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May 15, 2015

**Via Electronic Filing**

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

Re: Act 129 Energy Efficiency Program – Phase III  
Docket No. M-2014-2424864

Dear Secretary Chiavetta:

Enclosed for electronic filing please find the Reply Comments of the Demand Response Supporters on Tentative Implementation Order with regard to the above-referenced matter. Copies to be served in accordance with the attached Certificate of Service.

Sincerely,



Deanne M. O'Delle

DMO/lww

Enclosure

cc: Megan Good ([megagood@pa.gov](mailto:megagood@pa.gov))  
Kriss Brown ([kribrown@pa.gov](mailto:kribrown@pa.gov))

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Act 129 Energy Efficiency Program - :  
Phase III : Docket No. M-2014-2424864  
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**REPLY COMMENTS OF THE  
DEMAND RESPONSE SUPPORTERS  
ON TENTATIVE IMPLEMENTATION ORDER**

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Dated: May 15, 2015

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## I. INTRODUCTION

The Demand Response Supporters<sup>1</sup> hereby offer their Reply Comments<sup>2</sup> related to the Tentative Order, in the above-captioned docket, entered March 11, 2015 (“Tentative Order”), which proposed required consumption and peak demand reductions for each electric distribution company (“EDC”) subject to Act 129,<sup>3</sup> as well as guidelines for implementing Act 129 Phase III Energy Efficiency and Conservation (“EE&C”) Plans (“Phase III” or “Plan”).<sup>4</sup>

The primary goals embodied by Act 129 are reigning in electricity prices and giving customers key tools to manage their electricity costs. The demand response (“DR”) and other programs under Act 129 are funded by a legislated surcharge on retail customer bills. Act 129 has been effective on all fronts: adequate funds have been and continue to be raised without undue burden on customers; Pennsylvania consumers have saved billions of dollars in electricity costs<sup>5</sup>; and consumers participating in the DR Programs and energy efficiency (“EE”) programs mandated by the Act have tools to reduce their electric bills. Thus, the Commission should extend the DR Programs and invoke more robust reduction goals. To accomplish this, the

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<sup>1</sup> The Demand Response Supporters consist of Comverge, Inc. (“Comverge”), Enerwise Global Technologies d/b/a CPower Corporation (“CPower”), EnergyConnect, a Johnson Controls Company, and EnerNOC, Inc. (“EnerNOC”).

<sup>2</sup> The reply comments expressed in this filing represent only those of the Demand Response Supporters, which is a coalition of providers and supporters of demand response united to overcome barriers to the use of demand response, and do not necessarily represent the views of each particular member.

<sup>3</sup> Act 129 of 2008, 66 Pa. C.S. § 2806.1, et seq., as amended (“Act 129” or “Act”).

<sup>4</sup> The Commission invited interested parties to submit comments on the Tentative Order. See Tentative Order at 10, 120, and at Ordering Paragraph 3; Notice, 45 Pa.B. 1586 (March 28, 2015).

<sup>5</sup> Prepared Testimony of James H. Cawley, Commissioner; Pennsylvania Public Utility Commission before the Pennsylvania House of Representatives, Consumer Affairs Committee Hearing on the Costs and Benefits Associated with the Overall and Peak Load Reductions Required by Act 129 of 2008, February 25, 2014.

Demand Response Supporters urge the Commission to make the following modifications to its Tentative Order:

- Reverse the prohibition on customer participation in both PJM Interconnection LLC's ("PJM") Emergency Load Response Program ("Emergency Program" or "ELRP") and Pennsylvania's Act 129 DR Programs;
- Provide additional flexibility regarding the proposed DR dispatch parameters;
- Review the inputs utilized by the SWE in generating Residential Total Resource Costs ("TRC") in its DR Potential Study and recalculate the TRCs using the appropriate data assumptions for Phase III demand response programs; and,
- Increase the allocation of Act 129 funds to DR programs to at least 20%.

The opposition raised by some parties in their comments to the Tentative Order is really a collateral attack on Act 129 itself. The large industrial customers state that they simply do not want to pay for DR programs. Certain advocacy groups express a preference on EE programs, and (despite earlier positions) are surprisingly against providing consumers with tools to reduce demand at peak usage periods.<sup>6</sup> Much of the opposition expressed by some of the electric utilities' was already considered in the passage of Act 129 and the final legislation represents the General Assembly's careful balancing of these varied interests. There is no reason in this phase for the Commission to reverse now the already established goals of Act 129 based on these recycled arguments. Rather, consistent with the comments and these reply comments of the Demand Response Supporters and others who support achieving the full potential of Act 129 in Phase III, the Commission should adopt the recommendations intended to support the key goals of Act 129 to reign in electricity prices and give consumers key tools to manage their electricity costs.

