

**Comments of Advanced Energy Management Alliance for the Pennsylvania Public Utility
Commission on the Tentative Implementation Order for Phase IV Act 129**

Docket No. M-2020-3015228

April 27, 2020

1. Introduction

Advanced Energy Management Alliance (“AEMA”) is a trade association under Section 501(c)(6) of the federal tax code whose members are engaged in providing or facilitating various clean energy solutions including energy efficiency (“EE”), demand response (“DR”), and distributed energy resources (“DER”). AEMA includes some of the largest energy customers in the country, which leverage these services. AEMA members support the incorporation of clean energy solutions including from advanced energy management solutions to help customers achieve electricity cost savings and their personal environmental goals such as reducing their carbon footprint while also contributing to grid reliability. These comments represent the collective consensus of AEMA as an organization, although it does not necessarily represent the individual positions of AEMA member companies.

AEMA commends the Public Utility Commission (“Commission”) Commissioners and staff for their efforts to keep Pennsylvanians safe during this very difficult time across the Commonwealth. AEMA members hope for the health and safety of the workers throughout state government that are moving forward despite the challenges faced from COVID.

Act 129 is a vital policy of Pennsylvania and the demand response programs have gone through evolutions over the years. Many AEMA members are active demand response Conservation Service Providers (“CSPs”) working with Electric Distribution Companies (“EDCs”) under Act 129. Indeed, many AEMA companies and their staff have been CSPs since the inception of Phase I over a decade ago. AEMA members value the deep collaboration with EDCs and the dedication the Commission and Statewide Evaluator teams have given to each

phase of the program. AEMA appreciates the extensive consideration that went into developing a PJM-compliant Peak Shaving Adjustment (“PSA”) program.

AEMA commented in the 2021 Total Resource Cost Test docket in 2019.¹ AEMA suggested that PSA appeared to be the wrong direction for the Commonwealth, in particular, due to the limitation on dual participation, which would adversely impact commercial and industrial customers and would reverse this Commission’s long-standing policy. The Commission recognized this and other unfortunate flaws with the PSA approach in its Tentative Implementation Order.²

AEMA acknowledges the potential value of a PJM-compliant program, but now that the Commission has concluded that the costs of such a program design outweigh the benefits, it is reasonable to thoroughly review an alternative: continuation of the current program design, which has not been done thus far, at least publicly.

After an in-depth review of the DR Potential Study, it is clear that there is a path forward for DR programs to achieve high cost-effectiveness in Phase IV. AEMA details this path forward in the following comments. AEMA highlights below on page 12: “the Tentative Order’s conclusion of \$35 million in additional net TRC benefits from an EE-only portfolio is deeply flawed.³ AEMA identifies that the **net benefits of a Large C&I DR portfolio are \$53 million**. This impressive level of net benefits was unnecessarily not considered in the Tentative Order. **Comparing this \$53 million to the \$35 million difference noted in the Tentative Order provides a directional insight** that including Large C&I DR would result in a **DR plus EE portfolio that has greater net benefits** than an EE-only portfolio.”

2. Executive Summary

The Tentative Implementation Order (hereafter, “Tentative Order”) proposes to eliminate Pennsylvania’s highly cost-effective C&I DR programs. The Tentative Order’s proposal is based on a limited scope and does not make conclusions regarding Large Commercial & Industrial

¹ Comments of the Advanced Energy Management Alliance for the Pennsylvania Public Utility Commission on the Tentative Order on the 2021 Total Resource Cost (TRC) Test. Available: <http://www.puc.state.pa.us/pcdocs/1643160.pdf>

² Tentative Order, p 31. Available: <http://www.puc.state.pa.us/pcdocs/1658127.docx>

³ Tentative Order, p 33.

(“C&I” or “LCI”) DR in Phase IV.⁴ By taking Large C&I out of consideration in the first step of the main study of the DR Potential Study,⁵ then continuing this omission through the EE and Peak Demand Reduction Market Study, the Tentative Order similarly omits the cost-effectiveness and potential of demand response in general, and Large C&I DR, in particular.

