PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17120

Public Meeting held June 18, 2025

Commissioners Present:

Stephen M. DeFrank, Chairman, Statement
Kimberly Barrow, Vice Chair
Kathryn L. Zerfuss
John F. Coleman, Jr.
Ralph V. Yanora

Energy Efficiency and Conservation Program M-2025-3052826

IMPLEMENTATION ORDER

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BY THE COMMISSION:

The Pennsylvania General Assembly (General Assembly) has charged the Pennsylvania Public Utility Commission (Commission) with establishing an energy efficiency and conservation (EE&C) program. The EE&C program requires each electric distribution company (EDC) with at least 100,000 customers to adopt a plan to reduce energy demand and consumption within its service territory (66 Pa. C.S. § 2806.1). On January 15, 2009, the Commission adopted an Implementation Order at Docket No. M-2008-2069887, establishing the standards each plan must meet and providing guidance on the procedures to be followed for submittal, review, and approval of all aspects of EDC EE&C plans.[1]

The Commission was also charged with the responsibility to evaluate the costs and benefits of the EE&C program by November 30, 2013, and every five years thereafter. 66 Pa. C.S. § 2806.1(c)(3). The Commission must adopt additional incremental reductions in consumption if the benefits of the EE&C program exceed its costs. *Id*. In addition, the Commission has the responsibility to compare the total costs of the EE&C program to the total savings in energy and capacity costs. If the Commission determines that the benefits exceed the costs, the Commission shall set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand or an alternative reduction approved by the Commission. 66 Pa. C.S. § 2806.1(d)(2). Furthermore, EDCs are to file a new EE&C plan with the Commission every five years or as otherwise required by the Commission. Such plans must establish how the EDC will meet the required reductions in consumption under 66 Pa. C.S. § 2806.a(1)(b-c). 66 Pa. C.S. § 2806.1(b)(1)(ii). With this Implementation Order, the Commission adopts

[1] *See Energy Efficiency and Conservation Program* Implementation Order, Docket No. M-2008-2069887 (entered January 16, 2009,) (Phase I Implementation Order). Available online at: https://www.puc.pa.gov/electric/pdf/Act129/EEC_Implementation_Order.pdf

additional incremental reductions in consumption and peak demand, establishes the standards each EE&C plan must meet, and provides guidance on the procedures to be followed for submittal, review and approval of all aspects of EE&C plans for Phase V of the EE&C program.

BACKGROUND AND HISTORY OF THIS PROCEEDING

Act 129 of 2008 (the Act, or Act 129) was signed into law on October 15, 2008, effective November 14, 2008. Among other things, the Act created an EE&C program, codified at Sections 2806.1 and 2806.2 of the Pennsylvania Public Utility Code. *See* 66 Pa. C.S. §§ 2806.1 and 2806.2. This initial EE&C program required an EDC with at least 100,000 customers to adopt an EE&C plan, approved by the Commission, to reduce electric consumption by at least one percent (1%) by May 31, 2011, and by a minimum of three percent (3%) by May 31, 2013. Also, by May 31, 2013, peak demand was to be reduced by a minimum of four-and-a-half percent (4.5%) of the EDC's annual system peak demand in the 100 hours of highest demand. By November 30, 2013, and every five years thereafter, the Commission was required to assess the cost-effectiveness of the EE&C program and establish additional incremental reductions in electric consumption if the EE&C program's benefits exceed its costs.

The Act required the Commission to develop and adopt an EE&C program by January 15, 2009, and set out specific issues the EE&C program must address. 66 Pa. C.S. § 2806.1(a). The Commission's EE&C program was required to include the following:

(1) A procedure for approving EE&C plans.

(2) A process to evaluate and verify the results of each EE&C plan and the EE&C program as a whole.

(3) A process to analyze the costs and benefits of each EE&C plan with a total resource cost (TRC) Test.

(4) A process to analyze how the EE&C program as a whole and each EE&C plan will enable the EDCs to meet or exceed the consumption and peak demand reduction requirements.

(5) Standards to ensure that each EE&C plan uses a variety of measures applied equitably to all customer classes.

(6) A process through which recommendations can be made for the employment of additional measures.

(7) A procedure to require and approve the competitive bidding of all contracts with conservation service providers (CSPs).

(8) A procedure through which the Commission will review and modify, if necessary, all contracts with CSPs before execution.

(9) A requirement for the participation of CSPs in the implementation of all or part of an EE&C plan.

(10) A procedure to ensure compliance with the requirements of Sections 2806.1(c) & (d).

(11) A cost recovery mechanism to ensure that the customer class directly receiving the energy and conservation benefits finances approved measures.[2]

On January 15, 2009, the Commission adopted its Phase I Implementation Order establishing the EE&C program in compliance with Section 2806.1(a), 66 Pa. C.S. § 2806.1(a). In addition to adopting the Phase I Implementation Order, the Commission also adopted orders implementing specific and essential components of the EE&C

[2] 66 Pa. C.S. § 2806.1(a).

program, to include the establishment of a TRC Test,[3] updates to the Technical Reference Manual (TRM)[4] and the establishment of a Statewide Evaluator (SWE).

The Commission determined in its Phase II Implementation Order that additional reductions in consumption were cost-effective and prescribed targets to be met by May 31, 2016.[5] At that time, however, the Commission did not have enough information to determine the cost-effectiveness of peak demand reduction programs and only permitted EDCs to voluntarily offer cost-effective demand reduction programs.[6]

The Commission determined in its Phase III Implementation Order that additional reductions in consumption and peak demand were cost-effective and therefore prescribed reductions in consumption and peak demand targets to be met by May 31, 2021.[7]

The Commission determined in its Phase IV Implementation Order that additional reductions in consumption and peak demand were cost-effective and therefore prescribed reductions in consumption and peak demand targets to be met by May 31, 2026.[8] The targets for peak demand were based on the expected peak demand reductions from energy efficiency (EE) rather than dispatchable demand response (DDR) programs.

