



June 29, 2012

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
P.O. Box 3265  
Harrisburg, PA 17105-3265

Re: Implementation of Act 129 of 2008—Total Resource Cost Test (TRC) for Phase II of Act 129  
Docket Nos. M-2012-2300653 & M-2009-2108601

Dear Secretary Chiavetta,

Enclosed please find one original and three copies of joint comments of Northeast Energy Efficiency Partnerships and the Pace Energy and Climate Center in the above-referenced proceeding.

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

Sincerely,

A handwritten signature in blue ink that reads 'Josh N. Craft'.

Josh Craft  
Senior Policy Associate  
Northeast Energy Efficiency Partnerships

A handwritten signature in black ink that reads 'Jackson Morris'.

Jackson Morris  
Director of Strategic Engagement  
Pace Energy and Climate Center  
744 Broadway  
Albany, NY 12207  
914.539.1985  
[jmorris@law.pace.edu](mailto:jmorris@law.pace.edu)

Enclosure

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION:

Implementation of Act 129 of 2008 : Docket No. M-2012-2300653  
Total Resource Cost (TRC) Test-2012  
Phase II of Act 129

**REPLY COMMENTS OF  
NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS (NEEP)**

**I-Introduction**

As the regional organizations working to promote energy efficiency in buildings throughout the Northeast and Mid-Atlantic, Northeast Energy Efficiency Partnerships (NEEP) and Pace Energy and Climate Center (Pace) welcome the opportunity to comment in Docket Nos. M-2012-2300653 and M-2009-2108601, regarding the Total Resource Cost (TRC) Test in Pennsylvania's Act 129 energy efficiency programs.<sup>1</sup> We are pleased that the Public Utility Commission (PUC) recognizes the importance of cost-effectiveness testing, in particular the TRC, to the future success of Pennsylvania's energy efficiency programs. A cost-effective portfolio of programs, as determined by a well-designed and appropriately utilized TRC, helps meet the overarching objective of providing customers with reliable energy services at the lowest total cost. Indeed, as the lowest cost, lowest risk resource, ensuring utilities design and implement robust efficiency portfolios will help ensure Pennsylvanians are subject to utility rates that are both just and reasonable.

Our experience suggests, however, that in practice the TRC may inhibit the ability of the Electric Distribution Companies (EDCs) to create robust programs that can lower energy costs, provide tangible benefits to their customers, and enable the Act 129 programs to contribute fully to Pennsylvania's broader public policy goals.

We offer the following recommendations for consideration by the Commission in order to optimize its cost-effectiveness screening in Phase II of Act 129:

- The Commission should incorporate additional benefits to the TRC test, namely including a broader range of energy and avoided environmental cost benefits, and consider supplementing it with the Utility Cost Test (UCT), as is common in other states.
- The Commission should monitor and participate in discussions by Commissions and other stakeholders throughout the Northeast and Mid-Atlantic region regarding revisions to cost-effectiveness testing, particularly by the members of NEEP's Evaluation, Measurement, & Verification (EM&V) Forum. The final order should provide

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<sup>1</sup> Specifically with regard to NEEP's participation in this filing, these comments are offered by NEEP staff and do not necessarily represent the view of NEEP's Board of Directors, sponsors or underwriters.

flexibility to allow for consideration of this new information and possible recommendations.

## II-Recommendations for Revisions to Cost-Effectiveness Testing

NEEP largely concurs with the Commission's recommendations for the design of the TRC in Phase II of the Act 129 energy efficiency programs. We support the Commission's view that the TRC be applied at the EDC plan level, which will ensure ample protection for ratepayers while not short-changing important programs with low TRC ratio, such as whole house residential retrofit programs. We also commend the Commission's decision to use gross savings for purposes of compliance with the Act 129 savings targets, which will provide greater certainty to the EDCs about compliance as they design programs.

We propose two revisions to the current TRC test, to be considered either together or independently, and which we believe will enhance benefits to ratepayers.

### 1. Benefits Included in the TRC Test

We submit that cost-effectiveness screening should measure all quantifiable benefits created for customers by the Act 129 energy efficiency programs. In general, we applaud the Commission's approach to recognizing benefits in the TRC, which account for the economic savings that result from avoided electricity costs, transmission and distributions costs, operation and maintenance costs, and reduced Alternative Energy Portfolio Standard (AESP) compliance costs. The Commission tailored the design of the TRC test to be in accordance with Act 129, which specifies the "monetary benefits" from the avoided energy supply.<sup>2</sup> We believe, though, that the Commission is within its authority to include certain monetarily quantifiable, non-electric benefits as well, namely fuel and water savings and avoided environmental compliance costs. For informational purposes, we have included a chart below of how states throughout the region treat these matters.