In the following comments, we will leverage the same methodology employed in the Potential Study but without the very specific assumption requiring customers to be in Peak Shaving Adjustment. Instead, we use the Statewide Evaluator (“SWE”) data that assume customers are participating in Act 129 as they are today. Our comments focus on the Large C&I Sector, however, we also urge that the Commission adopt Residential and Small C&I programs.

The review of the SWE data concludes that a Large C&I program in Phase IV **would have a TRC over 2.37 in cost-effectiveness** with net benefits per year of \$1 million to over \$4 million in many EDCs. AEMA highlights that the DR Potential Study clearly demonstrates C&I programs based on the new 2021 TRC Test are cost-effective and should continue.

Phase IV DR can be delivered in a highly cost-effective manner and below we propose the specific pathway that will enable this outcome. The Commission has previously recognized the benefits of dual participation of customers as supply-side DR in PJM and Act 129 – these benefits can still be captured under this program design.

3. Summary of AEMA Recommendations

AEMA comments more fully address the following key points:

- Maintain and explore growing the current DR program; again, based on analysis using SWE data, Phase IV Large C&I DR programs would have a TRC over 2.37 in cost-effectiveness with net benefits of \$1 million to over \$4 million in many EDCs;

⁴ Phase IV DR Potential Study <http://www.puc.state.pa.us/pcdocs/1656475.pdf> . The Phase IV EE and Peak Demand Reduction Market Study takes the DR Potential Study as an input and compares it to the value of EE passive reduction. <http://www.puc.state.pa.us/pcdocs/1656474.pdf>

⁵ The DR Potential Study underscores on page 2 the main results of the study are “heavily influenced by the decision to model DR as Peak Shaving Adjustments nominated to PJM... No DR potential from the Large C&I sector because of prohibition [put in place by PJM] of dual participation”. Dual participation is currently practiced by most Phase III Act 129 Large C&I DR customers and has extensive benefits to the Commonwealth.

- Implement the 2021 TRC Test guidance to include avoided generation in all five years of the program for all customer segments (Residential, Large C&I and Small C&I);
- Continue an equitable budget allocation between energy efficiency and demand response that serve customers across the Commonwealth in complementary ways;
- In Phase IV, continue a similar design to the Phase III DR program design in terms of number of events and triggers; and
- Maintain the current detailed Commission policy allowing dual participation between Act 129 and PJM emergency DR programs.

4. Large Commercial and Industrial Demand Response is Vital to Pennsylvania

DR reduces electric utility bills and provides a direct source of revenue to thousands of Pennsylvania Businesses and Institutions.

Demand response programs provide utility bill relief to Pennsylvania’s businesses, municipalities, and schools, with sometimes hundreds of thousands of dollars in savings for certain participating customers. Even though Phase IV changes will not take effect until summer 2021, terminating the programs would result in an overall increase to these customers’ anticipated bills at what is likely to be a critical juncture for economic recovery.

Even before the current crisis, Chairman Brown Dutrieuille acknowledged the disproportionate negative impacts on Pennsylvania’s businesses if the state’s DR programs were eliminated.⁶ AEMA underscores the importance of the Chairman’s comments and strongly encourages the Commission to continue the existing Phase III programs under the current (or similar) model.

It is also important to note what the current health crisis does and does not mean for energy planning in Pennsylvania. “Stay at Home” orders have lowered both total energy use and peak demand in affected states, and “returning to normal” will not be an immediate switch – there is a good chance that certain populations will be affected for some months to come. However, it is also likely that a substantial portion of the state’s economy will have be re-opened

⁶ Statement of Chairman Brown Dutrieuille. Available: <http://www.puc.state.pa.us/pcdocs/1658047.pdf>

by the Fall, and both federal, state and municipal governments are planning substantial efforts to support an accelerated economic recovery.