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[3] *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test Order*, Docket No. M-2009-2108601 (Order entered June 23, 2009). Available online at: https://www.puc.pa.gov/pcdocs/1057172.docx

[4] *See Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update* Order, Docket No. M-00051865 (entered June 1, 2009). Available online at: https://www.puc.pa.gov/pcdocs/1043608.doc

[5] *See Energy Efficiency and Conservation Program Implementation Order*, Docket Nos. M-2012-2289411 and M-2008-2069887(Order entered Aug. 3, 2012), at 24. Available online at: https://www.puc.pa.gov/pcdocs/1186974.doc

[6] *Id.* at 32, 33, 42, and 43.

[7] *See Phase III Final Implementation Order*, Docket No. M-2014-2424864 (Order entered June 19, 2015), at page 12,. Available online at: https://www.puc.pa.gov/pcdocs/1367313.doc

[8] *See Phase IV Final Implementation Order,* Docket No. M-2020-3015228(Order entered June 18, 2020), at 15-16. Available online at: https://www.puc.pa.gov/pcdocs/1666981.docx

In preparation for a potential Phase V, the Commission tasked the Phase IV SWE with performing an energy efficiency and peak demand reduction (EEPDR) potential study, as well as a demand response (DR) potential study to determine the cost-effective consumption and peak demand reduction potential in Pennsylvania. The SWE submitted its final *Pennsylvania Act 129 Phase V Energy Efficiency and Peak Demand Reduction Market Potential Study* and *Pennsylvania Act 129 Phase V Demand Response Potential Study* to the Commission in February 2025.[9] The EEPDR and DR Potential Studies were released publicly via Secretarial Letter served February 21, 2025.[10]

On February 20, 2025, the Commission adopted a Phase V Tentative Implementation Order.[11] In conjunction with the adoption of the Tentative Implementation Order, Chairman Stephen M. DeFrank provided a statement requesting feedback on the following:

- The ways to maximize the impacts of the budgets on affordability and resource adequacy.
- How to use ratepayer funds as prudently as possible in ways that can provide savings to customers and preserve the reliability of our overall power grid, taking into account rising costs.

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[9] *See Pennsylvania Act 129 - Phase V Energy Efficiency and Peak Demand Reduction Market Potential Study Report*, submitted by NV5, Inc., et. al., February 2025. Available at: https://www.puc.pa.gov/pcdocs/1867286.pdf
Pennsylvania Act 129 - Phase V Demand Response Potential Study, submitted by Demand Side Analytics., February 2025. Available at: https://www.puc.pa.gov/pcdocs/1867287.pdf

[10] *See Release of the Act 129 Statewide Evaluator Energy Efficiency and Peak Demand Reduction Market Potential and Demand Response Potential Studies* Secretarial Letter, Docket No. M-2025-3052827 (served February 21, 2025).

[11] *See Energy Efficiency and Conservation Program* Tentative Implementation Order, Docket No. M-2025-3052826 (entered February 20, 2025) (Tentative Implementation Order).

Comments in response to the Phase V Tentative Implementation Order were due April 7, 2025. The following parties filed comments: Advanced Energy United; Coalition for Equitable Energy and Housing in PA (CEEH-PA); Commission on Economic Opportunity (CEO) and Pennsylvania Weatherization Providers Task Force (collectively, CEO and the Task Force); Philadelphia Solar Energy Association, Pennsylvania Solar Center, Pennsylvania Solar and Storage Industries Association, Evergreen Action (collectively, Clean Energy Advocates); Pennsylvania Department of Environmental Protection (DEP); Duquesne Light Company (Duquesne Light); Energy Association of Pennsylvania (EAP); FirstEnergy Pennsylvania Electric Company (FirstEnergy); Industrial Energy Consumers of Pennsylvania (IECPA); Building Decarbonization Coalition, Celentano Energy Services, Center for Coalfield Justice, Clean Air Council, Conservation Voters of PA, Energy Efficiency Alliance, Green Building United, Jewish Earth Alliance – PA, Natural Resources Defense Council, PA Solar & Storage Industries Association, PennEnvironment, Pennsylvania Interfaith Power & Light, Pennsylvania Solar Center, Pennsylvania Sustainable Business Network, Pennsylvania Utility Law Project, POWER Interfaith, Physicians for Social Responsibility Pennsylvania, Sierra Club Pennsylvania Chapter, Vote Solar (collectively, Joint Energy Advocates); Keystone Energy Efficiency Alliance (KEEA); Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) and Tenant Union Representative Network (TURN), (collectively, Low Income Advocates); Northeast Energy Efficiency Partnerships (NEEP); NRG Energy Inc. (NRG); Office of Consumer Advocate (OCA); Oracle Utilities Opower (Oracle); Office of Small Business Advocate (OSBA); PECO Energy Company (PECO); PPL Electric Utilities Corporation (PPL); RMI; UGI Utilities Inc. (UGI); and Uplight.

Reply comments were due April 22, 2025. The following parties filed reply comments: CEO and the Task Force; Duquesne Light; EAP; EnergyHub; FirstEnergy; IECPA; KEEA; Low Income Advocates; OCA; Oracle; OSBA; PECO; PPL; Renew

Home; Sierra Club; UGI; and Uplight.

All comments and reply comments which pertain to this Implementation Order have been summarized and responded to. Comments not addressed in this Implementation Order are considered to be irrelevant or outside of the scope of this preceding.

DISCUSSION

In this Implementation Order, the Commission presents its evaluation of the cost-effectiveness of the EE&C program and any proposed additional required incremental reductions in consumption and peak demand. In addition, we outline our proposals addressing the issues delineated in Section 2806.1(a) of the Act, 66 Pa. C.S. § 2806.1(a), for establishing Phase V of the EE&C program. We sought comments on (1) the evaluation of the EE&C program, (2) the proposed additional required incremental reductions in consumption and peak demand shown in Table 1, as well as (3) proposals addressing the design and implementation of the next round of the EE&C program. The Commission proposes implementing a five-year Phase V of the Act 129 EE&C program, which would operate from June 1, 2026, through May 31, 2031. We note that the EE&C programs have matured enough so that EDCs can increase their focus on more comprehensive measures, which tend to require longer implementation timeframes.