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<sup>6</sup> [http://www.pennfuture.org/media\\_e3\\_detail.aspx?MediaID=275](http://www.pennfuture.org/media_e3_detail.aspx?MediaID=275)

## II. REPLY COMMENTS OF THE DEMAND RESPONSE SUPPORTERS

### A. The Commission Has Legal Authority To Implement Peak Demand Targets Beyond May 31, 2017 And To Enforce Any Such Established Targets

Act 129 authorizes peak demand reduction targets beyond May 31, 2017. Act 129 generally authorizes the Commission to establish Programs that will “reduce energy demand and consumption within the service territory of each [EDC] in this Commonwealth.”<sup>7</sup> Such Programs shall include specific proposals to implement energy efficiency and conservation measures that include (but are not limited to) measures to reduce demand.<sup>8</sup> Beyond this general authorization, Act 129 also contained statutory mandates for required reductions in certain time periods.<sup>9</sup> But, those required reductions do not limit the Commission’s general authorization. In fact, Act 129 clearly and explicitly authorizes the Commission to develop Programs, and approve Plans, that exceed the required reductions contained in Act 129.<sup>10</sup>

The Demand Response Supporters further submit that the Commission also has legal authority to include DR Programs under subsection (c); which authorizes programs (both before and after May 31, 2017) that reduce electric consumption.<sup>11</sup> DR is a mechanism designed to

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<sup>7</sup> 66 Pa. C.S. § 2801.1(a).

<sup>8</sup> 66 Pa. C.S. §§ 2801.1(a)(5), (a)(6), (b), (m) (definition of “energy efficiency and conservation measures”).

<sup>9</sup> 66 Pa. C.S. § 2801.1(d).

<sup>10</sup> See 66 Pa. C.S. §§ 2801.1(a)(6) (“The program shall include: ... recommendations as to additional measures that will enable an electric distribution company to improve its plan and exceed the required reductions in consumption under subsections (c) and (d).”) (emphasis added), (b)(1)(i)(A) (“The following are the plan requirements: ... The plan shall include specific proposals to implement energy efficiency and conservation measures to achieve or exceed the required reductions in consumption under subsections (c) and (d).”) (emphasis added), (e)(1) (“The Commission shall conduct a public hearing on each plan and allow for the submission of recommendations ... members of the public as to how the electric distribution company could improve its plan or exceed the required reductions in consumption under subsections (c) and (d).”) (emphasis added).

<sup>11</sup> 66 Pa. C.S. § 2801.1(c).

result in a reduction in electricity consumption.<sup>12</sup> This point was acknowledged by the Commission as part of its Joint State Brief to the US Supreme Court wherein the Commission explained, *inter alia*, that “demand response contributes to state policy goals by serving as a substitute for high-cost and emissions-producing peak generators and enabling states to reduce their energy consumption.”<sup>13</sup> Simply put, that fact that the DR program, as proposed by the Commission, would be implemented in a way such that the reduction of consumption by DR resources would occur during certain periods of peak demand does not change the fundamental fact that any such program would, in fact, be reducing consumption.

Notwithstanding this, FirstEnergy and Duquesne Light repeat the argument that, based on subsection (d)(2), Act 129 prohibits demand reduction targets beyond May 31, 2017.<sup>14</sup> In the Tentative Order, the Commission rejected that argument and concluded that it has the statutory authorization to prescribe DR targets for Program Year 8 (which ends on May 31, 2017), and beyond, in those service territories where such programs are cost-effective.<sup>15</sup>

The Commission is correct in rejecting the above described argument of FirstEnergy. That argument is based entirely on the statutory mandates for peak load reductions in subsection

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<sup>12</sup> Comments of the Demand Response Supporters dated April 27, 2015 (“Demand Response Supporters Comments”) at 6, citing, 18 CFR § 35.28(b)(4) (defining demand response as “a reduction in the consumption of electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments designed to induce lower consumption of electric energy”).

<sup>13</sup> *Federal Energy Regulatory Commission, Petitioner, v. Electric Power Supply Association, et al., Respondents.; Enernoc, Inc., et al., Petitioners, v. Electric Power Supply Association, et al., Respondents*, US Supreme Court Docket Nos. 14-840, 14-841, Joint State Brief In Support Of Petitions For Writ Of Certiorari, filed by Pennsylvania Public Utility Commission and others, dated February 17, 2015, p. 7 (emphasis added).

<sup>14</sup> Comments of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company dated April 27, 2015 (“FirstEnergy Comments”) at 3-8; Comments of Duquesne Light Company dated April 27, 2015 (“Duquesne Light Comments”) at 3, fn 1.

<sup>15</sup> Tentative Order at 35-37.

(d), and ignores both DR's role in reducing energy consumption and the Commission's general authorization to direct the implementation of measures to reduce peak demand. As explained above, in the exercise of its discretion and general authorization, the Commission has the legal authority to include DR Programs and demand reduction targets in the Act 129 EE&C Program. Act 129 requires the Commission to compare the total costs of the EDCs' Plans to the total savings in energy and capacity costs to retail customers or other costs as determined by the Commission.<sup>16</sup> If the Commission determines that the benefits of the plans exceed the costs, the Commission is empowered to set additional incremental requirements for reduction in demand.<sup>17</sup> These additional requirements can improve or exceed any reduction mandated by Act 129.

FirstEnergy also attempts to argue that the Commission lacks authority to impose financial penalties for the failure of an EDC to meet Phase III DR goals. FirstEnergy supports this claim by arguing that the penalty provisions in Act 129 only apply to peak demand reductions mandated under subsection (d)(1).<sup>18</sup> This argument ignores the plain text of Act 129 which authorizes penalties for failure to achieve the reductions in consumption required under subsections (c) and (d).<sup>19</sup> As explained previously, DR programs in Phase III can be authorized under subsection (c) and/or the Commission's general authorizations under Act 129. The penalty provisions in Act 129 would apply programs under subsection (c).

