BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMENTS OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Implementation of Act 129 of 2008 –
Total Resource Cost (TRC) Test
2011 Revisions Docket No. M-2009-2108601

The Pennsylvania Department of Environmental Protection thanks the Commission for the opportunity to provide comments on the need to continue Implementation of Act 129 of 2008 and the Total Resource Cost (TRC) Test 2011 Revisions begun under Docket No. M-2009-2108601.

Measure Life:

The Department agrees with the Commission that use of a total resource cost (TRC) test to analyze the costs and benefits of the energy efficiency and conservation (EE&C) plans that certain electric distribution companies (EDCs) are required to file is necessary to ensure greatest value of services to the ratepayers funding these programs. Under the current PUC order, the TRC test is defined as "a standard test that is met if, over the effective life of each plan not to exceed 15 years, the net present value of the avoided monetary cost of supplying electricity is greater than the net present value of the monetary cost of energy efficiency conservation measures."

While the Department agrees with most aspects of this TRC definition, many installed building envelope measures have a useful, functional lifetime far exceeding the 15 year limitation – such as higher levels of insulation, effective air-sealing and high

performance fenestration replacements (i.e. high R-value, low emissivity windows and doors). This 15-year limitation in many cases prevents implementation of optimal benefit building envelope improvements and wholistic approaches to reducing ratepayer energy consumption and peak demand. A 15-year limit not only unrealistically undervalues the benefits of building envelope improvements, but also leads to oversizing of heating and cooling equipment – further increasing both peak demand and energy consumption.

Most building envelope measures have a functional life of 30 to 50 years. Using a more realistic time valuation for these measures will significantly improve their cost-benefit ratio and allow for more comprehensive, longer lasting and sustainable peak load and consumption reductions. The CA TRM lists numerous ECMs with a useful life of 18 to 20 years, depending upon climate zone, for building envelope improvements. PA has more severe climate zones than CA (greater number of combined heating and cooling degree days), is a dual-peaking state (summer and winter peak demand) and typically has older building stock (often predating any mandated building energy performance or insulation standards). Thus, the Department requests the Commission increase the effective life used in calculating benefit-cost ratio (B/C ratio) of building envelope measures from 15-years to 20-years, yielding significant improvements in 100 peak hour load reductions, energy consumption, air quality, ratepayer benefit and encouraging the development of more efficient structures.

<u>Treatment of ARRA and other non-ratepayer funds</u>:

Act 129, in essence, created a ratepayer-funded societal benefits program managed and administered by the EDCs to serve their respective customers by reducing

peak (100 hours) demand and energy consumption in their respective service territories through the implementation of Energy Efficiency and Conservation (EE&C) programs. Benefits of these EE&C programs are exclusive to ratepayers served by these EE&C programs - as well as the EDCs providing electrical distribution services - and are not available to electricity consumers outside of each respective EDC service territory.

When the Costs of EE&C plans are supported or supplanted by non-ratepayer funds, such as ARRA or other general population monies or tax-based programs, the process becomes analogous to taxation without representation. Therefore, the Department recommends that ARRA and all other non-ratepayer-based funds provided by, and intended to benefit, all of society and taxpayers on an equal basis, logically should not be used to support Act 129 program costs or to enhance individual, exclusive EDC EE&C plans.

Net-To-Gross:

The Department concurs with the Commission that Net-To-Gross research is costly, laden with potential inaccuracies and difficult to undertake. However, no potential alternatives, such as benchmarking and post EEM / ECM installation analysis of actual utility billing data for those ratepayers participating in EE&C plans, are discussed or offered.

The Department strongly suggests that rather than exacerbating a situation which has historically provided relatively low information value per expended cost and accuracy such as Net-To-Gross research, the Commission consider the use of (weather and site normalized) benchmarking and billing data to determine measure and program

effectiveness. Further, the Department recommends that additional economies of scale cost savings can be achieved (thus, rate-payer costs decreased and program benefits increased) through the utilization of a single, statewide standard for benchmarking and billing analysis. The Department currently employs the EPA's ENERGY STAR Portfolio Manager commercial building benchmarking program and a similar Home Energy Yardstick residential benchmarking program to provide essentially the same end results as Net-To-Gross research, with very minimal program expenditure and very high levels of accuracy. These programs are in the public domain (free) and require only minimal input and human interface, particularly if automated utility billing is utilized.

Fuel Switching:

The Department concurs with the Commission's proposed resolution, allowing Fuel Switching, using the latest version of the CA SPM as a Cost / Benefit guide and requiring replaced electrical appliances and equipment to be high efficiency. The Department would offer that only equipment earning the EPA's ENERGY STAR performance rating be eligible for inclusion in EE&C plans.

TRC Calculations:

The Department agrees with the Commission's assertions as to the potential complexities and numerous variants attributable in any attempt to determine incremental costs for every possible EEM and ECM. The Department also agrees with the Commission's proposed resolution to use the CPUC's DEER and to establish appropriate multipliers for each EDC. However, the Department suggests that the SWE or some

other third-party, rather than the individual EDC, be employed to determine the appropriate valuation of said multipliers.

Inclusion or Exclusion of Customer Avoided Operating And Maintenance Costs In The TRC Calculations:

The Department offers that "Avoided Cost" only be included for TRC calculations in cases where pre-existing Operating and Maintenance contracts are in place and where costs for said services are specifically identified within the contract. The SWE or other third-party should make the determination as to which, if any, individual EEM and ECM avoided cost may be included and to determine appropriate valuation. Inclusion of avoided cost for a home-owner to replace a light bulb, for example, is not only unjustified, but baseless as there are no realistic, standardized associated costs.

TRC Reporting:

The Department again concurs with the Commission on the need for establishing accurate baseline research and has previously provided a recommendation for the use of the existing, nationally recognized and vetted benchmarking services (Portfolio Manager and Home Energy Yardstick) provided by the US EPA's ENERGY STAR program.

The Department thanks the Commission for the opportunity to provide these comments.