Table 1: Proposed Phase V Targets, by EDC

EDC	Consumption Reduction (MWh)	Peak Demand Reduction (MW)	Low-Income Consumption Reduction (MWh)
Duquesne Light	275,318	48.4	18,933
PECO	1,174,520	202.4	74,456
PPL	875,992	157.5	65,678
FirstEnergy	1,155,573	199.3	86,913

Based on our review of stakeholder comments, we have modified the proposed Phase V compliance targets to assume an increased funding allocation to traditional EE and decreased funding allocation to solar photovoltaic (PV). This change raises the weighted average acquisition cost for energy and peak demand and lowers the MWh and MW targets by four to five percent. The low-income consumption reduction targets are unchanged from the Tentative Implementation Order. Table 2 lists required incremental reductions in consumption and peak demand by EDC, for Phase V of Act 129.

Table 2: Final Phase V Targets, by EDC

EDC	Consumption Reduction (MWh)	Peak Demand Reduction (MW)	Low-Income Consumption Reduction (MWh)
Duquesne Light	261,583	46.5	18,933
PECO	1,111,685	194.8	74,456
PPL	828,231	151.0	65,678
FirstEnergy	1,097,605	191.0	86,913

A. Proposed Reductions in Electric Consumption

1. Summary of SWE's EEPDR Potential Study

The SWE performed an EEPDR Potential Study that estimated the technical, economic, and achievable potential over ten years and program potential over five years, beginning June 1, 2026, for the residential, commercial, and industrial sectors.[12] This study was released to the public via Secretarial Letter on February 21, 2025, at Docket No. M-2025-3052827. A stakeholder meeting to review the study methodology and findings and gather input was held on January 29, 2025. In addition, the SWE performed baseline studies for the residential[13] and the non-residential[14] sectors, which the Commission released on March 25, 2024.[15] Together, these baseline studies represent a thorough assessment of current electricity usage and electrical energy consuming equipment installed in Pennsylvania. These baseline studies formed the basis for the EEPDR Potential Study.

The purpose of the EEPDR Potential Study was to determine the remaining opportunities for cost-effective, achievable electricity savings in the service areas of the four EDCs subject to Act 129. During this study, the Commission approved the consolidation of four EDCs (Metropolitan Edison Company (Met-Ed), Pennsylvania Electric Company (Penelec), Pennsylvania Power Company (Penn Power), and West Penn Power Company (West Penn)) into rate districts of a single EDC, FirstEnergy

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[12] *See EEPDR Potential Study* at page vii.
[13] *See Pennsylvania Act 129 2023 Residential Baseline Study*, submitted by NMR Group, Inc., March 21, 2024. Available online at: https://www.puc.pa.gov/media/2883/2023_pa_residential_baseline_study.pdf
[14] *See Pennsylvania Act 129 2023 Non-Residential Baseline Study*, submitted by Demand Side Analytics *et al.*, February 2024. Available online at: https://www.puc.pa.gov/media/2884/2023_pa_non-residential_baseline_study.pdf
[15] *See Release of the Statewide Evaluator Baseline Studies* Secretarial Letter, Docket No. M-2023-3044490 (served March 25, 2024). Available online at: https://www.puc.pa.gov/pcdocs/1821617.pdf

Pennsylvania Electric Company (FirstEnergy).[16] Because the baseline studies and other relevant sources of assumptions were either in process or finalized prior to the approval of the consolidation, the EEPDR Potential Study analysis was conducted at the regional granularity of the seven EDC territories prior to the FirstEnergy consolidation. For reporting purposes, savings potential and economic results for the FirstEnergy rate districts were aggregated to reflect a single EDC.

For this study, the SWE used the Act 129 Pennsylvania-specific cost-effectiveness criteria, including the most recent EDC-specific avoided cost projections for electricity.[17] The avoided cost projections were calculated according to the instructions in the Commission's 2026 TRC Test Final Order.[18] As part of the EEPDR Potential Study, the SWE separately assessed budget-constrained estimates of combined heat and power (CHP) and solar PV potential. The CHP potential assumed a one percent budget allocation, balancing the historically mixed performance in Pennsylvania for acquiring CHP savings in EE&C programs with the fact that low-cost savings are available in all EDC territories, according to previously modeled results.[19] Further, a five percent budget allocation was assumed for PV balancing the increasing prevalence of PV in the EE&C portfolios with the uncertainty surrounding the continuation of supportive policies such as net metering and tax credits. These budget allocations were drawn proportionally from

[16] FirstEnergy was granted approval for consolidation by the PUC, at the December 7, 2023, Public Meeting, of the four independent EDCs it owned: Metropolitan Edison Company (Met-Ed), Pennsylvania Electric Company (Penelec), Pennsylvania Power Company (Penn Power), and West Penn Power Company (West Penn). These former four EDCs are now Rate Districts that comprise the FirstEnergy EDC.

[17] *See the 2026 Avoided Cost Calculator*. Available online at: https://www.puc.pa.gov/pcdocs/1855612.xlsx

[18] *See the 2026 TRC Test Final Order*, Docket No. M-2024-3048998 (Order entered November 7, 2024). Available online at: https://www.puc.pa.gov/pcdocs/1855583.pdf

[19] *See Pennsylvania Act 129 Phase IV Energy Efficiency and Peak Demand Reduction Market Potential Study,* submitted by Optimal Energy, Inc. et al., February 28, 2020. Released via Secretarial Letter on March 2, 2020, at Docket No. M-2020-3015229. Available online at: https://www.puc.pa.gov/pcdocs/1656474.pdf

all sectors. The resulting blend of Traditional EE, CHP, and PV, with budgets calibrated precisely to Act 129 budget caps, constituted the Act 129 EE Potential as presented in the EEPDR Potential Study.[20]

For the residential sector, the SWE first determined the eligible equipment stock, followed by estimations of the available electric savings, and screened for cost-effectiveness. The SWE then summed those savings at the end-use and the EDC service territory levels. Regarding the non-residential sectors, the SWE used a similar approach to determine measure-level available electric savings and costs, in addition to cost-effectiveness. The SWE then applied cost-effective measure savings to all applicable shares of electric load.[21]

