission adopted the Technical Reference Manual (“TRM”) as a component of the EE&C evaluation process and noted that the TRM would be updated and expanded in its Phase I Implementation Order.<sup>1</sup> On August 29, 2013, the Commission issued a Tentative Order proposing updates to the TRM and soliciting comments from interested stakeholders within 30 days after the publication of notice of the Tentative Order in the *Pennsylvania Bulletin*.<sup>2</sup> Through the annual update process, the TRM has been expanded from roughly 68 pages into a document that is more than 400 pages as proposed. The expansion of the TRM reflects the extraordinary efforts and increased experience and expertise of the Commission, Statewide Evaluator (“SWE”), EDCs as well as other stakeholders. Duquesne understands the need for TRM updates and appreciates the opportunity to provide comments to the proposed 2014 TRM.

In the August 29, 2013 Tentative Order, the Commission notes that the proposed modifications to the TRM are based on a number of key goals including 1) minimizing the number of EE&C measures that must be evaluated through custom protocols, 2) allowing more

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<sup>1</sup> See Energy Efficiency and Conservation Program Implementation Order at Docket No. M-2008-2069887.

<sup>2</sup> Notice of the Tentative Order was published in the Pennsylvania Bulletin on September 14, 2013.

flexibility for EDCs to use territory-specific data when calculating savings and 3) providing additional reasonable methods for measurement and verification of the energy savings associated with the EE&C measures without unduly burdening EE&C program and evaluation staff, among others. Duquesne generally supports the proposed modification to the 2014 TRM and offers some suggested changes that may help align the 2014 TRM with the Commission's stated goals. Duquesne's suggested changes are based on three broad principles:

1. Changes requiring significant modifications to EDC tracking systems should be avoided where the value gained from the modification is outweighed by increased administrative burden on the programs;
2. The Commission should adhere to industry standard practices for planning, implementing and measuring energy efficiency programs, including the use of annualized savings;
3. Evaluation, Measurement and Verification (EM&V) requirements should be based on the characteristics of the measures and projects implemented as opposed to blanket thresholds.

These issues are discussed more fully below.

## **I. ALTERNATIVE SAVINGS CALCULATIONS AND TRACKING REQUIREMENTS.**

### **a. Purpose of the TRM**

The proposed 2014 TRM was issued August 2013, approximately five (5) months after Duquesne's Phase II plan approval.<sup>3</sup> Duquesne's Phase II Plan projected savings were based on the 2013 TRM in effect at the time of development. Based on the Company's review and evaluation, the proposed 2014 TRM modifications are expected to reduce overall measure savings across the portfolio by approximately 5%.

Under existing processes, the TRM is used to determine compliance with the EE&C requirements of Act 129. As such the process for updating the TRM has been the source of some consternation due to concerns that energy savings values are subject to change after EE&C plans are designed and approved by the Commission. The Commission has responded to these concerns by noting that EDC's have the ability to use alternative methods to calculate deemed

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<sup>3</sup> See Petition of Duquesne Light Company for Approval of its Phase II Plan, Docket No. M-2012-2334399 (Opinion and Order entered March 14, 2013 )

savings and ask their evaluation contractor to use a custom methods to verify savings.<sup>4</sup> Although more costly and administratively burdensome than using energy and demand savings values for standard measures in the TRM, Duquesne has been content with this substitution.

In the 2014 TRM, the Commission again notes that EDC's have the ability to use alternative methods to calculated deemed savings or ask their evaluation contractor to use a custom methods to verify savings. However, EDCs would be required to track savings estimated from the TRM protocols and alternative methods and report both sets of values in the quarterly and annual reports. EDCs must also justify the deviation from the TRM ex ante and ex post protocols in the quarterly and annual reports. Duquesne understands the need to justify deviations from the TRM. However, this obligation requires the tracking of two sets of baseline assumptions and savings and extensive modifications to Duquesne's tracking systems, which may be costly and time consuming. The Company would experience greater administrative burden and costs to use alternative methods of calculating savings when there are changes to the TRM or applicable regulations that effect savings. Given that the draft 2014 TRM reduces overall savings to Duquesne's portfolio, the Company is somewhat concerned about the costs burden of these tracking requirements.

The Company also notes that varying from TRM stipulated or a listed open variable value renders a measure "custom." Custom measures currently require project file documentation to support claimed savings and are not subject to deemed or partially deemed measure protocols. Additionally, there are essentially three types of custom measures: 1) large complex process related, 2) prescriptive measures not yet addressed by the TRM and 3) prescriptive measures with atypical application parameters. This requirement addresses only prescriptive measures with atypical application parameters. Such expanded tracking requirement for a small number of exception projects appears out-of-scope. The Company respectfully requests that the Commission allow EDCs to follow existing protocols for justifying alternative methods of calculating savings.