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<sup>16</sup> See 66 Pa. C.S. § 2801.1(a)(3). See also footnote 8, *supra*. The Total Resource Cost ("TRC") Test has historically been a regulatory test. Sections 2806.1(c)(3) and 2806.1(d)(2), 66 Pa. C.S. §§ 2806.1(c)(3) and (d)(2), as well as the definition of the TRC Test in Section 2806.1(m), 66 Pa. C.S. § 2806.1(m), provide that the TRC Test be used to determine whether ratepayers, as a whole, received more benefits (in reduced capacity, energy, transmission, and distribution costs) than the implementation costs of the EDCs' Plans.

<sup>17</sup> See footnotes 7 to 10, *supra*.

<sup>18</sup> FirstEnergy Comments at 8-9.

<sup>19</sup> 66 Pa. C.S. 2801.1(f)(2). Act 129 states that an EDC shall be subject to a penalty ranging from \$1 million to \$20 million for failure to achieve the reduction requirements in subsection (d). See 66 Pa. C.S. § 2806.1(f)(2)(i).

Subsection (d) mandates peak demand reductions for two specific periods: (1) June 1, 2010 to May 31, 2013,<sup>20</sup> and (2) June 1, 2013 to May 31, 2017.<sup>21</sup> The first period coincides with what is referred to as Phase I, and mandated a peak demand reduction of 4.5%.<sup>22</sup> The second period coincides with what is referred to as Phase II and the first year of Phase III (Program Year 8), which will end on May 31, 2017. The Commission did not set a peak demand reduction goal for Phase II<sup>23</sup> and does not intend to set a peak demand reduction goal for Program Year 8, which ends on May 31, 2017.<sup>24</sup>

The Commission does, however, intend to set peak demand reduction goals for the remaining four years in Phase III (Program Years 9 to 12) and the EDCs are not free to ignore DR program requirements established and directed by the Commission for periods beyond May 31, 2017. The penalty provisions in Act 129 would apply programs under subsection (c).<sup>25</sup> In addition, reductions directed in the exercise of the Commission's discretion and general authorization would be embodied in an order issued by the Commission and orders of the Commission are enforceable pursuant to the Commission's general authority. This authority includes the ability of the Commission to impose penalties for a failure to comply with its orders. More specifically, Section 3301 of the Public Utility Code provides that if any regulated entity

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<sup>20</sup> 66 Pa. C.S. § 28011(d)(1). The reduction in this period is measured against the electric distribution company's peak demand for June 1, 2007, through May 31, 2008. *Id.* The 4.5% demand reduction target included both coincident demand reductions from EE measures and reductions from DR programs. DR Potential Study at 42.

<sup>21</sup> 66 Pa. C.S. § 28011(d)(2). The reduction in this period is measured against the electric distribution company's peak demand for June 1, 2011, through May 31, 2012. *Id.*

<sup>22</sup> 66 Pa. C.S. § 2801.1(d)(1).

<sup>23</sup> *Energy Efficiency and Conservation Program Implementation Order*, Docket No. M-2012-2289411, Phase II Implementation Order entered August 3, 2012 at 32-42.

<sup>24</sup> Tentative Order at 17.

<sup>25</sup> See footnote 19, *supra*, and the accompanying text.

fails to comply with any Commission order, it shall forfeit and pay to the Commonwealth a sum not exceeding \$1,000.00 per day of violation.<sup>26</sup>

Thus, for all these reasons, FirstEnergy's claims that the Commission cannot implement peak demand targets beyond May 31, 2017 or penalize EDCs that fail to meet any such established targets are without valid legal support and should be rejected.

**B. The Commonwealth Would Not Benefit By Reallocating Money For DR To Energy Efficiency Programs**

Certain parties proposed that all the money should be allocated to EE programs instead of DR programs. For example, PPL Electric Utilities Corporation ("PPL") recommended eliminating its peak demand reduction target and reallocating the proposed DR funding (\$15.38 million) to energy efficiency programs.<sup>27</sup> Similarly, OSBA recommended that the Commission reverse its preliminary decision to extend DR targets and programs into Phase III, and to require EDCs to focus on load reduction programs.<sup>28</sup> As explained further below, there is no support for abandoning DR in favor of EE. To the contrary, the Commission should increase the allocation for DR to 20% instead of funding the least cost effective EE.

**1. There is no support for abandoning DR in favor of EE**

First, the suggestions to replace DR measures with EE measures fail to recognize the value of DR as an important program to help reign in electricity prices and give customers key tools to manage their electricity costs. Act 129 recognized the importance of DR and there is no

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<sup>26</sup> See 66 Pa. C.S. §§ 701, 3301. To implement this section, the Commission has adopted certain standards that must be applied when imposing a civil penalty for violations of Commission directives and regulations. See 52 Pa. Code § 69.1201.

<sup>27</sup> Comments of PPL Electric Utilities Corporation dated April 27, 2014 ("PPL Comments") at 21-22.

<sup>28</sup> Comments of the Office of Small Business Advocate dated April 27, 2015 ("OSBA Comments") at 3-4, ¶ 6.

justification for abandoning DR now in favor of the EE programs. DR and EE complement each other well, as DR reduces peak and improves load shape and EE lowers overall usage. As reflected in the TRCs, these benefits are equally critical, but neither DR nor EE can achieve these benefits by themselves. As has been well-documented, including in the SWE DR Potential Study,<sup>29</sup> reducing peak and improving the load shape reduces the need for retaining and constructing the most expensive peak generation capacity, avoids transmission and distribution costs, lowers wholesale energy prices during high-priced periods, and increases competition through mitigating supplier market power. It also avoids emissions from the highest emitting power plants, positioning Pennsylvania for Clean Air Act (“CAA”) Section 111 (d) compliance.<sup>30</sup> Neglecting to fund DR would jeopardize these benefits.