Hence, in planning programs through 2025, demand response programs should be understood both as allowing Pennsylvanian organizations to support the state’s electric grid as the economy rebounds, providing an effective hedge against future price shocks during that rebound.

Phase III DR programs are highly cost-effective and are achieving their goals.

Based on the latest data from Act 129 SWE PY10, the EDC demand response programs are achieving and surpassing their goals cost-effectively. The statewide target of 425 MW has been surpassed thus far with average event performance of 588 MW. Each EDC has met or exceeded its goal.⁷

Large C&I DR programs are highly cost-effective and often one of the most cost-effective programs in a portfolio. As described in *Table 1* below, for PECO, the Large C&I DR program was the second best performing program in its portfolio based on TRC, only after Residential EE.⁸ In MetEd, the Small and Large C&I DR programs were the top 1st and 2nd performing programs based on TRC.⁹

Table 1: Summary of Large C&I DR PY10 Gross TRC Ratios by Program¹⁰

EDC	TRC Ratio	Net Benefits
PECO	1.46	\$2,277,000
PPL (all DR)	2.22	\$2,776,000
Duquesne Light	3.00	\$3,579,000
Met-Ed	2.43	\$1,752,000
Penn Power	4.85	\$2,431,000
West Penn Power	4.10	\$7,064,000

⁷ *SWE Annual Report: Act 129 Program Year 10*. Version 1.1. February 19, 2020. Table 2: Act 129 Phase III Demand Response Compliance Targets, p 11 http://www.puc.pa.gov/Electric/pdf/Act129/Act129-SWE_AR_Y10_021920.pdf

⁸ Ibid. Table 30. p 50.

⁹ Ibid. Table 54. p 82.

¹⁰ Ibid. Compiled from Tables 30, 38, 46, 54, 67, 74.

DR is more effective at reducing the peak than energy efficiency.

While the Tentative Order concludes the state can rely on energy efficiency alone, “passive” peak reduction by energy efficiency is not as cost-effective as demand response at reducing the peak. Peaks in electricity consumption vary seasonally, and by the day and hour. Therefore, installing energy efficient measures may or may not actually impact the peak. Demand response programs are designed to respond to peak demand.

While it is true that EE measures are installed, peak reduction can also involve investments in metering and automation technology that last decades. AEMA’s review of the SWE data (discussed later in this filing) confirms that Pennsylvania ratepayers would pay many times more for a portfolio of EE –only peak reduction, relative to a DR portfolio that includes Large C&I DR. When it comes to what customers pay, reducing MW has a very significant effect in the long term because the system is built to manage peak demands, even when those peaks occur less than 1% of the hours of the year.

Peak reduction reduces carbon emissions and the need to build new large-scale generation.

Navigant Consulting determined that DR “can directly reduce CO2 emissions by more than 1% through peak load reductions and provision of ancillary services, and that it can indirectly reduce CO2 emissions by more than 1 percent through accelerating changes in the fuel mix and increasing renewable penetration.” One percent is equivalent to 19.5 million metric tons.¹¹ In Pennsylvania, where most new generation is fossil-fuel based, peak reduction could have an even greater impact on avoiding demand for new fossil generation. More peak reduction occurs via load curtailment. Even with a minority of demand response occurring with behind-meter generation, overall pollution from the grid is drastically reduced through demand response. More demand response means fewer large and often old, inefficient power plants left on the system.¹² While the SWE regularly assesses the avoided pollution from EE, it does not maintain a similar tracking tool for demand response. To provide a full picture of the relative impacts, the

¹¹ *Carbon Dioxide Reductions from Demand Response*, Navigant Consulting, Inc., November 25, 2014. Available at: <https://aem-alliance.org/download/10680/>

¹² *Impact on Emission of Pollutants Resulting from the Elimination of Emergency Generators from Capacity Markets*, Navigant Consulting, Inc., March 3, 2016. Available: <https://aem-alliance.org/download/119965/>

Commission may consider this moving forward given the Governor's strong environmental goals.