#### **b. Using the TRM**

Prescriptive measures have deemed measure protocols whereby energy and demand values are specified in the TRM, or partially deemed measure protocols using algorithms with

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<sup>4</sup> See Energy Efficiency and Conservation Program Implementation Order, Docket Nos. M-2012-2289411, M-2008-2069887 (Entered August 3, 2012).

stipulated and open variables. The proposed 2014 TRM prohibits the use of customer-specific or program-specific information to alter the stipulated variable for deemed measure protocols. Additionally, the 2014 TRM limits the use of customer-specific or program-specific information to variables specifically identified as open variables in partially deemed measure protocols.

The restriction on deemed measure protocols implies that TRM values should not be subject to evaluator correction or application of realization rates associated with evaluator findings of site-specific parameters that vary from TRM stipulated or listed values for open variables. To the contrary, the TRM is “a living resource document that requires updates to reflect specific current Pennsylvania conditions, as they become known. These changes in baseline parameters are derived from changing state and federal standards or *specific data gathered from the Act 129 EE&C Program.*”<sup>5</sup>

### **c. Definitions**

The definition of Retrofit Measure (Early Replacement Measure) contained in the 2014 TRM provides “[r]etrofit measures have a dual baseline: for the estimated remaining useful life of the existing equipment the baseline is the existing equipment; afterwards the baseline is the applicable code, standard and standard practice expected to be in place at the time the unit would have been naturally replaced.” Again, tracking dual baselines expands the data structures and would require significant modifications to tracking and reporting systems. These modifications may be costly and time consuming. In practice Duquesne identifies a given measure as either “Replace on Burnout”<sup>6</sup> or “Retrofit.” Duquesne’s Commission approved Phase II EE&C Plan at Figure 38 (page 99) describes its Program Management and Reporting System (PMRS) capabilities, specifically the existing base case technology, useful life and measure cost. There is no provision for tracking two base case technologies; each with partial useful life. Implementation of this requirement would expand the operational requirements of Duquesne’s EE&C plan. The Company requests that this Commission remove language requiring EDCs to track dual baselines.

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<sup>5</sup> *Id.*

<sup>6</sup> Duquesne suggests using the term “Replace on Burnout” instead of “Retrofit on Burnout.” “Retrofit” is contradictory, replaces “Natural Equipment Replacement” as a term and creates confusion with the contrasted “Retrofit Measure.”

## II. INDUSTRY STANDARDS FOR PLANNING, IMPLEMENTING AND MEASURING EE PROGRAMS

### a. Measure Retention and Persistence of Savings

Industry standard practices for planning, implementing and measuring energy efficiency programs apply *annualized* savings, meaning savings are tabulated across program periods, cumulative. Cumulative annualized incremental savings within a multiyear reporting period are added together when assessing whether a multiyear savings goal is achieved. Cumulative savings represent the sum of annualized savings over multiple program years of a reporting period.

The Commission's Phase II Implementation Order provides that savings reduction targets can be cumulative at the end of a phase and among phases. Specifically, regarding the "Accumulation of Targets," the Phase II Order states:

"... The Act 129 programs are cumulative at the end of a phase such that the savings at the end of a phase must show that the total savings from measures installed during the phase are equal to or greater than the established reduction target. Therefore, if any measures are installed whose useful life expires before the end of the phase, another measure must be installed or implemented during that phase which replenishes the savings from the expired measure.

Savings reduction targets can also be cumulative among phases such that any savings from measures installed in a previous phase, which expire during a subsequent phase, must be replaced in the subsequent phase so that there is no erosion of savings over multiple phases. We do not read the legislation as requiring the adoption of this concept."

Duquesne understands the aforementioned language to mean that EDCs must accumulate enough savings at the end of a phase to demonstrate that the savings from the measures installed are equal to or greater than the target. Additionally, EDCs are not required to replenish savings from Phase I in Phase II to prevent savings erosion over multiple phases.

However, in section 1.12.2, the proposed 2014 TRM states "savings for a measure with a useful life of two years installed in the first program year of the Phase II cannot be counted toward the established reduction target unless another measure is installed or implemented to replenish the savings from the expired measure." The Company understands this example as indicating that

the Company *could not* count savings from a measure with a two year useful life when installed in the first year of a three year phase unless the measure is replaced. This requirement is seemingly inconsistent with the notion that savings needn't be replenished to be counted toward the compliance target. Moreover, this method of accounting for savings from measures with short-life energy savings is not consistent with other states, including energy efficiency leading states such as California, Connecticut, Massachusetts, New York, Vermont or Wisconsin.