Moreover, consumers benefit from diversity in program offerings providing customers in all classes the opportunity to participate. Consider a large customer that has already implemented all cost-effective EE measures or does not wish to spend its capital on EE but continues to pay the Act 129 surcharge. Without DR, such a customer would not participate in Act 129 despite paying the surcharge. With DR, customers such as this would have options to participate with strengthened control over their energy choices. In addition, DR and EE also utilize different measures and incentives need to be provided not just to replace lighting or do retrofits, but to shut down factory lines and adjust freezer set points in grocery stores during peak

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<sup>29</sup> SWE DR Potential Study at 2,17. 23. 25 and summarized in the Comments of the Demand Response Supporters at 10.

<sup>30</sup> On June 18, 2014, the US Environmental Protection Agency (“EPA”) proposed new regulations governing greenhouse gas (“GHG”) emissions from existing power plants for the states. The EPA’s proposed CAA Section 111 (d) regulations represent a far-reaching first step in controlling GHG emissions on a national basis. *See* Preamble and Proposed Rule at 40 CFR Part 60 published at 79 FR 34830 (June 18, 2014).

periods. Incentives just for EE will mean these latter, highly cost-effective measures are not realized.

Further, as the world of energy is rapidly changing, providing multiple and diverse opportunities for customers to participate are critical and will create more opportunities for providers to innovate. For example, with DR programs, customers may choose to utilize behind the meter solar and battery storage to reduce their consumption during peak periods, unleashing the potential of game-changing technologies. This kind of innovation would be hampered without funding for DR.

Second, information has been provided in some of the comments regarding the costs that have already been invested in DR programs. Notably, PECO has spent over \$7 million to install its existing DR infrastructure for approximately 70,000 residential and commercial DLC customers that could be lost without the DR programs.<sup>31</sup> Failing to allocate funds for DR in Phase III will result in stranding significant investment, such as this already spent by PECO, without ever providing customers the opportunity to receive the value of those already invested dollars. Such a result is not in the public interest.

Third, the claim that the EE programs are “better” than the DR programs is simply not correct. To the contrary, the SWE established that the value of both DR and the EE programs to ratepayers is practically identical. At the end of the SWE DR potential report, the SWE provided two tables that reviewed the TRC values – the ratio of program costs to benefits – of the EE and the DR programs under a few funding scenarios. Under all funding scenarios, the maximum difference in statewide TRC is a scant 0.01. Moreover, a review of tables 7-5 and 7-6 in the

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<sup>31</sup> PECO Energy Company’s Comments dated April 27, 2015 (“PECO Comments”) at 22.

SWE DR potential report establishes that the TRC of the DR programs is higher than the ratio for the EE programs for many of the EDCs while the EE and DR TRC ratios are very close for other EDCs like Met-Ed.<sup>32</sup>

The fact is that DR is equally as cost effective as the proposed EE portfolio. Table ES-4, provides an estimate of the EE Program Potential TRC of 1.88. In table 7-5 of the DR Potential Study all but one of the Utilities have TRC equal or greater than the EE Program TRC. For the one utility, the lower TRC is understated as it does not consider adequately the new Act 129 Phase III design.

In addition, the Demand Response Supporters provided an analysis in its comments that Residential Demand Response was significantly understated due to the fact that the kW reduction factors were based on the Act 129 Phase I 100 hour based operations and not reflective of what was attainable under the 6 day, 4 hour or 12 day, 2 hour scenarios envisioned for Phase III.<sup>33</sup> The Phase III Act 129 DR program design focuses on 5CP hours<sup>34</sup> by targeting load reduction on those days when the day-ahead peak load is projected to be greater than 96% of the EDC's forecasted system peak. PJM's system peak period, the EDC's system peak periods and, in turn, the 5CP hours are primarily driven by air conditioning demand. The 5CP hours are highly correlated with hot and humid summer afternoon hours. During these hours, then, the demand (including residential demand) is higher across the entire state and the DR efforts

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<sup>32</sup> Under all three funding scenarios there is a separation of .02. The TRC BC Ratio for DR is 1.90 and the TRC BC ratio for EE programs is 1.92

<sup>33</sup> Demand Response Supporters Comments at 24-30.

<sup>34</sup> PJM defines the 5CP hours as: The unrestricted load of a zone, LSE (load serving entity), or end-use customer, coincident with one of the five highest loads used in the weather normalization of the PJM seasonal peak. 5CP values are used in the allocation of the PJM and zonal normalized peaks. *See PJM Manual 35: Definitions and Acronyms*, Revision 23, Effective April 11, 2014. Available at [www.pjm.com](http://www.pjm.com).

focused on those hours will be much more cost-effective than the DR curtailments called in Phase I when, in many cases, the temperatures were moderate and the grid was not constrained in any way.

The curtailment hours under the Phase III program design will undoubtedly occur at times when temperatures will be materially higher than the curtailment hours that were used in the 100 hour scenario utilized in Phase I of Act 129 implementation. Curtailing load during the 5CP hours will drive significant value from the Phase III design which is not captured in the TRC estimated by the SWE. The analysis provided by the Demand Response Supporters in its comments showed that residential DR can provide a TRC equal or greater than the EE portfolio by itself. Therefore, in contrast to what some commenters have suggested, the proper analysis of TRCs shows that including more DR – for all customer classes including residential DR – is well supported.