It is important to note how the SWE treated non-residential lighting in the study. In Phase IV to date, non-residential lighting has been the largest contributor of savings in each EDC's portfolio. However, the 2023 Non-Residential Baseline Study indicates that light emitting diode (LED) lighting saturations are already high and increasing quickly. Statewide, LED technologies represent 60% of commercial lighting and 40% of total installed wattage.[22] The EEPDR Potential Study assumed that opportunities for both market-driven (such as midstream) and retrofit measures are limited to the projected stock of inefficient lighting equipment, and, once converted to LEDs, will no longer represent a future opportunity.[23] This modeling perspective assumes that once a business converts a fixture or lamp to LED, they will not revert back to a less-efficient lighting technology when that LED equipment reaches the end of its useful life, even though there may be a commercially available non-LED replacement option. This aspect of the

[20] *See EEPDR Potential Study* at pages xi-xiii.
[21] *See EEPDR Potential Study* at pages 5-20.
[22] *See 2023 Non-Residential Baseline Study*.
[23] *See EEPDR Potential Study* at pages 12-13.

EEPDR Potential Study is discussed in more detail in Section A.6 of this Implementation Order.

The SWE utilized, as a reference from which to report savings as a percentage of annual MWh sales, the forecast MWh sales for each EDC for the period June 1, 2009, through May 31, 2010.[24] For the Act 129 EE Potential, which assumed a blend of traditional EE measures, CHP, and PV portfolio components and budgets calibrated precisely to Act 129 budget caps, the SWE estimated that the total incremental annual achievable electric savings potential for the four EDCs from June 1, 2026, through May 31, 2031, for consumption reductions is 2.5% of the 2009–2010 baseline annual kWh sales (Table 3).[25] This represents average annual electric savings equal to 0.50% per year of the baseline 2009–2010 load, or 3,626,603 MWh of total incremental annual savings over a five-year timeframe. Consistent with the EEPDR Potential Study, Table 3 also presents the results for Achievable Potential, Program Potential, and Act 129 Traditional EE Potential scenarios.[26]

[24] *See EEPDR Potential Study* at pages ix–x.
[25] *See EEPDR Potential Study* at page xi.
[26] *See EEPDR Potential Study* at page iii. The Achievable Potential estimated all achievable, cost-effective potential recognizing real-world barriers and assuming aggressive, well-designed, marketed, and implemented programs that provide incentives covering 100% of incremental measure costs. The Program Potential is a subset of the Achievable Potential assuming incentives are reduced for non-low-income participants to cover 50% of incremental measure costs (the assumption of incentives covering 100% of incremental costs was maintained for low-income participants). The Act 129 Traditional EE Potential is a subset of the Program Potential and reflects incorporation of the Act 129 budget caps and assumes all available Act 129 budgets fund energy efficiency only (i.e., no budget allocation is assumed for CHP or PV).

Table 3: EEPDR Potential Study Savings Compared to 2009–2010 MWh Sales Forecast

Potential Study Scenario	2026–2031 Sum of Incremental Annual Savings	
	MWh	% of 2009–2010 Sales Forecast[1]
Achievable Potential	7,826,695	5.3%
Program Potential	5,138,822	3.5%
Act 129 Traditional EE Potential	3,039,599	2.1%
Act 129 EE Potential	3,626,603	2.5%

[1] The total sales forecast for June 1, 2009, through May 31, 2010, was 146,661,792 MWh.

The SWE also concluded that consumption reduction programs will continue to be cost-effective for ratepayers, as noted in the EEPDR Potential Study and as presented in Table 4 below. The TRC ratio statewide is estimated to be 1.82, with net benefits of approximately $1.4 billion over the lifetime of measures installed during Phase V (June 1, 2026 through May 31, 2031). The estimated program acquisition cost (dollars per first-year MWh saved) of $402.3 per MWh translates to savings of 3,039,599 MWh under Act 129 funding constraints.[27] Note that these values assume that the entirety of the Act 129 budgets are spent on traditional EE measures, without any allocation for CHP and PV, and are therefore consistent with the Act 129 Traditional EE Potential values presented in Table 3, not the Act 129 EE Potential.

[27] *See EEPDR Potential Study* at page xi.

Table 4: EEPDR Potential Study Traditional Energy Efficiency Potential, by EDC

EDC	Acquisition Cost ($/MWh)	Budget ($MM)	TRC Costs ($MM)	TRC Benefits ($MM)	Net TRC Benefits ($MM)	TRC Ratio (X:1)	MWh
Duquesne Light	$404.1	$97.7	$132.2	$260.6	$128.4	1.97	241,824
PECO	$419.9	$427.4	$578.3	$987.9	$409.6	1.71	1,017,755
PPL	$404.8	$307.5	$456.0	$855.7	$399.7	1.88	759,625
FirstEnergy	$382.5	$390.3	$536.3	$992.1	$455.8	1.85	1,020,394
Statewide*	**$402.3**	**$1.222.9**	**$1,702.8**	**$3,096.3**	**$1,393.5**	**1.82**	**3,039,599**

*Statewide values in this table may not sum due to rounding

The SWE notes that program acquisition costs are significantly different among traditional EE, CHP, and PV measures. Further, within the modeled traditional EE potential, the acquisition costs of low-income measures are significantly higher than those for non-low-income EE measures. Table 5 and Table 6 show the energy and system-level peak demand acquisition costs modeled in the Act 129 EE Potential scenario of the EEPDR Potential Study. The electric energy acquisition cost for Act 129 EE Potential ranges from $323.42 per MWh for FirstEnergy to $349.57 per MWh for PECO.[28]

[28] *See EEPDR Potential Study* at pages xiii, 36-37, 42, 50, and 54.

