

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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<b>Act 129 Energy Efficiency</b>	)	
<b>And Conservation Program</b>	)	<b>Docket No. M-2014-2424864</b>
<b>Phase III</b>	)	

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**COMMENTS OF JOINT COMMENTATORS: PENNFUTURE, SIERRA CLUB, ENVIRONMENTAL DEFENSE FUND, AND CLEAN AIR COUNCIL**

Citizens for Pennsylvania’s Future (PennFuture), Sierra Club, Environmental Defense Fund, and Clean Air Council (hereinafter “Joint Commentators”) appreciate the opportunity to submit these comments in response to the Public Utility Commission’s (Commission) Secretarial Letter dated October, 23, 2014.<sup>1</sup>

PennFuture is a membership based non-profit advocacy organization focused on energy and environmental issues that impact Pennsylvanians. We work to create a just future where nature, communities, and the economy thrive. We enforce environmental laws and advocate for the transformation of public policy, public opinion, and the marketplace to restore and protect the environment, safeguard public health, and reduce the consequences of climate change within Pennsylvania and beyond.

Sierra Club is a non-profit environmental organization whose mission is to explore, enjoy, and protect the wild places of the Earth and to practice and promote the responsible use of the Earth’s resources and ecosystems. The Sierra Club currently has 24,049 members in Pennsylvania, most of whom receive electricity service from one of the EDCs required to offer efficiency services under Act 129. These members have a strong interest in both the success of energy efficiency programs and in protecting wild places and their ambient environment from the effects of air, water, and other pollution from electrical generation.

Environmental Defense Fund’s mission is to preserve the natural systems on which all life depends. Guided by science and economics, we find practical and lasting solutions to the

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<sup>1</sup>Docket No. M-2014-2424864

most serious environmental problems. With more than 1,000,000 members, we work to solve the most critical environmental problems facing the planet. This has drawn us to areas that span the biosphere: climate & energy, oceans, ecosystems and health. Since these topics are intertwined, our solutions take a multidisciplinary approach.

Clean Air Council is a member-supported environmental organization serving the Mid-Atlantic Region. The Council is dedicated to protecting and defending everyone's right to breathe clean air. The Council works through a broad array of related sustainability and public health initiatives, using public education, community action, government oversight, and enforcement of environmental laws.

We continue to support Act 129 and believe that a well implemented program will protect public health and the environment while promoting economic growth and ensuring affordable electricity is available to our citizens. With that in mind, we respectfully submit the following comments:

## **Length of Phase III**

There are potential advantages to a longer phase of up to six years. A longer phase length will allow for more data from the current phase to be considered while developing subsequent phases. It may also result in savings in administrative costs and possibly even programmatic costs. Particularly if EDCs can take advantage of longer contract terms with service providers, or other efficiencies allowing for greater cumulative reductions under the existing price cap.

That said, there are pending policy changes that are outside the Commission's control that could affect the viability and appropriateness of Phase III targets. For example, the costs and benefits associated with demand response (DR) could vary widely as a result of court challenges to FERC Order 745. Similarly, decisions on the state and federal level about Clean Power Plan requirements and state plan implementation could fundamentally change

market conditions and impact Phase III plans. We recommend that the Commission take the potential implications from these two specific examples into consideration in this proceeding. These uncertainties are unlikely to be resolved before the scheduled adoption of the Phase III Final Order. Therefore, we urge the Commission to clearly state the important underlying policy assumptions on which the Phase III targets are based. For example, is the Commission (or SWE) assuming that DR will continue to participate in the capacity and energy markets? Or, will compliance with the Clean Power Plan impact either the targets or the available budgets for efficiency in any way?

The Commission should also outline a process by which stakeholders can petition a reconsideration of the Phase III targets in the event that one or more of those underlying assumptions turns out to be false. With that caveat, we would support a six-year Phase III.