Importantly, some EE measures will be less cost-effective than the overall DR picture. In the Energy Efficiency Potential Study the SWE provides the reader 1487 pages of Energy Efficiency Measures. For each measure the SWE provides a long list of attributes and estimated values: EDC, Industrial, Measure Name, Segment, End Use, Vintage, Unit, Baseline Energy (kWh) Energy Savings %, Dmd Savings (kW), EUL (years), Incr. Cost (\$), Applicability, and TRC. However, how each measure is mapped to the savings scenarios of technical, economic, maximum achievable, achievable and program potential is not explicitly provided nor the quantity that measure is assumed in the scenario. As such one does not know specifically which EE measures were selected as having program potential and which do not. If this had been provided one might be able to ascertain the relative cost effectiveness of individual EE measures

compared to DR measures in Table 7-6. In the absence of this list, one can estimate that half of the EE measures have TRCs that fall below the mean TRC for each scenario.

Moreover, one would expect a significant spread both above and below the mean TRC for each scenario and EDC. Since there are measures with TRCs considerably greater than 1.88, such as 24.0, 31.5, 235.2, there must be measures with TRC below 1.88 to counter balance the highly cost effective measures to arrive at an average of 1.88. On a cost basis, one would expect that approximately half of the measures would have a TRC below the mean. Some pruning of these measures provide ample opportunity to increase the budget allocation to DR. These recommendations are not meant to diminish the value of EE or deny its value of a resource, but Pennsylvania consumers would suffer if DR did not have a meaningful role in Phase III.

## **2. DR funding should be increased, not decreased**

Rather than abandoning DR in favor of EE as suggested by some comments, the Commission should increase funding for DR to 20%, replacing DR for some of the less cost effective EE measures. The 10% allocation for DR was done under the assumption that dual enrollment would be prohibited in the PJM and Act 129 programs for C&I programs and that residential programs were not cost-effective. If the Commission were to allow for dual participation, as recommended by the Demand Response Supporters, there will be approximately 2,000 MW of additional demand response potential. Tables 6-9 and 6-10 of the SWE report show that the TRC for C&I DR, which was already practically identical to the overall TRC for EE, would increase if dual participation were allowed. Furthermore, as pointed on in the Demand Response Supporter's comments, demand response (including residential DR) is comparable or greater than the average TRC for EE measures enumerated in the SWE report. Since there are many measures included in the EE programs that are blended into an overall

average, certain EE measures have a TRC below the average EE TRC and, therefore, below the TRC for C&I programs and the residential DR programs. Replacing the least cost effective EE measures with an increase in funding for DR to 20% will, therefore, increase the overall TRC.

The increased funding should be directed toward expanding the large C&I DR programs already planned in certain territories with small program sizes, creating large C&I DR programs in territories where programs are not currently planned and creating residential programs in each territory. This would enable participation from thousands of additional commercial, industrial, and residential customers. As is well-documented in the SWE Potential Study and noted above, the large C&I programs are already highly cost-effective and lifting the ban on dual participation and increasing the program sizes or creating new programs would result in even more cost-effectiveness.

Further, residential DR programs have been found to be cost-effective in states across the country, including neighboring jurisdictions such as New York, Maryland, Delaware and New Jersey – to name a few.<sup>35</sup> There is no reason why cost-effective residential DR cannot be designed and implemented in Pennsylvania. In fact, Pennsylvania would be lagging the majority of states in the country in determining that residential DR is not cost-effective. Therefore, the Demand Response Supporters recommend that the Commission accurately estimate the cost-effectiveness of residential DR and encourage its use in lieu of the EE programs with lower TRC values.<sup>36</sup>

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<sup>35</sup> See, e.g., Cost-Effectiveness of CECONY Demand Response Programs, November 2013, which is available at: <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BBE9E7304-DA3C-4C06-B18B-ADD0D4568E3F%7D>.

<sup>36</sup> The Demand Response Supporters are not advocating an increase in residential DR at the expense of eliminating or reducing C&I DR.

That being said, the Tentative Order and the DR Potential Study did not identify parameters for cost-effective residential DR. To remedy this situation, the Commission could: (a) direct each EDC to create a working group (or to otherwise with stakeholders) to develop parameters for cost-effective residential DR programs for that service territory; and, (b) clarify that EDCs are allowed to implement any residential DR program that can be shown to be cost-effective.<sup>37</sup>

The Demand Response Supporters want to be clear that residential DR programs will be cost effective in Pennsylvania under the currently envisioned Phase III program design. Reaching a contrary position based on the general conclusion in the DR Potential Study fails to recognize that the cost effectiveness was only calculated using the now abandoned 100 hour methodology.<sup>38</sup> As explained therein, **residential TRC should be recalculated using appropriate data assumptions for Phase III demand response programs.** Correcting the issues identified shows that residential DR would have TRCs well in excess of 1.0 – **perhaps as high as 2.71** –and generally greater than the TRCs seen from EE measures.<sup>39</sup>

**C. Many Comments Offer Support For The Demand Response Supporter’s Request That The Commission Permit Dual Participation In ELRP And Act 129 DR Programs**

As explained in its Comments, the Demand Response Supporters urge the Commission to reconsider and reverse the prohibition on customer participation in both PJM Emergency

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<sup>37</sup> See Tentative Order at 39 (“... we do recognize the benefits of continued provision of DR programs should Penelec determine them to be advantageous to its customers. We propose that Penelec be allowed to voluntarily include a DR program in its EE&C Plan for Phase III if that program can be shown to be cost-effective. Additionally, Penelec must show that the implementation of such a program will not affect its ability to meet the proposed consumption reduction requirements outlined later in this Tentative Order.”).

