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October 24, 2013

**VIA ELECTRONIC FILING**

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

Re: Implementation of the Alternative Energy Portfolio Standards Act of 2004:  
Standards for the Participation of Demand Side Management Resources – Technical  
Reference Manual 2014 Update  
Docket No. M-2012-2313373; M-00051865

Dear Secretary Chiavetta:

Enclosed please find joint reply comments from Citizens for Pennsylvania's Future (PennFuture) and the Keystone Energy Efficiency Alliance (KEEA) on the above-referenced proceeding.

Please do not hesitate to contact us should you have any questions.

Sincerely,

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Cc: Megan G. Good  
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Enclosures:

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION:**

Implementation of the Alternative Energy : M-2012-2313373  
Portfolio Standards Act of 2004: Standards : M-00051865  
for the Participation of Demand Side  
Management Resources – Technical  
Reference Manual 2014 Update

**JOINT REPLY COMMENTS OF**

**CITIZENS FOR PENNSYLVANIA’S FUTURE (PENNFUTURE) AND THE  
KEYSTONE ENERGY EFFICIENCY ALLIANCE (KEEA)**

**Section I – Introduction**

Citizens for Pennsylvania’s Future (PennFuture) is a statewide, non-profit (501(c)(3)) public interest organization, working to enhance Pennsylvania’s environment and economy, with offices in Harrisburg, Philadelphia, Pittsburgh and Wilkes-Barre.

The Keystone Energy Efficiency Alliance (KEEA) is a nonprofit, tax-exempt 501(c) (6) trade association of 64 businesses and nonprofits dedicated to promoting the energy efficiency and renewable energy industries in Pennsylvania.

On September 13, 2013, the Pennsylvania Public Utility Commission (“PUC” or “Commission”) released a Tentative Order in the above-captioned proceeding seeking comments on the Technical Reference Manual (TRM) 2013 Annual Update and reply comments. PennFuture and KEEA jointly filed comments on October 15 on the Tentative Order. Herein represent reply comments filed jointly by KEEA and PennFuture, in response to comments filed on the Tentative Order by other parties. We received analytical support and policy advice to develop these reply comments from Energy Futures Group and Optimal Energy, Inc. We appreciate the opportunity to submit reply comments on the Technical Reference Manual (TRM), Docket No. M-2012-2313373.

We thank you for undertaking annual updates to the TRM as information gained from program implementation each year will inform more accurate savings estimates. The Reply Comments provided below are focused on a limited number of key issues and measures rather than responding to all of the measure level detail provided by some parties. Based on our consultants’ review of the TRM comments filed by the Energy Association of Pennsylvania (EAP) and by the individual EDCs, PennFuture and KEEA offer the following Reply Comments.

**Section II – Key Comments**

**The level of TRM detail is appropriate and the effort to effect any required EDC changes is both necessary and justified.** Both the EAP and individual EDCs have questioned whether the cost to implement the proposed changes is justified by the additional detail in the draft 2014 TRM. Further, Duquesne has stated that the proposed changes will reduce their overall planned savings and require them to modify their program offerings. PennFuture and KEEA believe that there is more than sufficient time prior to the start of the next Program Year to make any necessary changes to program tracking systems, program rebate forms, and portfolio measure mixes. Any change to savings levels and program offerings is a result of more precise measurement of savings and is fully justified. Further, there is and always will be an interplay between EM&V and program planning. Program planning should be forward looking and be expected to incorporate updated and more accurate evaluation results, including TRM savings estimates. Measure baselines, high efficiency measure definitions, and measure savings are rarely static, even over short periods of time. The EDCs should anticipate such changes and have sufficient flexibility in their program planning and implementation activities to respond to these changes.

**The Commission should establish a higher metering threshold of 1,000,000 kWh for non-residential lighting measures.** The EAP, Duquesne, and PPL noted that establishing a 500,000 kWh metering threshold would significantly increase the number of projects to be metered, with PPL quantifying the increase based on their historic program activity. While PennFuture and KEEA support increased metering in many applications, it is not yet clear as to whether the increased EDC cost and customer intrusion are currently justified to generate more precise estimates of lighting hours of use (HOU) and coincidence. We concur with the suggestions to modify the current 200 kW of connected load threshold to 1,000,000 kWh in savings. Based on PPL's estimates this will still yield a substantial increase in the number of projects to be metered. Data from these projects should be reviewed by the SWE to ascertain how well the HOU, coincidence factors, and other key variables match current default assumptions. Based on this review a more informed decision can be made as to the need to further lower the metering threshold.