We note that an alternative suggestion has been made to extend the existing Phase II targets on a pro-rated basis to allow time for the outstanding judicial and regulatory processes to complete. We believe that the Commission has sufficient authority to extend phase II should it choose to do so, but recommend that any such decision be discussed at a separate stakeholder meeting before it is proposed.

## **Incremental Targets**

We see value in retaining incremental progress requirements, but have concerns that such requirements may discourage the adoption of more comprehensive measures that may have lower initial savings. Should the commission choose to adopt incremental targets, we note that they need not be a flat percentage for each year as was ordered in phase II.

Should a plan be proposed that makes use of more comprehensive measures that provide reductions over a longer time frame, it may be reasonable to allow lower initial goals and correspondingly higher goals in later project years. Also, should the Commission set incremental targets, it should specify in advance how statutory penalties will be allocated for

missing such a target. In doing so, it is reasonable to give the failure to achieve overall phase III goals more weight than individual interim goals. And, it is especially necessary to ensure that the incentive to continue programs remains even after missing a milestone.

While we understand that Act 129 bars the recovery of lost revenue<sup>2</sup> as a result of decreased consumption or changes in energy demand, we note that this does not prevent the Commission from implementing performance incentives. We believe that the Commission has the authority to establish an incentive structure that is not tied to lost revenue and that doing so may encourage greater per-person investment in efficiency by utilities.<sup>3</sup> We encourage the Commission to consider the use of performance incentives as a component to the penalty structure.

## **Inclusion of Peak Demand Reduction Requirements**

Peak demand reduction should be continued past May 31, 2017, and any such reduction should be an annual reduction as opposed to an annual average. Peak demand reductions are intended to address issues with reliability and high peak power costs that tend to occur as exceptional events. Averaging across years tends to mask such events.

To be clear about our comments, we point out that setting a target for reducing peak demand does not necessarily imply that program effort be directed to measures or programs that specifically and/or solely reduce peak demand, such as demand response programs. Rather, we note that most EE measures are likely to result in some peak coincident demand reduction. An analysis of available EE measures should, therefore, be able to determine a base level of demand reduction that can be obtained from continued spending on efficiency.

To the extent that the Commission wishes to set peak demand reduction targets beyond

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<sup>2</sup>66 Pa. Cons. Stat. § (k)(2)

<sup>3</sup>Hayes, S., Steven Nadel, Martin Kushler, and Dan York. *Carrots for Utilities: Providing Financial Returns for Utility Investments in Energy Efficiency* Washington, D.C.: American Council for an Energy-Efficient Economy (Jan. 2011).

these levels, we believe EDC's should have the flexibility to allocate funds between program areas as necessary to reach both energy savings and peak demand reduction targets, and that no budget allocation between the two types of programs be prescribed by the Commission. If this suggests the use of demand response programs, then it is our understanding that the 2 percent cap under the act is for the entire plan as approved and, as such, covers spending on both EE measures and those designed specifically for demand reduction.

Allocation of targets considering the available funding should broadly reflect relative costs and benefits of EE and demand reduction. While the combined program must be cost effective as determined by the Total Resource Cost (TRC) test, there is no statutory requirement to use the TRC test in balancing the relative merits of individual programs. For this reason, the assessment can consider transmission and distribution benefits, non-energy benefits such as environmental and public health impacts, and impacts on other fuel usage even if the Commission does not include such benefits in the TRC. The resulting allocation between EE and demand reduction can also vary on a sector-specific or service area-specific basis depending on the cost effectiveness.

The Commission raises the possibility that they will find there is no cost-effective peak demand reduction available—this is not likely to be the case due to the availability of peak-coincident efficiency. Commission staff have also suggested that if demand response is not compensated by the energy or capacity market, it would be unlikely to be cost effective. We believe demand response has real, measurable value regardless of whether or not it is provided compensation, just as energy efficiency has value but is not compensated by markets. From a TRC perspective, the energy and capacity costs avoided by demand response are likely to outweigh the cost of implementing the demand response measure, regardless of who realizes these savings. While we expect demand response to be compensated for this value in some form, we believe it is appropriate to assume for planning purposes that it is cost-effective, regardless of compensation.