<sup>38</sup> See DR Potential Study at 4-7, 55-64.

<sup>39</sup> Comments of the Demand Response Supporters at 24-30.

Program and Pennsylvania’s Act 129 DR Programs.<sup>40</sup> The two programs complement each other and provide different and distinct services to the grid. To capture the full range of benefits, dual enrollment needs to be allowed. Support for this view was expressed by many commenters.

More specifically, the EDCs generally expressed concerns about how participation in the Act 129 DR programs will be limited if forced to compete with the PJM ELRP. Some of the comments included the following:

- FirstEnergy stated: “The ineligibility of customers participating in PJM Emergency Load Response Program (‘ELRP’) creates legal vulnerability for the Commission’s program, and sets the Act 129 Programs and the PJM wholesale market at odds with one another.”<sup>41</sup>
- PPL stated: “Furthermore, if PJM has a DR program during Phase III, PPL Electric would be ‘competing’ with that program (and PJM Curtailment Service Providers) to recruit customers during the entire Phase III which would create a very unpredictable outcome where customers could bounce back and forth between PJM and Act 129 programs, whichever has a more favorable price, less hours of curtailment, and a more-favorable payment structure (e.g., paid to be on-call not per event). Therefore, PPL Electric believes Act 129 DR incentives will need to be much greater than PJM DR to cause customers to switch from PJM DR to Act 129 DR, especially since Act 129 participants would expect to curtail six days per year, four hours per event whereas participants in PJM’s DR get paid for the ‘capability’ to curtail and PJM typically has no more than one or two short events per year.”<sup>42</sup>
- PECO stated: “acquisition costs may very well be higher than those estimated by both PECO and the SWE because Act 129 programs will have to ‘compete’ with PJM programs for customers in Phase III in light of the Tentative Order proposal that customers participating in PJM’s [Emergency] Load Response Program (‘ELRP’) will be ineligible to participate in Act 129 DR programs.”<sup>43</sup>
- Duquesne Light stated: “The largest single barrier to achieving either of the aforementioned annual or cumulative outcomes is the Commission’s proposal

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<sup>40</sup> Comments of the Demand Response Supporters at 10-21.

<sup>41</sup> FirstEnergy Comments at 2.

<sup>42</sup> PPL Comments at 25-26 (footnote omitted).

<sup>43</sup> PECO Comments at 5.

requiring mutual exclusivity of participation in Act 129 DR programs and PJM DR markets.”<sup>44</sup>

Similarly, a number of other parties expressed support for removing the “mutual exclusivity” position that that Commission has proposed in the past.<sup>45</sup> In particular, Duquesne Light concluded that Act 129 DR program and PJM DR program participation should not be mutually exclusive.<sup>46</sup> Duquesne Light pointed out that adding the Act 129 DR program payments to the PJM DR market payments will drive participation numbers and demand reductions higher.<sup>47</sup> The Demand Response Supporters agree with Duquesne’s position. In addition, the SWE has noted in previous reports that customers may be enticed to participate in the demand response programs only if the revenue streams from both programs are available.<sup>48</sup>

There really can be no dispute, as other commenters have noted, that the programs will be in competition with each other if customers are not allowed to participate in both programs. Those commenters have reached a common conclusion that suggests that the PJM program will win out because of price, curtailment likelihood, energy payments in addition to the reservation payment, familiarity with the program and other reasons. While the Demand Response Supporters generally agree with this conclusion, it is also noteworthy to point out that mandated exclusivity may harm the entire PJM market. In the scenario where the Act 129 programs would

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<sup>44</sup> Duquesne Light Comments at 5.

<sup>45</sup> Comments of Keystone Energy Efficiency Alliance dated April 24, 2015 at 10, Duquesne Light Comments at 7.

<sup>46</sup> Duquesne Light Comments at 3-4.

<sup>47</sup> Duquesne Light Comments at 5 (“Increased funding made available by adding Act 129 DR programs to the established PJM DR markets has been shown to drive greater customer participation and larger aggregate demand reduction.”)

<sup>48</sup> *See*, Act 129 Demand Response Study, Final Report, Submitted May 13, 2013 and Addendum Added November 1, 2013 at 48 (“However, it is possible that customer would not enroll in the PJM Emergency Load Response Program at all without the added revenue promised by the EDC programs. The surveys conducted with Act 129 program participants and discussed in Section E indicate that this was frequently the case in 2012.”)

“win” customers over the PJM emergency program, PJM would be left with a void of a very valuable emergency resource. In an emergency event that might otherwise be preventable, PJM will not have the demand resource available to call on, and the end result could be a reliability event. Similar to the scenarios outlined by the EDC commenters, this scenario is not an acceptable outcome either.