As the SWE establishes metering requirements and thresholds, PennFuture and KEEA recommend that the SWE consider the possible leveraging of increased smart meter installations. Are there opportunities to use smart meters to reduce the costs and potential customer intrusion associated with end use metering? If so, how might this affect proposed metering requirements for energy efficiency projects?

**The proposed metering thresholds for variable frequency drives (VFDs) should be left unchanged.** The metering thresholds for VFDs are reasonable and appropriate given the large amount of savings per metered site. The requirements for VFD metering is appropriate given the possible large variability in both operating hours and operating profile, particularly for those building types classified as "other".

**It is imperative that early replacement retrofit measures be properly modeled to account for dual baselines and savings streams.** In its comments, Duquesne argues against calculating early replacement retrofit measure savings to account for the two - in some cases very different - savings streams that an early replacement retrofit measure generates: the savings based on going from the current efficiency of the removed unit to baseline and from baseline to the high efficiency level of the installed measure. The effective lifetimes for these two savings stream differ so they must be tracked and estimated separately.

PennFuture and KEEA strongly disagree with Duquesne's proposal. The rationale provided by Duquesne is largely one of cost and inconvenience centered on changes to their tracking system. Given the large role that early replacement retrofit measures play in the C&I sector there is a clear need to properly and accurately characterize their savings. We believe that any tracking systems modifications to track these savings are fully justified.

We note that in Exelon's comments it proposes further distinguishing between Early Replacement and Retrofit measures. We concur with the general suggestion proposed by Exelon on this issue noting that the dual baseline and savings concern raised by Duquesne applies primarily to Early Replacement measures.

**The TRM must use a consistent and unambiguous peak period definition throughout.** In our prior comments and in those provide by Exelon questions were raised as to inconsistencies about how the peak period is defined and used to develop measure coincidence factors. We concur with Exelon's request that all coincidence factors in the draft TRM be reviewed and revised accordingly to ensure consistency with the new peak period definition.

**Measure baselines should not default to the minimum code or standards requirement.** Exelon proposes that industry standard practice only be used to define measure baselines "in the absence of applicable codes or standards". As detailed in our previous comments we noted that codes and standards often make for very poor baseline assumptions. For equipment and products covered by federal standards, data on the market share for nearly all ENERGY STAR covered products demonstrates that the baseline for these products is often much above any presumed federal standards baseline. Conversely, new construction baseline studies have shown that lax building code enforcement often results in standard industry construction practices less than that required by code. The TRM must properly and correctly establish baselines for each measure and not defer to codes or standards for mere convenience.

**The current treatment of short-lived measures by the TRM to determine compliance with cumulative savings goals is adequate and should remain unchanged.** Duquesne raises a legitimate concern as to the timing and impact of short-lived measures installed at the beginning of a three-year compliance period. The concern raised is that if the measure will not be operating at the end of the compliance period then the savings from that measure would not count towards the cumulative three-year compliance target. However, if that measure were installed later in the three-year compliance period it would contribute to the cumulative compliance target.

While PennFuture and KEEA share some of Duquesne concerns we believe that the current TRM position is consistent with growing interest and focus on lifetime measure, program, and portfolio savings and benefits rather than on shorter term or annual benefits. For example, Ontario establishes lifetime gas saving goals and Wisconsin has lifetime savings goals for its electricity efficiency programs. In addition, shareholder performance incentive goals in both Connecticut and Massachusetts include a benefits component which requires the quantification of both lifetime energy and demand savings. The TRM should remain unchanged.

**The changes in the residential lighting Table 2-88 proposed by Exelon should be reviewed and included in the TRM as appropriate.** Exelon has recommended significant modifications to Table 2-88. Currently the table only addresses values for reflector lamps and assumes a single wattage for any given reflector lamp type. Exelon's proposed Table 2-88 expands the table to include other

lamp types and provides a range of baseline wattages based on lumen output. PennFuture and KEEA supports this approach, but would ask that the SWE review and confirm that the proposed baseline wattages and lumen bins in the revised Table 2-88 are technically correct and properly aligned.

### Section III -- Conclusion

In conclusion, PennFuture and KEEA appreciate the opportunity to provide reply comment on this docket and look forward to working with the commission to continue the success of Act 129.

Sincerely,



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