Table 5: Act 129 EE Potential MWh Acquisition Costs by Component, by EDC

EDC	Acquisition cost ($/MWh)			
	Non-Low-Income EE	Low-Income EE	PV	CHP
Duquesne Light	$380.78	$671.03	$162.87	$32.13
PECO	$393.40	$746.22	$160.84	$32.13
PPL	$384.93	$608.66	$154.30	$32.13
FirstEnergy	$363.21	$583.82	$154.65	$32.13
Statewide	**$380.20**	**$646.32**	**$157.31**	**$32.13**

Table 6: Act 129 EE Potential MW Acquisition Costs by Component and EDC

EDC	Acquisition cost ($/MW)			
	Non-Low-Income EE	Low-Income EE	PV	CHP
Duquesne Light	$2,809,870	$4,463,207	$1,162,958	$230,920
PECO	$2,995,930	$5,774,027	$1,278,518	$230,920
PPL	$2,923,141	$4,173,077	$1,158,649	$230,920
FirstEnergy	$2,847,135	$4,087,317	$1,138,229	$230,920
Statewide	**$2,913,669**	**$4,613,152**	**$1,191,212**	**$230,920**

a. Comments

Stakeholder comments on the EEPDR Potential Study are organized by topic due to the volume of comments received.

I. General Study Process and Methods

EAP argues that there is little opportunity for substantive input on the assumptions adopted and methodologies employed by the SWE in the potential studies until the issuance of the Tentative Implementation Order. EAP notes that it has expressed similar concerns through comments on tentative implementation orders for previous phases. Further, the EAP argues that the January 29, 2025, Stakeholder Meeting[29] to review methodology and draft results before public release of the potential study reports was inadequate in a situation where a regulatory agency plans to enact goals based on study outcomes that will create compliance obligations. EAP notes, failure to meet those obligations will have meaningful consequences. EAP argues that the stakeholder meeting was not a substitute for a process that allows input to the SWE prior to the initiation of the studies, time following the release of the completed studies for review and formal response by stakeholders prior to the issuance of the Tentative Implementation Order, and time for the Commission to consider the completed studies as well as input from the EDCs and other stakeholders. EAP Comments at 4-5.

II. Treatment of Outside Funding and Tax Credits

Several stakeholders object to the treatment of outside funding in the EEPDR Potential Study. Duquesne Light argues that due to uncertainty with respect to the direction the federal government may take under the current administration, the influence of outside funding should be removed from estimated energy reduction potential. Duquesne Light Comments at 13.

PECO recommends excluding the Home Efficiency Rebates (HER) and Home Electrification and Appliance Rebates (HEAR) funding from the calculation of

[29] *See Secretarial Letter announcing the MPS Stakeholder Meetings*. Available online at: https://www.puc.pa.gov/pcdocs/1862831.pdf

acquisition costs, and consequently, from the EE targets arguing that there is persisting uncertainty with respect to the availability of HER and HEAR funds. Further, PECO requests the ability to petition for a revision to targets if changes in circumstances, such as the elimination of federal funding, materially impact their ability to meet targets. PECO Comments at 21.

FirstEnergy comments that, due to uncertainty, assuming the availability of federal funding and tax credits during Phase V is inappropriate, and that any such impacts should be removed from the EEPDR Potential Study. Specifically, FirstEnergy objects to the inclusion of the influence of HER and HEAR funding on estimated low-income residential measure costs, incentives, and participation estimates. FirstEnergy further objects to the assumption that federal tax credits for solar PV will persist in Phase V. FirstEnergy Comments at 16.

Similarly, EAP disagrees with the assumptions it believes were used in the EEPDR Potential Study, arguing that the study overstates the certainty of both federal weatherization and beneficial electrification funding for low-income households and federal tax credits for solar PV and battery storage. EAP Comments at 16. OCA argues that the Commission should set the goals independent of the Inflation Reduction Act (IRA) funding to allow the EDCs to develop their EE&C plans without the complication of relying upon availability of outside funds to achieve their goals. OCA Reply Comments at 6-8.

III. Macroeconomic Factors

Several stakeholders argue that the potential studies did not adequately account for inflation, supply chain issues, and import tariffs. PPL contends that the potential studies applied historical acquisition costs for key measures and did not factor in existing or potential levels of inflation resulting in artificially increased energy consumption and

peak demand reduction targets. PPL therefore recommends that the Commission adjust the incentives and costs for all measures to more conservative levels and adjust EDC targets accordingly. PPL Comments at 5.

EAP argues that the SWE's use of historical acquisition costs from early Phase IV to estimate acquisition costs in the potential studies for Phase V ignores cost increases due to supply chain issues, inflation, and possible future impacts from federal tariffs or the expiration of tax credits. EAP argues that the resulting uncertainty in future acquisition costs should be considered in the Final Implementation Order and that an assumption of suppressed acquisition costs will increase compliance risk and stifle program innovation and creativity. EAP Comments at 7-8.

FirstEnergy contends that the potential studies suppressed acquisition costs by making budgetary assumptions for Phase V based on what was observed in early Phase IV, which included an over-reliance on participation of lower cost measures, and notes that their acquisition costs have increased over 20% since that time. Further, FirstEnergy states that the EEPDR Potential Study did not consider volatile inflation experienced during Phase IV when estimating non-incentive program costs, and they argue that inflation should be considered and included in the potential studies' assumptions for non-incentive costs. FirstEnergy also states that the EEPDR Potential Study should be updated to include the impacts of tariffs on equipment costs and further recommends that incentives be updated to offset the increased costs to customers. FirstEnergy Comments at 3 and 13.

IV. Treatment of CHP and Solar PV

EAP contends that, due in part to the macroeconomic factors discussed above, the modeled acquisition costs are too low and should be based on EE measures that have a demonstrated track record in previous phases. EAP argues that the modeling of

acquisition costs and targets is not the place to incorporate complex measures such as CHP and solar PV, and doing so would constrain program design and create undue reliance on specific measures. EAP believes CHP should be excluded from the calculation of the blended acquisition cost due to project complexity and unpredictability. EAP further argues that doing so would not prevent EDCs from including CHP in Phase V EE&C plans. EAP Comments at 6, 8, and 14.

FirstEnergy comments that the EEPDR Potential Study did not consider their historical Act 129 achievement when assessing CHP potential. FirstEnergy contends that CHP projects are highly complex, specialized, and uncertain due to changing economic and business conditions. FirstEnergy further comments that the EEPDR Potential Study assumed acquisition costs to be consistent with those observed early in Phase IV without consideration for increasing costs to customers or increased customer incentives. FirstEnergy argues that if they are unable to achieve CHP participation and savings at the costs assumed by the SWE, they will need to make up for the savings shortfall with higher acquisition cost measures, leading to undue risk of compliance. FirstEnergy Comments at 7.