While the Demand Response Supporters recognize that the Commission has concerns regarding dual participation, the Commission should reconsider its position. To the end, the following points warrant emphasis:

- Dual participation should expand the total customer base of DR customers in Pennsylvania, and not just result in all PJM customers being enrolled in the Act 129 programs. As stated above, the SWE has noted in previous reports that customers may be enticed to participate in the demand response programs only if the revenue streams from both programs are available.
- The PJM emergency program is only called during emergency situations, and for the overwhelming majority of peak hours, is not dispatched. Simply relying on the PJM program will not reduce the costs that are incurred because of consumption during peak periods. Allowing dual participation will unlock a significantly greater resource stream that would otherwise go unrealized. Even for those customers that are already participating in PJM, the Act 129 programs will mean they are reducing consumption for 10-20 more hours each year than they otherwise would.
- If the Commission has concerns about overcompensation of customers, we would welcome discussions with the Commission on potential solutions. We are entirely confident that a simple solution can be reached that results in a much more favorable outcome for Pennsylvania consumers than if dual participation is not allowed.

There are at least two residential demand response programs in Pennsylvania that participate in PJM demand response. The aforementioned rationale for allowing these programs to participate in both PJM and Act 129 also apply to residential DR programs. Finally, permitting dual participation during this time of uncertainty in the PJM market will certainly provide stability to this valuable resource. The Commission acknowledged in the Tentative Order that there are a number of potential changes to the wholesale market (PJM) over the

course of the next few years.<sup>49</sup> The Industrial Customer Coalition also raised concerns regarding the instability of the PJM DR programs going forward.<sup>50</sup> As part of the tentative order the Commission declined to address the potential PJM situations “that may or may not happen.”<sup>51</sup> The Demand Response Supporters agree with the Commission’s overall approach but simply point out that permitting participation in both programs will go a long way toward providing stability for demand response participation generally and economic development opportunities for DR participants.

**D. There Is No Support For Using Phase I Participation Or Spending Figures For The Phase III DR Goals**

Some of the utilities advocate that the Phase I participation and/or spending figures are reasonable measures to develop the Phase III DR goals. The Demand Response Supporters agree that the ability for dual participation will be needed to prevent “competition” with the PJM program and that larger incentives will be needed if dual participation is not allowed. However, the Demand Response Supporters do not agree that the Phase I participation numbers or expenses are a good proxy for the Phase III program.

Regarding participation levels, FirstEnergy stated that their Phase I experience “should be considered the maximum achievable DR potential because it is based on proven real-world experience.”<sup>52</sup> The Phase I experience is nothing more than that – an “experience.” It has no bearing on what is possible in Phase III. As has been discussed at length and has been agreed to

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<sup>49</sup> Tentative Order at 33.

<sup>50</sup> Comments of the Industrial Energy Consumers of Pennsylvania, Met-Ed Industrial Users Group, Penelec Industrial Customer Alliance, Penn Power Users Group, Philadelphia Area Industrial Energy Users Group, PP&L Industrial Customer Alliance, and West Penn Power Industrial Intervenors dated April 27, 2015 at 11-12.

<sup>51</sup> Tentative Order at 33.

<sup>52</sup> FirstEnergy Comments at 14.

by all of the stakeholders in the Commonwealth, the Phase I DR program design was fatally flawed and that impacted everything from consumer acceptance to measuring success of the program. The design outlined in the Tentative Order will be much more manageable. If the utilities fund and support programs designed as outlined, or as modified consistent with the recommendations of the Demand Response Supporters, the programs will be successful.

Outside of the Commonwealth, residential DR programs have recruited additional participants each year to grow programs upwards of 60% of the addressable market. Unfortunately, the experiences of Act 129 Phase I participant recruitment is not the experience of success oriented programs in neighboring states such as Delaware and Maryland. As stated before the, the design parameters of Phase I DR programs were severely flawed limiting both participation and DR performance.

The Demand Response Supporters encourage the Commission to permit events that are a maximum of four hours per dispatch, not a mandatory four hours. That would be much more palatable for program participants than the experience under Phase I, where all customers were asked to curtail for many consecutive hours, in consecutive days. During Phase I, electric loads, including air conditioners, were curtailed for more than six hours a day to attempt to capture the “top 100 hour” metric. Under the Phase III program design and the changed marketplace, it will be possible to successfully re-market to customers that opted out of Phase I.

As stated above, the market has changed significantly from the time that Phase I DR programs were implemented. Technologies have changed. Communications capabilities have changed. Consumer awareness and knowledge has increased. The cost to acquire demand response participants is dependent all of those items and on marketing channels, messaging and the consumer incentive paid to participate in the demand response program.

In Phase III, demand response participation will likely be capped by the program cost targets, and no other reason. Given the relatively small budgets allocated to DR, those budgets will rapidly deplete before customer critical mass is achieved. Budget constraints are often a reason why other demand response programs report a limited size even if they are operational for many years. However as the SWE reported there are four very large programs in states bordering Pennsylvania where participation rates have reached as high as 60%. These programs are operating in the service territories of SMECO, PEPCO, DPL and BG&E and they present the best examples on which one can gain actual insight into the potential of all DR including residential demand response programs for Pennsylvania.

Regarding Phase I expenses, PECO raises concerns regarding the SWE's acquisition costs by analyzing data from the 100-hour program.<sup>53</sup> However, the program developed for Phase I and the program proposed for Phase III are vastly different. In fact, the Commission recognized the shortcomings of the Phase I 100-hour DR program and correctly chose a new path:

The Commission will reiterate its decision from its PDR Cost Effectiveness Final Order that the top 100 hours methodology is not a cost-effective approach to utilize for peak demand reduction programs in Pennsylvania and therefore it will not be used in Phase III planning. We agree with those parties who, in response to our Phase III Secretarial Letter, recommended the removal of this criterion due to the predictive and forecasting difficulties associated with its use. Additionally, we agree with the SWE's expert opinion that this methodology does not adequately capture the complexities of the market and leads to the dispatch of resources when not cost-effective.<sup>54</sup>

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<sup>53</sup> PECO Comments at 24, Table 6.