Should the Commission determine there is little or no cost-effective Demand Response available, we believe the Act requires the entire budget to be available for cost-effective EE measures. This agrees with the Commission’s position in the Phase II implementation order stating that the unused “funding associated with meeting demand response targets will not sit idle or go directly to the benefit of the EDCs. That funding will go to cost-effective energy efficiency programs. As such, the EDCs still maintain their full 2% annual budgets that will be spent on achieving cost-effective energy efficiency.”<sup>4</sup> We agree with the Commission that “this is more beneficial to ratepayers than reducing the EDCs’ budgets by the amount of money that would have been budgeted for potential demand response programs.”<sup>5</sup>

## Carve Outs

We recognize the value of carve outs as a way to focus benefits of efficiency programs on under-served sectors such as low-income families, renters, and multi-family units. We also recognize the utility of carve-outs for government organizations and schools as these benefits often have synergistic benefits through expanding education about EE and encouraging voluntary adoption.

We support retaining carve outs for low income customers and Government, Educational, and Nonprofit customers. We urge caution in the establishment of carve outs for additional sectors or sub-carve outs within these two sectors, as these have the potential to increase acquisition costs and decrease savings. However, we would support an increase in carve out targets for these two sectors, particularly to allow allocation of more resources to multi-family housing efficiency. In addition, we suggest that savings from multi-family units be tracked and reported separately to build a record that will inform any future decisions.

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<sup>4</sup>*Phase II Implementation Order at 41*

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

## Inclusion of Whole-House Measures

We believe that there is value in emphasizing comprehensive, whole-house and whole-building measures. This includes physical upgrades to buildings, optimizing building systems, training of contractors for proper installation, and training occupants of buildings to maintain and use systems more efficiently over incentivizing “widget” approaches. As a first step, the Commission should clearly define the term “comprehensive” and how comprehensiveness would be measured. While it is possible for individual programs to be more or less comprehensive, ideally, whether or not an approach is comprehensive should be measured at the program or plan level, rather than at the measure level as with the Phase II requirement to have one measure available to customers.

Many comprehensive approaches may entail higher per-kWh acquisition costs when measured as the cost per annual (or “first-year”) kWh saved. On the other hand, more comprehensive approaches tend to have longer effective useful lifetimes (e.g., increased insulation) and therefore equal or even lower cost per lifetime kWh saved. Thus, we urge the Commission and the SWE to utilize a cost effectiveness metric that fairly compares the costs and benefits of longer-term comprehensive measures to shorter term widget approaches.

Furthermore, before the Commission considers lowering targets to permit comprehensive measures it must consider whether the sometimes higher cost of these measures can be offset by combining them with cheaper behavioral or operational measures, the benefits of which are becoming more quantifiable.<sup>6</sup> It must also evaluate if the deeper savings or market changes driven by comprehensive measures justify smaller short-term reductions. Finally, it must ensure that there are adequate measurement, verification, and regulatory mechanisms in place to ensure that comprehensive measures cannot be replaced with less comprehensive

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<sup>6</sup>For example, it has been demonstrated in the North Penn and Castle Rock School districts (and others) that dramatic savings can be achieved with very little capital investment, simply by changing student and staff behaviors, optimizing the use of existing equipment, and changing policies for setting thermostats when buildings are empty. Even the most efficient equipment will waste energy when operated improperly. (For more information, see: <http://energywisepa.org/node/2970>).

alternatives.

Truly comprehensive measures should address gas and other heating fuels as well as electricity. We recognize that the Act makes no provision for efficiency targets for other energy sources, but we ask the Commission to encourage coordination between gas and electric utilities wherever practical.

## **EDCs' Phase III Budgets**

The Joint Commentators are sensitive to the sometimes competing goals of maintaining appropriate incentives on the part of the EDCs, maximizing efficiency reductions, and maintaining an efficient and stable program.