Maintaining Demand Response is critical to achieve equity across Pennsylvania.

AEMA recommends that the PUC strive to maintain the current 90-10 budget allocation between energy efficiency and demand response. This allocation recognizes that the customers that pay for Act 129 reap different benefits from the energy efficiency program and the demand response program. Some customers exclusively participate in the demand response program and vice-versa. If the Commission eliminated the demand response program, some customers that fund Act 129 would no longer have the opportunity to participate.

For Residential DR, the Commission should recognize the inherent value in bring your own thermostat programs, which are highly cost-effective because the customer pays for the equipment and the installation.

Demand response is a natural complement to energy efficiency. For most businesses, energy budgets are housed in the same department. AEMA members find that many customers use their incentives for performing in demand response to fund energy efficiency projects.

5. The Tentative Order correctly recognizes the drawbacks with requiring Act 129 DR customers to comply with PJM's new program

AEMA supports the Tentative Order recommendation against a Phase IV DR program requiring participation in the PJM Peak Shaving Adjustment design.¹³ Instead of concluding that all state DR should be abandoned, AEMA recommends the Commission maintain a similar program design to Phase III, which would be highly cost-effective and have extensive benefits that outweigh the value of requiring all peak reduction to be registered in the PJM product. With Act 129's history since 2009, this historic and anticipated peak reduction accomplishes a similar objective to the PJM program without the significant drawbacks of the PJM program.

Dual participation as a supply-side resource in PJM and in Act 129 is essential for DR customers to be successful. Based on the current design of Act 129, dual participation is permitted and working very effectively, as AEMA believes the overwhelming majority of

¹³ Tentative Order, p 30-31.

customers dual participate. Customers that dual participate earn 50% from Act 129 programs relative to customers who only participate in Act 129. PJM emergency and Act 129 events never occurred simultaneously during Phase III. Wholesale emergency events have many causes, including generator and transmission outages which are fundamentally different from peak demand.

If simultaneous events did occur, it would not be a problem. A customer can be simultaneously compliant with both programs and will not be paid twice for the same performance. PJM has developed its own mechanisms to be sure that DR that is dispatched for peak shaving in Act 129 is not also compensated for the same performance in wholesale markets. Customers can continue to dual participate in Pa Act 129 markets and PJM load management programs based on current Pa Act 129 and PJM rules.

6. Based on SWE DR Potential, Large C&I DR Phase IV under the current program design will be highly cost-effective

The DR Potential Study includes clear data that illustrates that maintaining the existing Act 129 Phase III design into a Phase IV is highly cost-effective. AEMA conducted a detailed review of the Potential Study to evaluate what continuing the current Phase III design would mean in terms of DR potential and cost-effectiveness based on the latest TRC updates.

Cost-effectiveness.

The 2021 Total Resource Cost Test establishes the value that a cost-effective DR portfolio provides. The avoidable cost for Large C&I customers is the sum of Avoided Generation, Avoided Transmission and Avoided Energy Costs. The avoidable cost for Small C&I customers, which also make up a good portion of aggregations, also includes Avoided Distribution costs since these customers are connected on low voltage lines. While most DR customers are considered “Large C&I”, in fact, many aggregators of customers in Act 129 have customers that also meet the “Small C&I” definition. The distinction is important for modelling purposes. Thus, for simplicity’s sake this review focuses on Large C&I, but the study methodology and recommendations should also be considered for Small C&I.

AEMA acknowledges that the PUC made significant changes in how these costs are valued moving from Phase III to Phase IV. In Phase IV, the Commission re-evaluated the impact

of peak shaving and concluded that peak shaving impacts vary by EDC but the overall ratio of actual MW peak reduction performance to valued peak reduction is roughly 1:0.6. In other words, customer performance is only valued at 60%. This was a significant de-valuing relative to Phase III.