<sup>54</sup> Tentative Order at 32-33 (internal footnote omitted).

Thus, basing any aspect of the Phase III programs on a set of rules that was determined to be ill-suited for the complexities of the market and not cost effective does not seem appropriate.

**E. Efforts To Look At The Future Of DR Programs In The PJM Market Should Be Rejected**

FirstEnergy asks the Commission to eliminate the peak demand reduction goals in part because of recent upward swings in PJM demand response participation. More specifically, FirstEnergy takes the position that DR targets should not be mandated for Phase III based on its theory that the market potential has not been adequately demonstrated in the SWE's DR Potential Study. According to FirstEnergy "a major flaw" in the SWE calculation of DR potential exists because it is based on a three-year average of the MW that cleared the BRA for the delivery years 2012/2013 through 2014/2015 to estimate PJM DR participation.<sup>55</sup> Based on this, Penn Power specifically requested an exemption from DR MW claiming that the use of a three-year assumption for Penn Power is particularly problematic.<sup>56</sup>

Before responding to FirstEnergy's arguments here, the Demand Response Supporters believe it is appropriate to remind the Commission that it is FirstEnergy who has filed a complaint at FERC seeking to remove all demand resources from the PJM capacity market.<sup>57</sup> Ironically, FirstEnergy makes arguments in that docket that demand response should not be federally regulated in an ISO tariff but should be relegated to the states to implement. In this proceeding, FirstEnergy is arguing that peak demand reduction goals should be eliminated, in

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<sup>55</sup> FirstEnergy Comments at 6-7.

<sup>56</sup> FirstEnergy Comments at 18-20.

<sup>57</sup> *FirstEnergy Services Company v. PJM Interconnection, L.L.C.* FERC Docket No. EL14-55-000, Complaint filed on May 23, 2014 and amended on September 22, 2014.

part because of the success of the PJM demand response program.<sup>58</sup> Taking all of this together, then, in FirstEnergy's "perfect world" is a place where there is no demand response anywhere. FirstEnergy's positions are inconsistent with federal policy, state policy and most importantly, consumers' interest.

The Demand Response Supporters oppose FirstEnergy's position on this issue. To the contrary, a three-year average is an appropriate, though probably conservative, figure for the Commission to consider. The recent rule changes implemented in PJM would lead one to believe that PJM demand response participation will decline. This is evidenced by the results of the 2016/2017 BRA auction. Any analysis past the 2016/17 BRA auction results in pure speculation – particularly with the *EPSA* case pending at the US Supreme Court and PJM's continued efforts to make modifications to their DR programs. Thus, the Demand Response Supporters agree with the Commission's position to not consider future DR programs in the PJM Market because it is not prudent to take action on something that may or may not happen. As such, decisions should be based on the currently-applicable conditions and not on potential future changes.

#### **F. Innovation Should Be Encouraged**

The Demand Response Supporters agree with other commenters that the Commission should encourage innovative DR. Utilities should have the flexibility to meet their reduction goals through innovative measures to the extent they are cost-effective. For instance, small and medium commercial customers are often neglected in EE and DR programs, even though in aggregate they represent a significant portion of load. These customers are often too busy

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<sup>58</sup> FirstEnergy Comments at 14.

running their businesses and too short-staffed to pay close attention to their energy consumption and usage on peak days. A DR program designed to meet these customers' needs should necessarily be different than a program designed for large C&I customers. While these larger customers need customized recommendations to reduce their demand, aggregators could not visit every barber shop and pizza parlor in Pennsylvania. Behavioral demand response programs represent a fast-growing, innovative tool for engaging these customers. Behavioral demand response companies can leverage customer data to segment customers appropriately, and then make targeted recommendations to customers for reducing their demand during peak periods. For example, a typical dry cleaner has the ability to process in batches and to shift load. On the other hand, a laundromat is more constrained by serving customers when the customers desire to use the machines. Thus, engagement must be tailored to the realities of each business. Intelligent software-driven approaches are key to cost-effective engagement of these and many other types of small businesses so as to achieve the state's DR goals. Results from these programs in other jurisdictions have been promising, and the Commission should provide utilities the flexibility to leverage this new approach.

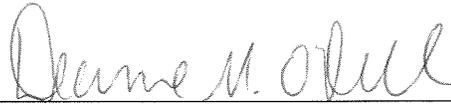
### **III. CONCLUSION**

The Demand Response Supporters appreciate the opportunity to offer Reply Comments to the Comments on the Tentative Order, and look forward to working cooperatively with all interested stakeholders in this proceeding.

Through reduced costs, increased reliability and resiliency, and lower emissions, robust DR participation in Phase III will be beneficial to all Pennsylvania electric customers and the Commonwealth. The Demand Response Supporters urge the Commission to adopt the comments, suggestions and recommendations described in these Reply Comments and their

original Comments to ensure that all Pennsylvanians and the Commonwealth receive the benefits provided by DR resources as intended by the Legislature when Act 129 was enacted.

Respectfully submitted,



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