As we noted in the discussion of peak demand reduction requirements, above, we support the decision made by the Commission in the Phase II implementation order to continue spending on programs after targets have been reached. We believe this reflects the Legislature's intent as they explicitly created a budget cap and not a cap on savings. This also will avoid inefficiencies and negative consumer impacts that are inevitable if programs stop and start in accordance with budget cycles.

We also understand allowing excess consumption reductions from one phase to be used in a subsequent phase is beneficial to the extent it encourages EDCs to act earlier and exceed their targets. However, failure to consider the available excess credit when deciding on targets for the next phase could diminish the effectiveness of the overall program. This occurred in Phase II, when the EDCs significantly exceeded their Phase I targets and were allowed to carry over large credits into Phase II. However, the Phase II targets were set based on estimates of acquisition costs that completely ignored the potential for this carryover. At minimum, we recommend that this historical oversight be corrected by an upward adjustment to Phase III targets to account for the head start EDCs had in Phase II.

Going forward, we encourage the Commission to consider alternative methods of balancing these interests. This could include, for example, the ability to consider if a utility has exceeded goals in the past when determining the level of penalties to assess for missing a later target, or possibly a performance incentive system.

## **Updating the Technical Reference Manual**

During Phase I and II, the Commission implemented an annual updating process for the TRM. The Joint Commentators recommend that moving forward, the TRM be updated on an “as-needed” basis (i.e. as new information is acquired). While minor updates may be determined to be necessary annually, the Commission could consolidate more significant revisions to the TRM and address them together during a comprehensive review. Additionally, any changes should be prospective, to avoid the need to make major adjustments to utility efficiency portfolios during the current program year.

The Commission should also determine a schedule for more comprehensive reviews of the TRM. We recommend that these occur every 3 years, ideally timed to best support the upcoming phase. Additionally, stakeholders should be included in this review process.

## **Updating the Total Resource Cost Test**

### **Application of the TRC**

We note that the statute requires application of the TRC on a plan level,<sup>7</sup> and agree with the Commission’s order to that effect in Phase II.<sup>8</sup> However, we remain concerned with the Commission’s Phase II language that the Commission “reserve[s] the right to reject any

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<sup>7</sup>66 Pa.C.S. § 2806.1(b)(1)(I)

<sup>8</sup>Phase II TRC Order at 11, Docket No. M-2012-2300653 (August 30, 2012).

program with a low TRC ratio, which indicates the program will not be cost-effective.”<sup>9</sup> As discussed above, we find no requirement in the Act for the TRC test to be applied on a program-specific basis. Focusing on the TRC, especially under the restrictive interpretation applied in Phase II, could limit consideration of non-energy benefits and non-electric savings. It could also discourage application of more comprehensive efficiency measures that have higher costs of acquisition in relation to the near-term energy savings. It should be sufficient for the Commission to state that they reserve the right to reject any program that is wasteful, not cost effective, or otherwise inconsistent with the intent of the Act.

## **Inclusion of additional benefits**

The current TRC implementation needs to be revised. There are real, tangible, and measurable benefits to participants and ratepayers that are being omitted, including energy benefits such as fossil fuel reduction and non-energy benefits such as health and environmental impacts. These should be considered in a TRC test.

We understand the Commission’s position that any test must be limited to analysis of monetary cost based on the statutory definition of TRC.<sup>10</sup> However, we do not believe this excludes consideration of a wide range of monetized benefits such as wholesale price suppression, environmental, and health benefits.

According to the Commission, “Non-energy Impacts (NEIs) are contrary to the statutory language pertaining to the exclusion of societal and environmental costs from the PA TRC Test.”<sup>11</sup> However, there is no such exclusion in Act 129. The Commission references the definition of the Total Resource Cost Test<sup>12</sup> which mentions the use of a “monetary cost.” Since Act 129 does not define “monetary cost,” a finding that NEIs are “contrary to statutory language” is a matter of interpretation.