The TRC acknowledges that regardless of whether customers are enrolled in PJM Peak Shaving Adjustment or continue to participate in PA Act 129 as designed today, peak shaving still brings this full stream of benefits. The program is focused on peak shaving this year to lower capacity costs in the future which occurs through either design. Whereas the Peak Shaving Adjustment program requires a Temperature-Humidity Index trigger, the Phase III design is a 96% threshold of peak RTO forecast. A Peak Shaving Adjustment program design would necessitate a day-of trigger, whereas the current Phase III design is a day-ahead trigger.

Evaluating the DR Potential data for Large C&I.

First, we will summarize the key data reviewed:

The applicable data relevant for developing a C&I portfolio Avoidable Costs can be found in Tables 27 through 30 of the DR Potential Study. This includes the set of Avoidable Costs discussed above under “cost-effectiveness.”

Applicable Incentive Payments at the Realistic Potential and Maximum Potential levels can be found in Tables 59 and 60 of the DR Potential Study. Programs also include administrative costs. The SWE’s assumed Admin cost was not transparent from the DR Potential Study. In the below analysis we assume a 10% administrative cost adder. Finally, per the 2021 TRC, incentive payments are adjusted by 75% to adjust for the assumption that customers incentivized to participate are not breaking even, but financially motivated and have lower costs to participate than the costs of the incentive. The TRC value presented below reflects this assumption, though we note that the cost to utilities does not.

DR Potential Study Figure 9 describes the relationship between Net Benefits and Incentive Payment. With greater Incentive Payments, more customers are available to participate, however, the total costs to get those customers increases. The grey line represents the Realistic Achievable Potential (RAP), in which Net Benefits are maximized. Maximum

Available Potential (MAP) is represented by the orange line, which may yield lower TRC value, but more total benefits. Any program design should find a balance across these priorities.

The overall Realistic Achievable Potential (RAP) and Maximum Achievable Potential (MAP) by EDC, Program Year, and Day-Of or Day-Ahead trigger, are shown in Tables 61 through 67. The RAP values give us the specific MWs that result in the maximum net benefit dollars for each EDC. Based on the study assumption of participation in Peak Shaving Adjustment, only Program Years 16 and 17 data is useful to estimating the value per year of the program. Estimates from Program Year 16 and 17 can be extended to other years.

AEMA compiled the results presented by the SWE from each EDC into a summary *Table A-1*, found in the Appendix to this filing. The data show that for Phase IV Large C&I DR Realistic Achievable Potential across all EDCs totals across five years 1,374 MW (Day-Of trigger) or 2,554 MW (Day-Ahead trigger). These values are slightly below those estimated before Phase III: 1,552 MW (Day-of trigger) or 3,216 MW (Day-Ahead trigger).¹⁴

The Potential Large C&I DR MW is the largest and usually the most cost-effective form of potential demand response. The DR Potential Study summarizes the total potential residential and Small C&I DR, to 198 MW per year or 990 MW over 5 years. In other words, the Tentative Order made its conclusion to eliminate demand response based on looking at only 28% (using Day-Ahead Large C&I as the comparison) to 42% (using Day-Of Large C&I as the comparison) of the total available realistic demand response resources in the Pennsylvania market.

The above data can be used to derive cost-effectiveness results for Large C&I customers in Phase IV.

As described in *Tables A-1* and *A-2* in the Appendix, all EDCs have highly cost-effective Large C&I Demand Response. The net benefits of each program are summarized below in *Table 2*. The net benefits per EDC range from just \$6,651 per year in Penn Power to \$4,641,313 per year in PECO. Applying a 5% discount rate from the TRC, the total program benefits, costs and net benefits are described in *Table 3*. Finally, as described in *Table 4*, the TRC Ratios range from

¹⁴ Act 129 Phase III DR Potential Study. Table 6-5. Available: <http://www.puc.pa.gov/pdocs/1345077.docx>

2.37 to 2.70. Given the small size of Penn Power’s program, it would likely make sense not to hold the EDC to a target, as was the case in Phase III.