- **Fuel and water savings:** Act 129 programs will provide significant reductions in fossil fuels for space and water heating, as well as significant water savings. These are especially important because Pennsylvania does not have energy efficiency programs that address non-electric fuels. The Commission should allow the EDCs to account for these savings, which are quantifiable in monetary terms and are inherent in supplying energy to customers.
- **Wholesale price suppression benefits:** The reductions in demand for electricity that are driven by energy efficiency projects not only result in savings as consumers use less kWh on a volumetric basis, but also put downward pressure on the wholesale clearing price of electricity on the wholesale markets (i.e. the commodity price paid by all consumers goes down as reliance on more expensive resources higher up the bid

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<sup>2</sup> 66 Pa. C.S. § 2806.1(m).

stack declines). While this effect in the context of the broader PJM market may be difficult to quantify, it is certainly not zero. And when combined with efficiency investments in other PJM states, the collective impact could be significant. In addition to this effect on electricity prices, reduced load forecasts from efficiency investments lowers the amount of capacity load serving entities must procure, thereby generating additional savings from reduced capacity prices. We strongly urge the Commission to explore mechanisms by which these savings can be accounted for and incorporated into the TRC and/or UTC analyses.<sup>3</sup> Failing to do so will result in flawed results that undervalue the benefits of these investments.

- **Environmental compliance costs:** The Commission plans to exclude avoided carbon benefits as part of the TRC in Phase II without further statutory change. We note, though, that customers stand to gain from avoided environmental compliance costs for new federal air pollution and carbon rules for power plants, including but not limited to the EPA's proposed Carbon Pollution Standard and the Mercury and Air Toxics Standard (MATS).<sup>4</sup> These avoided costs are particularly significant given the large amount of coal in Pennsylvania's electric supply mix. Over time, we recognize that these benefits may be included in the avoided cost of electricity, but we encourage the Commission to recognize the avoided environmental compliance benefits of energy efficiency investments and ensure that those are adequately accounted for in the future.

#### Northeast States Cost-Effectiveness Tests and Benefits Included<sup>5</sup>

State	Test & Non-Electric Benefits Included
Connecticut	Utility Cost Test
Delaware	TRC- <i>in progress</i>
District of Columbia	Societal Cost Test- avoided fossil fuel costs and environmental externalities adder
Maine	Societal Cost Test- avoided fossil fuel, water and environmental compliance costs

<sup>3</sup> See Rick Hornby, et al., Synapse Economics, "Avoided Energy Supply Costs in New England: 2011 Report," August 11, 2011, p. 1-14-18. Available at <http://www.synapse-energy.com/Downloads/SynapseReport.2011-07.AESC.AESC-Study-2011.11-014.pdf>.

<sup>4</sup> For a discussion of the potential costs of compliance with new EPA regulation, see Congressional Research Service, "EPA Regulation of Coal-Fired Power: Is a 'Train Wreck' Coming?," August 8, 2011, p.8. Available at <http://www.fas.org/sqp/crs/misc/R41914.pdf>. We also point out the demand-side resources, such as energy efficiency, had a major significant impact in ensuring that the PJM region, of which Pennsylvania is a part, will continue to have sufficient capacity to meet its needs. See Sue Tierney, "The Positive Outlook for Cleaner Air and Reliable Electric Service," Analysis Group, Inc., June 11, 2012, p. 6-8. Available at [http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Tierney\\_PositiveOutlook\\_MATSReliability\\_June\\_2012.pdf](http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Tierney_PositiveOutlook_MATSReliability_June_2012.pdf).

<sup>5</sup> Martin Kushler, Seth Nowak, and Patti White, "A National Survey of State Policies and Practices for the Evaluation of Ratepayer-Funded Energy Efficiency Programs," ACEEE Research Report, February 16, 2012. Available at <http://www.aceee.org/research-report/u122>; Elizabeth Titus, Julie Michals, NEEP, and Monica Neivus, Consortium for Energy Efficiency (CEE) "How Do We Measure Market Effects?: Counting the Ways and Why It Matters," ACEEE Summer Study, 2004, p. 6-121.

Maryland	TRC— avoided electric costs only
Massachusetts	TRC- avoided fossil fuel, water and environmental compliance costs
New Hampshire	TRC- avoided fossil fuel costs
New Jersey	Multiple Tests—avoided fossil fuels costs
New York	TRC- avoided fossil fuels and water costs
Pennsylvania	TRC-avoided electric costs only
Rhode Island	TRC- avoided fossil fuel, water, and avoided CO2 costs
Vermont	Societal Cost Test- avoided fossil fuel and water costs

## 2. Supplement the TRC with the Utility Cost Test (UCT)

As stated above, a well-designed and thoughtfully applied TRC that fully accounts for the costs and benefits of efficiency programs in a balanced manner can be a key tool for regulators to compile an optimal portfolio of programs. However, it is not the only tool that should be considered. For example, an increasing number of states have adopted the Utility Cost Test as their primary screening tool, which focuses on the comparison between avoided supply costs and costs incurred by energy efficiency program administrators. Efficiency programs that have a UCT ratio above 1.0 minimize total energy supply costs to ratepayers, hence promoting resources that are least cost. We request that the Commission consider supplementing its use of the TRC test with the UCT test.