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<sup>9</sup>*Id. at 11*

<sup>10</sup>66 Pa.C.S. § 2806.1(m)

<sup>11</sup>Phase II TRC Order 9.

<sup>12</sup>66 Pa.C.S. § 2806.1(m)

In the preamble to the Act, the Legislature spoke of the objectives addressing a broader range of benefits finding “the health, safety and prosperity of all citizens of this commonwealth are inherently dependent upon the availability of adequate, reliable, affordable, efficient and environmentally sustainable electric service at the least cost, **taking into account any benefits of price stability, over time and the impact on the environment.**”<sup>13</sup> Considering the environmental impacts, in particular is further implied because of the Commonwealth’s trust responsibility to conserve and maintain our natural resources established by the Pennsylvania Constitution.<sup>14</sup> Under the Commission’s previous implementation orders, no mechanism was established to take into account such NEI benefits. Because, under Pennsylvania law, the “object to be attained” is one of the items to be considered in ascertaining meaning of statutory text<sup>15</sup> even without the constitutional requirement, the Commission has an obligation to interpret the term “monetary cost” sufficiently broadly to give effect to the Act’s intent.

There is an extensive record in academic and governmental sources addressing methods to monetize environmental impacts, and progress in this area is continuing—particularly in the area of carbon pollution and climate change. Professor Michael Greenstone, of the University of Chicago, for example, noted recently that “there’s been an explosion of research on the economics of climate change.”<sup>16</sup> This has informed findings made by the EPA, which has been working since 2010 on putting a dollar amount on the social cost of carbon (SCC). EPA estimates the SCC by looking at the “economic damages associated with a small increase in carbon dioxide (CO<sub>2</sub>) emissions, conventionally one metric ton, in a given year.” EPA then considers the SCC when implementing new rulemaking.<sup>17</sup>

There is also the very real consideration of avoided costs of regulatory compliance. This has been applied to NO<sub>x</sub> and SO<sub>2</sub> emissions for years, and will soon apply to CO<sub>2</sub> emissions as

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<sup>13</sup>Act 129 of 2008, Preamble, *emphasis added*

<sup>14</sup>Pa. Const. Art I § 27

<sup>15</sup>1 Pa.C.S. § 1921(c)(4)

<sup>16</sup>Evan Lehmann, *E&E Reporter* (Dec. 8, 2014)

<sup>17</sup><http://www.epa.gov/climatechange/EPAactivities/economics/scc.html>

well. Once the Clean Power Plan is implemented, it is likely that power plants will engage in carbon trading, which will clearly monetize such emissions, and this will readily translate into monetary benefits of avoided electricity consumption.

Beyond environmental issues there are a host of NEIs that have quantifiable benefits. For example, energy efficiency investments often result in water or fossil fuel consumption reductions. Failing to account for these quantifiable benefits undervalues energy efficiency reductions

Finally, the Commission should also consider the impacts of Energy Efficiency on Markets. This could occur in capacity markets, particularly in locations facing transmission constraints. One such case was identified in a recent ACEEE paper describing an Ohio study that found bidding in greater energy efficiency could have suppressed auction prices as much as 35%.<sup>18</sup> This could also occur in energy markets as reduced demand leads to lower prices. In the case of Ohio, the ACEEE found that this could average more than \$800 million by 2020.<sup>19</sup>

## Conclusion

The Joint Commentators, thank the Commission for its efforts in outreach to stakeholders and, in particular, for this opportunity to provide input on Phase III. We believe that adoption of the above comments is consistent with the intent of Act 129 and will help improve the program. Ultimately, this will benefit all of Pennsylvania's Citizens.

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<sup>18</sup>M. Neubauer, B. Foster, R.N. Elliott, D. White, and R. Hornby, *Ohio's Energy Efficiency Resource Standard: Impacts on the Ohio Wholesale Electricity Market and Benefits to the State* at 9 (Apr. 2013)

<sup>19</sup>*Id.* at 8