Similarly, FirstEnergy comments that the Commission almost doubled the amount of solar PV assumed in the blended acquisition costs relative to what was modeled in the EEPDR Potential Study to arrive at the proposed targets for Phase V. FirstEnergy states that the assumed acquisition costs for solar PV in the EEPDR Potential Study based on program data from early Phase IV does not consider increasing costs to customers and economic uncertainty. FirstEnergy contends that studies have shown that the new expected solar PV capacity in the US could drop by 50% if current federal tax credits are removed. FirstEnergy argues that if they cannot achieve solar PV participation and savings at the costs assumed by the SWE, they will need to make up the savings shortfall with higher acquisition cost measures leading to undue risk of non-compliance.

FirstEnergy argues that the assumed Act 129 Potential from solar PV projects should be reduced by at least 50%, so as not to rely on tax credits, and incentives should be increased to account for increasing equipment and labor costs. FirstEnergy Comments at 10-11.

PPL comments that the SWE's solar PV models assume low costs for residential and non-residential solar PV that do not reflect increasing costs for trade allies and customers, nor the flexibility of incentive levels provided by the EDCs. PPL Comments at 7. PPL avers that the contribution from solar PV should be recalculated with a more conservative approach assuming higher costs and EDC targets adjusted to align with new assumptions. PPL Comments at 7. Duquesne Light disagrees with commenters who suggested that the acquisition costs modeled in the EEPDR Potential Study are artificially low, leading to higher targets. Duquesne Light Reply Comments at 4.

V. Miscellaneous Study Comments

FirstEnergy argues that the magnitude of the Program Potential estimated in the EEPDR Potential Study for residential space heating, water heating, and cooling end uses is not reasonable. They assert that the potential is unrealistic for a program design that sets customer incentive levels at only 50% of the incremental measure costs for this equipment, due to high project costs and other customer barriers, recent changes to codes and standards for residential cooling and electric heating equipment, and reliance on customers having applicable electric equipment that can be replaced with higher efficiency air-conditioning and heat pump equipment. FirstEnergy notes that they have traditionally achieved low participation among these end uses and provides their view of the maximum reasonably achievable participation. Finally, FirstEnergy recommends that the SWE update the EEPDR Potential Study, increasing incentives for these end uses to at least 75% of the incremental measure costs to drive increased participation. FirstEnergy Comments at 11.

FirstEnergy notes that LED lighting has become the dominant technology in the commercial sector over the past several years and comments that savings from non-residential lighting in FirstEnergy's programs have been declining at an average rate of 15% year over year, even with continued heavy promotion. FirstEnergy argues that when this trend is projected into the Phase V period, the forecasted savings are far lower than the estimated average annual savings of 49 GWh as derived from the EEPDR Potential Study. FirstEnergy further argues that those customers who have not yet upgraded to LED lighting are likely to have additional barriers requiring higher incentives and other cost-increasing program activities. FirstEnergy recommends that more recent levels of participation should be used as a starting point and the Act 129 Potential over Phase V should reflect declining participation and savings over time. FirstEnergy Comments at 5.

FirstEnergy comments that in the EEPDR Potential Study the SWE capped measure lives at 15 years. FirstEnergy argues that while this is appropriate for application of the TRC Test, the effective useful life of the equipment should instead be used when calculating participation rates and program potential. FirstEnergy Comments at 17.

OCA contends that potential studies have well-documented limitations that result in underestimation of savings potential. OCA notes that the proposed Phase V acquisition costs are significantly higher than actual acquisition costs in Phase IV and that FY15 actual acquisition costs are generally lower than those in the planned Phase IV Final Implementation Order. Specifically, the OCA notes that the EEPDR Potential Study projected PPL's acquisition costs to increase the most and argues that there is potential for PPL to continue to experience lower acquisition costs than its EDC counterparts. OCA therefore recommends that the PPL goal be adjusted to reflect a

similar increase in acquisition costs, relative to actuals, as that projected for other EDCs. OCA Comments at 6.

PPL disagrees with comments from the OCA that PPL's acquisition costs should be lowered and savings targets increased. PPL argues that the higher acquisition costs as modeled in the EEPDR Potential Study are, in part, a result of high forecasted levels of HVAC and water heating measures, which have higher acquisition costs, reflecting an increased number of electrically heated homes. PPL Reply Comments at 3.

b. Disposition

I. General Study Process and Methods

The Commission does not find EAP's comments regarding the need for process modifications with respect to potential study development compelling. The potential studies are intended to be an *independent* assessment of the remaining cost-effective, achievable potential. As such, stakeholder influence on the development of these studies should be minimized. In addition, the potential studies are developed leveraging avoided costs developed consistent with the 2026 TRC Test Final Order, measure input assumptions from the 2026 TRM, and data from the 2023 Pennsylvania Residential and Non-Residential Baseline Studies, all of which are subject to stakeholder review and comment and/or presented at public meetings. Further, the potential studies used data provided directly by the EDCs in response to detailed data requests from the SWE. Establishing a planning timeline that accommodates the proposed review processes would either require key inputs, such as the baseline studies, the TRM, and the potential studies themselves to be developed much earlier in the timeline, thereby increasing the risk of producing outdated findings, or would truncate the period for EE&C plan development. Given the volume of stakeholder comments requesting incorporation of very recent economic developments in the potential studies and more time to file EE&C plans, the Commission declines to adopt modifications for the potential study

development process at this time. The Commission will explore opportunities for enhanced review when developing the planning timeline for Phase VI of Act 129.

II. Treatment of Outside Funding and Tax Credits

In the 2026 TRC Test Final Order, the Commission established that, for the purposes of applying the TRC Test, "…EDCs only need to factor in, as reductions to cost, the non-Act 129 incentives that are reasonably quantifiable by the EDC at the time the Act 129 transaction is recorded."[30] In the development of the EEPDR Potential Study, what the SWE assumed to be "reasonably quantifiable" for the purposes of estimating potential varied depending on the specific tax credit or source of outside funding.