The following example demonstrates the problem with this proposal. According to the Draft 2014 TRM a CFL in a residential application will last 6.8 years (see Appendix A) and is expected to be in use 2.8 hours per day (Table 2-73) or 1,022 hours per year. If the CFL expected useful life is 6.8 years, the life of the CFL is 6,949.6 hours. If we apply that CFL in a hospital where the Draft 2014 TRM states annual hours of use are 5,182 hours (Table 3-6) the CFL will last 1.34 years. Application of this rule would prohibit EDCs from counting CFLs installed in hospitals unless installed mid-2nd year of the three year Phase II program period. This is inequitable in that the CFL will result in the same energy savings whether installed in year one, two or three. However, under the proposed Draft 2014 TRM it would only count toward the savings if installed mid-year 2 or year 3. The idea that energy proven to have been saved, is not saved, unless it is "replenished" so as to be producing savings at the end of a multiyear program period is problematic. Duquesne respectfully suggests that TRM should be revised to return to industry standard practice of tabulating annualized energy savings for compliance purposes.

**III. THRESHOLDS & METERING REQUIREMENTS**

**a. End-use Categories & Thresholds for Default Values**

The 2014 TRM indicates that customer-specific values are appropriate for high-impact and high-uncertainty measures such as HVAC or lighting retrofits in universities or hospitals that have diverse facilities, and where those types of projects represent a significant share of program savings. Duquesne agrees that customer-specific values are appropriate for high-uncertainty measures. However, the Company believes that the requirement for "metering" should be based on uncertainty as opposed to size or expected savings. There are many instances of large projects that have large quantities of simple prescriptive measures. Such projects should not trigger mandatory metering. Appropriately rigorous baseline studies should be used to gather data needed to produce better bases for future TRM stipulated and listed building type variables, the

proposed metering requirements will serve to slow program production and increase administrative burdens to EDC EE&C plans.

**b. Quantifying Annual Hours of Use.**

Similarly, in section 3.2.6, the proposed 2014 TRM states that for projects with expected savings of 500,000 kWh or higher, metering is required but trend data from Building Management System (“BMS”) is an acceptable substitute. This section also states that for whole facility lighting projects with connected load savings less than 20 kW stipulated whole building hours shown in Table 3-6 should be applied. If the project cannot be described by the categories listed in Table 3-6, or the project retrofitted only a portion of a facility’s lighting system for which whole building hours of use would not be appropriate, select the “other” category and determine hours using facility staff interviews, posted schedules, or metered data. This language should be clarified to ensure that whole building hours of use should be used when appropriate and it is permissible to use such whole building as use area hours of use where applicable to any specific building use area. For example, in a distribution warehouse with clearly differentiated “office” versus “warehouse” space, the Company believes that it should be acceptable to use the whole building “warehouse hours of use” for lighting modifications in the warehouse and “office hours of use” for lighting modifications in the office. Again, metering should be required for uncertainty only.

**c. Variable Frequency Drive Improvements**

Under the proposed 2014 TRM, VFD projects achieving expected kWh savings of 250,000 kWh or higher must be metered to calculate ex ante and/or ex post savings. In addition, if any VFD within a sampled project uses the “Other” category to stipulate hours, the threshold is decreased to 25,000 kWh. Metering is not mandatory where hours can be easily verified through a building automation system schedule that clearly shows motor run time. The Company believes that requirement will create extensive and excessive metering requirements and will confound program implementation and stymie program production. Metering should only be where there is uncertainty in project parameters used to calculate savings.

#### IV. CONCLUSION

The Company supports the Commission's efforts to update the TRM to account for new measures, regulatory/code changes and improve the accuracy of EM&V processes. Additionally, the Company supports many of the changes included in the draft 2014 TRM. However, the Company respectfully suggests that changes requiring significant modifications to EDC tracking systems should be avoided where the value gained from the modification is outweighed by increased administrative burden on the programs. Second, industry standard practices for planning, implementing and measuring energy efficiency programs should be maintained. Finally, blanket thresholds should be avoided and project requirements should be guided by the characteristics of the measures and projects implemented.

Respectfully Submitted:

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Dated: October 15, 2013

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant):

VIA Email or US Mail

Bureau of Investigation & Enforcement  
PA Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor West  
PO Box 3265  
Harrisburg, PA 17105-3265

PA Department of Environmental Protection  
Rachel Carson State Office Building  
400 Market Street  
Harrisburg, PA 17101

Megan G. Good  
Bureau of Technical Utility Services  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
3rd Floor 400 North Street  
Harrisburg, PA 17120

Office of Small Business Advocate  
300 North Second Street, Suite 1102  
Harrisburg, PA 17101

Office of Consumer Advocate  
555 Walnut Street  
Forum Place, 5th Floor  
Harrisburg, PA 17101-1923

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Dated: October 15, 2013