Table 2: Large C&I DR Program Net Benefits (Nominal)

Year	DLC	PECO	PPL	ME	PN	PP	WPP
PY13	\$ 2,008,745	\$ 4,520,413	\$ 2,080,430	\$ 778,913	\$ 778,913	\$ 6,651	\$ 1,201,002
PY14	\$ 2,034,262	\$ 4,573,648	\$ 2,080,430	\$ 790,283	\$ 790,283	\$ 6,651	\$ 1,201,002
PY15	\$ 2,059,779	\$ 4,628,657	\$ 2,080,430	\$ 801,653	\$ 801,653	\$ 6,651	\$ 1,201,002
PY16	\$ 2,093,400	\$ 4,641,313	\$ 2,603,068	\$ 810,455	\$ 810,455	\$ 6,555	\$ 1,189,989
PY17	\$ 2,105,383	\$ 4,782,964	\$ 1,563,875	\$ 829,090	\$ 829,090	\$ 6,747	\$ 1,211,718

Table 3: Large C&I Program Total Benefits, Costs and Net Benefits (Discounted)

Year	Benefits	Costs	Net Benefits
PY13	\$ 20,717,128	\$ 8,698,553	\$ 12,018,576
PY14	\$ 20,825,430	\$ 8,698,553	\$ 12,126,878
PY15	\$ 20,936,012	\$ 8,698,553	\$ 12,237,459
PY16	\$ 21,698,773	\$ 8,876,175	\$ 12,822,598
PY17	\$ 20,497,679	\$ 8,499,563	\$ 11,998,117
Total	\$ 90,617,294	\$ 37,650,396	\$ 52,966,897

Table 4: Large C&I DR Program TRC Ratios

Year	DLC	PECO	PPL	ME	PN	PP	WPP
PY13	2.37	2.37	2.40	2.38	2.37	2.68	2.42
PY14	2.39	2.39	2.40	2.40	2.38	2.68	2.42
PY15	2.40	2.41	2.40	2.42	2.40	2.68	2.42
PY16	2.45	2.46	2.46	2.43	2.40	2.66	2.40
PY17	2.41	2.40	2.35	2.48	2.45	2.70	2.45

Comparing the results here to the information in the Tentative Implementation Order underscores the vital importance of evaluating Large C&I DR fairly in a Phase IV. While the Tentative Order considered a limited DR portfolio with a 1.54 TRC and an EE-only portfolio with a TRC of 1.62, the TRC here is much greater. Furthermore, this analysis highlights that

passive EE peak reduction is much less cost-effective than demand response peak reduction. Demand response can be delivered at a fraction of the cost. The EE-only portfolio costs \$1.9 billion to achieve peak reductions of 878 MW, while the Large C&I DR portfolio costs \$38 million to deliver 2,554 MW, a greater level of peak reduction. The “DR Portfolio” noted in the Tentative Order achieves reductions of 1,031 MW but does not include Large C&I customers and so the overall comparison in the Tentative Order is incomplete.

Clearly, the Tentative Order’s conclusion of \$35 million in additional net TRC benefits from an EE-only portfolio is deeply flawed.¹⁵ AEMA identifies that the net benefits of a Large C&I DR portfolio is \$53 million. This impressive level of net benefits was unnecessarily not considered in the Tentative Order. Comparing this \$53 million to the \$35 million difference noted in the Tentative Order provides a directional insight that including Large C&I DR would result in a DR plus EE portfolio that has greater net benefits than an EE-only portfolio.

Phase IV DR program design elements to consider.

Based on the above, AEMA recommends that the Commission maintain the current DR program design with minor changes to the status quo. Below is a short, non-exclusive list of possible areas of change to consider and AEMA’s perspectives.