Comments and reply comments related to the influence of HER and HEAR funding on the estimated acquisition costs and potential from the EEPDR Potential Study reveal that the Tentative Implementation Order lacked clarity regarding the assumptions about outside funding embedded in the proposed consumption reduction targets. The Commission clarifies that HER and HEAR funding were only considered as part of a sensitivity analysis in the EEPDR Potential Study and not the primary study results or proposed targets. Due to persisting uncertainty regarding availability of such funds at the time of the study's development, these funds were not considered "reasonably quantifiable" and were thus omitted from the Act 129 EE Potential and proposed reduction targets. Similarly, the EEPDR Potential Study conservatively omitted impacts of the IRA-funded 25C Energy Efficient Home Improvement Credit as eligibility, magnitude of the applicable credits, and whether a given household will even claim the credits are inherently uncertain.

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[30] *See 2026 TRC Test Final Order at 21.* Available online at: https://www.puc.pa.gov/pcdocs/1855583.pdf

For solar PV, the Commission clarifies that the EEPDR Potential Study included the impacts of currently available federal tax credits. In contrast to IRA-funded tax incentives and rebates that were either implemented within the last several years or are still pending implementation, solar PV tax credits have been available in some form since 1978. Given this long track record and the likelihood that new solar PV projects are more sensitive to ongoing, favorable net metering policies, the elimination of solar PV tax credits alone may not significantly impact the identified potential.

Therefore, the Commission confirms that treatment of IRA-funded rebates and tax credits in the EEPDR Potential Study and savings targets proposed in the Tentative Implementation Order are already consistent with the recommendations of Duquesne Light, PECO, FirstEnergy, and EAP. Finally, the Commission declines to adopt the recommendations of Duquesne Light, FirstEnergy, and EAP to remove the impacts of federal tax credits on the identified solar PV potential.

Regarding PECO's comment requesting the ability to petition for a revision to targets if changes in circumstances, such as the elimination of federal funding, materially impact their ability to meet targets, the Commission reminds PECO that it, or any other EDC, can petition the Commission pursuant to Sections 501(a) and 703(g) of the Public Utility Code, 66 Pa. C.S. §§ 501(a) and 703(g), and Section 5.572(d) of the Commission's regulations, 52 Pa. Code § 5.572(d), to amend the Final Implementation Order.[31] The Commission also reminds PECO that there is precedent for petitioning the Commission for modifications to the Implementation Order. During Phase III, the

[31] Section 5.572(d) of Title 52 of the Commission's regulations provide that "[p]etitions for rescission or amendment may be filed at any time according to the requirements of section 703(g) of the act (relating to fixing of hearings)." 52 Pa. Code§ 5.572(d).

Commission granted EAP's petition to modify compliance with peak demand reduction targets because of the COVID-19 pandemic.[32]

III. Macroeconomic Factors

The Commission acknowledges PPL, EAP, and FirstEnergy's concerns regarding inflation and supply chain issues, but disagrees with these commenters' position that the EEPDR Potential Study did not adequately account for those factors. For most measures assessed in the EEPDR Potential Study, the SWE used inflation-adjusted estimates of incremental measure costs. Historical acquisition costs from Phase IV were only assumed in the isolated cases of CHP and solar PV potential. Given the typical magnitude of CHP projects, such projects are usually subject to a project-level or customer-level incentive cap thereby divorcing the project-level acquisition costs from the equipment costs. Therefore, assuming somewhat consistent program policies in Phase V, an inflationary adjustment to CHP equipment and labor costs would be unlikely to significantly alter portfolio-wide estimates of CHP acquisition costs as derived from Phase IV data. In the case of solar PV, historical EDC program incentives have been based on kWh produced rather than a function of total system costs. In this framework, the underlying cost of materials and labor are not directly connected to EDC acquisition cost. Given that EDC incentives typically cover only a small fraction of total system costs for CHP and solar PV, we are unconvinced that inflationary pressures on CHP and solar PV equipment costs would alter program participation levels if EDC incentive

[32] The EAP requested that the Commission modify the Phase III Implementation Order to measure compliance with peak demand reduction targets based on EDC performance during the second, third, and fourth program years of Phase III (June 1, 2017, through May 31, 2020) and permit EDCs to implement approved demand reduction programs on a voluntary basis for the fifth and final program year (June 1, 2020, through May 31, 2021). EAP sought expedited consideration of this Petition. See *Petition to Amend the Commission's June 19, 2015, Implementation Order*, Docket No. M-2014-2424864 (Order entered June 3, 2020) (Phase III Implementation Order). Available online at: https://www.puc.pa.gov/pcdocs/1665150.docx

levels were held flat. While increases in costs could reduce achievable potential and program potential, the budget is the limiting factor.

The Commission views comments made by PPL, EAP, and FirstEnergy related to potential future impacts of federal tariff policy as premature, noting the significant uncertainty regarding how and to what degree tariffs may impact EDCs' programs and the economy in general in a policy environment that is changing nearly daily. This uncertainty, paired with the Phase V start date, which is still over a year away, supports the Commission's view that now is not the appropriate time to engage in speculative estimates of undefined future tariff impacts on Phase V of Act 129.

IV. Treatment of CHP and Solar PV

The Commission disagrees with comments from EAP that CHP and solar PV should not be considered in the modeling of acquisition costs and savings targets. These components of the EE potential were isolated specifically because their historical acquisition costs have been significantly lower than the portfolio average, their historical savings have been significant contributors to targets, or both. To arbitrarily omit these components from the estimated potential due to uncertainty would put undue upward pressure on overall acquisition costs and downward pressure on targets. Finally, the Commission rejects EAP's contradictory suggestion that CHP should be specifically excluded from the calculation of the blended acquisition cost, but somehow eligible for inclusion in EE&C plans. The Commission has no reason to believe the EDCs will not continue to pursue these eligible opportunities in Phase V and therefore confirms the inclusion of CHP in the blended acquisition cost.