To be clear, we are *not* recommending that the Commission *replace* the TRC with the UTC. Rather, the combination of the two tests could assist the Commission in promoting least cost resources for ratepayers. One possible approach would be to rely on the TRC to gauge cost comparison with supply-side resources and impacts among customers, while using the UCT for final program approval. We submit that a future technical session on this topic would provide the Commission with a good comparison of the utility of each of these tools.<sup>6</sup>

### Participate in the Regional Dialogue on Cost-Effectiveness and Other Evaluation Issues

Several states throughout the Northeast and Mid-Atlantic region are recognizing the need to develop new approaches to cost-effectiveness screening that enable all cost-effective energy efficiency opportunities. As states like Pennsylvania move towards stronger energy efficiency programs, these discussions will become even more important. We submit that there is not one solution, but that states will take different approaches in reconciling cost-effectiveness testing with their energy, economic and environmental goals. We therefore encourage the Commission to engage in a dialogue about this issue with neighboring states and ensure that

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<sup>6</sup> Elizabeth Daykin, Jessica Aiona, Cadmus Group, and Brian Hedman, Hedman Consulting, “Whose Perspective? The Impact of the Utility Cost Test,” International Energy Program Evaluation Conference (IEPEC), August 2011, p. 7-8.

its order in this proceeding allows for flexibility to incorporate new information as it becomes available.<sup>7</sup>

To help facilitate these discussions regarding cost-effective and other important evaluation matters, we encourage Pennsylvania's energy efficiency stakeholders join the Regional EM&V Forum ('the Forum'), a project managed and facilitated by Northeast Energy Efficiency Partnerships, Inc. (NEEP). The Forum is a cost beneficial partnership established to develop technical information and EM&V and reporting protocols that would assist states in developing solid evaluation, measurement and verification strategies and standards for energy efficiency programs.<sup>8</sup> The overall premise for the EM&V Forum is that by combining the evaluation interests of the region along with the multi-state experience of regulatory staff from many states, all states benefit from sharing the research costs as well as overall expertise of the group effort.

Pennsylvania could benefit from leveraging costs for large, hard-to-deliver research projects such as load shape studies, development of incremental cost curves for priority measures, and timely research on emerging technologies. The Forum is currently undertaking protocol projects to develop common EM&V definitions and guidance on EM&V methods to determine gross savings, net savings, and cost effectiveness (underway in 2012) associated with energy efficiency programs that will have important implications for this proceeding, as well as launching the Regional Energy Efficiency Database (REED) that is being developed to collect consistent EE program impact data from the ten Forum jurisdictions to support states' ability to benchmark their programs with other states to identify opportunities for improving program design and cost-effectiveness this fall. Pennsylvania would gain increased access to shared information and an opportunity to shape regional research and evaluation priorities, and by participating as a member of the Forum, Pennsylvania stakeholders could further increase the impact of their voices in regional and national arenas.

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<sup>7</sup> Massachusetts and New York are currently weighing significant changes to their cost-effectiveness screening. See New York Public Service Commission (PSC), Total Resource Cost (TRC) petition, Energy Efficiency Portfolio Standard, Docket 07-M-0548 and Massachusetts Department of Public Utilities (DPU), D.P.U. 11-120, "Investigation by the Department of Public Utilities on its Own Motion into Updating its Energy Efficiency Guidelines," November 29, 2011. Available at <http://www.mass.gov/eea/docs/dpu/energy-efficiency/energy-efficiency-legislation-and-regulations/ee-noi-dpu-11-120.pdf>. See also Chris Neme and Marty Kushler, "Is It Time to Ditch the TRC? Examining Concerns with Current Practice in Cost-Benefit Analysis," 2010. Available at [http://neep.org/uploads/EMV%20Forum/Steering%20Committee%20Notes/CNeme\\_ACEEE\\_Paper\\_for\\_SC%20Notes.pdf](http://neep.org/uploads/EMV%20Forum/Steering%20Committee%20Notes/CNeme_ACEEE_Paper_for_SC%20Notes.pdf). We note that two additional reports on cost-effectiveness testing by the Regulatory Assistance Project and the National Home Performance Council will be available later this year.

<sup>8</sup> Projects are developed through a series of committees that make recommendations to the Forum Steering Committee, represented by commissioners and state energy offices from ten jurisdictions in the northeast and mid-Atlantic region, from Maine to D.C., and includes air regulatory representation as well.