1. Utilities were not required to obtain peak demand reductions in the first program year of Phase III (PY8). Moving from Phase III to Phase IV, the Commission could seamlessly continue the existing programs or decide to repeat the Phase III design – hence, creating a gap year. Continuity is often preferable to customers and may accomplish the Commission’s goal to reduce administrative costs. If the Commission identifies benefits to pausing a year, that could also be a feasible solution and still result in beneficial programs to the Commonwealth.
2. A day-ahead trigger results in greater customer participation and cost-effectiveness. AEMA recommends that the Commission continue this program design, rather than shift to a day-of trigger.

¹⁵ Tentative Order, p 33.

3. The specific trigger is now the 96th percentile of peak demand, whereas the Commission had considered moving to a Temperature-Humidity-Index (“THI”). Utilities and others have cited the potential challenge associated with a THI trigger, including availability of data. AEMA recommends maintaining the existing trigger. If the Commission decides to move forward with a THI trigger, it should consider hiring a consultant to share THI data with all Act 129 participants such that all have the same data source.

Current PA PUC dual participation model should continue.

As discussed above, the Commission’s existing Act 129 Phase III participation model recognizes the benefits of dual participation. The Commission has not identified flaws with this approach over the first three years of Phase III.¹⁶ Much to the contrary, the Commission has recognized that dual participation in PJM emergency programs and state level peak shaving programs have complementary objectives, triggers, and compensation structures. These are not the same services. The Commission held an extensive process during Phase III planning that determined the current rules on dual participation. Parties, including many members of AEMA, filed extensive comments. Ultimately, the Commission and Parties developed a framework that has worked in Phase III.

If the Commission wishes to re-open that specific framework, AEMA and its members reserve the right to opine on the issues. As a matter of saving valuable time and resources for all stakeholders, AEMA recommends maintaining the current Phase III rules on dual participation.

We note that the Commission has spoken to the value of dual participation when it comes to distributed energy resources, not just in state proceedings, but also at the federal level. Former Commissioner Andrew Place in April 2018 compellingly argued the benefits of dual participation in wholesale and retail markets at the Federal Energy Regulatory Commission Technical Conference on Distributed Energy Resources.¹⁷ Commissioner Place’s comments, which were reflected by other meeting participants as well, underscored the point that limiting a distributed energy resource that has the physical ability to provide value to the retail and

¹⁶ See SWE Annual Reports.

¹⁷ <https://www.ferc.gov/CalendarFiles/20180502152456-Transcript%20-%20DER%20-%20041018.pdf>

wholesale markets at different times, into a permanent category of “either, or” is inefficient and not consistent with efficient market design.

7. Conclusion

AEMA appreciates this opportunity to comment on the Tentative Implementation Order. The Commission, SWE, EDCs, CSPs, and customers have managed and participated in a highly successful Phase III DR program. Now is not the time to terminate the highly cost-effective DR programs, but rather time to continue into a Phase IV under a similar model that can be fine-tuned based on recent learning and reflecting the latest benefit-cost assumptions captured in the completed 2021 Total Resource Cost Test. Based on close review of the SWE DR Potential Study, a Phase IV would be highly cost-effective.

Respectfully submitted,



Katherine Hamilton
Executive Director, Advanced Energy Management Alliance
1701 Rhode Island Ave., NW
Washington, DC 20036
Katherine@aem-alliance.org; 202-524-8832

April 27, 2020

Table A-1: Realistic Achievable Potential for Large C&I Demand Response (MW)

			Duquesne		PECO		PPL		Met-Ed		Penelec		Penn Power		West Penn Power	
	Sector	Data Source	Day-of	Day-ahead	Day-of	Day-ahead	Day-of	Day-ahead	Day-of	Day-ahead	Day-of	Day-ahead	Day-of	Day-ahead	Day-of	Day-ahead
PY13 (2021- 2022)	LCI	Avg of PY 16-17	33.9	67.15	95.55	177.45	64.45	116.1	20.4	37.9	27.15	50.5	0.9	1.6	32.35	60.15
PY14 (2022- 2023)	LCI	Avg of PY 16-17	33.9	67.15	95.55	177.45	64.45	116.1	20.4	37.9	27.15	50.5	0.9	1.6	32.35	60.15
PY15 (2023- 2024)	LCI	Avg of PY 16-17	33.9	67.15	95.55	177.45	64.45	116.1	20.4	37.9	27.15	50.5	0.9	1.6	32.35	60.15
PY16 (2024- 2025)	LCI	Table data	33.6	67.2	94.2	175	81.6	144.4	20.5	38.1	27.4	51	0.9	1.6	32.6	60.6
PY17 (2025- 2026)	LCI	Table data	34.2	67.1	96.9	179.9	47.3	87.8	20.3	37.7	26.9	50	0.9	1.6	32.1	59.7
Totals			169.5	335.75	477.75	887.25	322.25	580.5	102	189.5	135.75	252.5	4.5	8	161.75	300.75

Table A-2: Large C&I Demand Response Phase IV Based on SWE DR Potential Study (Nominal)

Year	DLC			PECO			PPL		
	Benefits	Costs	Net Benefits	Benefits	Costs	Net Benefits	Benefits	Costs	Net Benefits
PY13	\$ 3,476,811	\$ 1,468,067	\$ 2,008,745	\$ 7,814,328	\$ 3,293,916	\$ 4,520,413	\$ 3,565,058	\$ 1,484,629	\$ 2,080,430
PY14	\$ 3,502,328	\$ 1,468,067	\$ 2,034,262	\$ 7,867,563	\$ 3,293,916	\$ 4,573,648	\$ 3,565,058	\$ 1,484,629	\$ 2,080,430
PY15	\$ 3,527,845	\$ 1,468,067	\$ 2,059,779	\$ 7,922,573	\$ 3,293,916	\$ 4,628,657	\$ 3,565,058	\$ 1,484,629	\$ 2,080,430
PY16	\$ 3,534,840	\$ 1,441,440	\$ 2,093,400	\$ 7,817,563	\$ 3,176,250	\$ 4,641,313	\$ 4,390,018	\$ 1,786,950	\$ 2,603,068
PY17	\$ 3,600,035	\$ 1,494,653	\$ 2,105,383	\$ 8,196,566	\$ 3,413,603	\$ 4,782,964	\$ 2,722,835	\$ 1,158,960	\$ 1,563,875

Year	ME			PN			PP			WPP		
	Benefits	Costs	Net Benefits	Benefits	Costs	Net Benefits	Benefits	Costs	Net Benefits	Benefits	Costs	Net Benefits
PY13	\$ 1,341,728	\$ 562,815	\$ 778,913	\$ 2,463,985	\$ 1,041,563	\$ 1,422,423	\$ 10,611	\$ 3,960	\$ 6,651	\$ 2,044,606	\$ 843,604	\$ 1,201,002
PY14	\$ 1,353,098	\$ 562,815	\$ 790,283	\$ 2,482,165	\$ 1,041,563	\$ 1,440,603	\$ 10,611	\$ 3,960	\$ 6,651	\$ 2,044,606	\$ 843,604	\$ 1,201,002
PY15	\$ 1,364,468	\$ 562,815	\$ 801,653	\$ 2,500,850	\$ 1,041,563	\$ 1,459,288	\$ 10,611	\$ 3,960	\$ 6,651	\$ 2,044,606	\$ 843,604	\$ 1,201,002
PY16	\$ 1,376,240	\$ 565,785	\$ 810,455	\$ 2,529,691	\$ 1,051,875	\$ 1,477,816	\$ 10,515	\$ 3,960	\$ 6,555	\$ 2,039,904	\$ 849,915	\$ 1,189,989
PY17	\$ 1,388,935	\$ 559,845	\$ 829,090	\$ 2,529,590	\$ 1,031,250	\$ 1,498,340	\$ 10,707	\$ 3,960	\$ 6,747	\$ 2,049,011	\$ 837,293	\$ 1,211,718