The Commission does not share FirstEnergy's concerns regarding the estimated CHP potential. The Commission clarifies that historical CHP project data from Phase IV was only used in the EEPDR Potential Study to estimate acquisition costs, not determine

potential. The estimated CHP potential is not simply a reflection of business-as-usual achievement but a reasonable, market-based estimate of the achievable potential. It is informed by the Pennsylvania Act 129 - Phase IV Energy Efficiency and Peak Demand Reduction Market Potential Study Report and subject to a one percent budget allocation for consistency with the approach used in the Phase IV Final Implementation Order. For reasons discussed above on macroeconomic factors, the Commission finds FirstEnergy's concerns on the assumed acquisition costs for CHP speculative and declines to modify estimates of CHP cost or potential.

The Commission disagrees with FirstEnergy, PPL, and Duquesne Light that the solar PV acquisition costs are too low and that modeled incentive assumptions should not align with existing program designs. The Commission believes that EDCs can acquire solar PV savings for the assumed costs in Phase V given the supportive net metering policies and elevated Alternative Energy Credit pricing in the Commonwealth.

V. Miscellaneous Study Comments

The Commission disagrees with FirstEnergy's comments on the estimated magnitude of residential space heating, water heating, and cooling end use potential and rejects the recommendation to increase the modeled incentive for these end uses to at least 75%. To develop the Act 129 EE Potential in the EEPDR Potential Study, the SWE first estimated Program Potential assuming incentives covering 50% of incremental measure costs (for non-low-income participants) without constraining for Act 129 budget limits. As the estimated budget to achieve this potential exceeded the budget limits, the potential was then scaled down linearly at a constant acquisition cost to match the Act 129 budget limit. This approach is intended to provide the EDCs with the flexibility to design a portfolio of measures in program plans differing from that modeled in the EEPDR Potential Study. Such plans could potentially prioritize lower cost measures to allow higher incentives for a subset of measures. Further, the Commission finds that

FirstEnergy's estimate of the participation levels necessary to achieve the modeled potential presented in the EEPDR Potential Study are vastly overstated as they are not consistent with the higher space heating and water heating savings that can be achieved when retrofitting baseline electric resistance equipment. Finally, as the EEPDR Potential Study used the 2026 TRM as the basis for most measure savings estimates, the recent codes and standards changes noted in FirstEnergy's comments are already considered in the potential.

The Commission does not find FirstEnergy's comments on non-residential lighting compelling. To support their comments, FirstEnergy uses a simple linear fit of non-residential lighting energy savings data from PY8-PY15 to project savings estimates through PY22. Using this approach, FirstEnergy estimates PY16 savings of 73 GWh. However, quarterly reporting of program activity indicates that FirstEnergy has already acquired 106 GWh through PY16 Q3. Assuming savings in PY16 Q4 are consistent with the average of Q1-Q3, FirstEnergy is on pace to achieve over 140 GWh in energy savings from non-residential lighting in PY16, nearly double the value estimated by FirstEnergy. A prediction error of this magnitude in the first year calls into question the accuracy of FirstEnergy's linear forecasting method. The Commission finds that the estimated average annual savings of 49 GWh for Phase V as supported by the EEPDR Potential Study is reasonable and therefore declines to adjust the assumptions in the EEPDR Potential Study and the associated targets.

The Commission acknowledges FirstEnergy's comments on the use of capped measure lives to calculate participation rates for replacement measures. The Commission concurs that it would be appropriate to use uncapped estimates of equipment life for this purpose; however, in practice, very few measures have equipment lives that exceed the 15-year cap (e.g., insulation, windows, the ground loop for ground source heat pumps), and such measures are more commonly modeled as time-discretionary retrofits, not

replacement upon equipment failure. Such a change would have little impact on the modeled energy reduction potential, and the Commission, therefore, declines to adjust the assumptions in the EEPDR Potential Study and the associated targets.

The Commission acknowledges OCA's recommendation to decrease PPL's acquisition cost to maintain consistency across EDCs. The Commission finds that the acquisition costs are a key result of modeling a comprehensive mix of measures in the EEPDR Potential Study, consistent with the most recent available market data, and consequently, finds that ad hoc adjustments thereto are unwarranted.

2. EDC Budget Limits

EE&C plan funding limits are a central parameter in setting the Phase V consumption reduction targets because the level of savings an EDC can acquire is a function of its budget to deliver programs and pay incentives. Act 129 EE Potential estimates refer to the conservation potential possible given specific program funding constraints. The Act 129 EE Potential contained in the EEPDR Potential Study reflects a budget ceiling that limits program spending to two percent of each EDC's 2006 annual revenue. Table 7 shows the budget limits for each EDC used to estimate funding-constrained Act 129 EE Potential.

Table 7: Act 129 Budgets by EDC

EDC	Annual Budget	Phase V Budget (Five Year)
Duquesne Light	$19,545,952	$97,729,760
PECO	$85,477,166	$427,385,830
PPL	$61,501,376	$307,506,880
FirstEnergy	$78,064,027	$390,320,135
Statewide	**$244,588,521**	**$1,222,942,605**

The Commission recognizes that notable inflation has occurred since the inception of Act 129, so the proposed EDC budgets are effectively decreasing each program year in terms of real dollars and purchasing power. However, Act 129 states that "The total cost of any plan required under this section shall not exceed two percent of the electric distribution company's revenue as of December 31, 2006." 66 Pa. C.S. § 2806.1(g). The legislation makes no mention of adjustments for inflation, and prior phases of Act 129 utilized identical budget limits without adjustment from the initial calculations against 2006 revenues on a nominal basis. For Phase V of Act 129, the Commission proposed to base EDC targets and EE&C plan budget limits on the five-year totals shown in Table 7 without adjustment for inflation. EDCs would be allowed to exceed the annual spending limit for a given year of Phase V, provided that the total Phase V cost recovery is less than or equal to the five-year limit.

a. Comments

NEEP recommends increasing the Act 129 budgets to account for inflation. NEEP argues that increasing the budget can be achieved without violating Act 129 because the statutory language does not prohibit inflation adjustment. NEEP estimates inflation of

52% between 2006 to 2025, using a gross domestic product (GDP) implicit price deflator sourced from the United States Federal Reserve. Adjusting for inflation using NEEP's estimates would result in a budget of approximately $1.85 billion, or roughly $600 million over the proposed budget of $1.22 billion. NEEP Comments at 2.

The Clean Energy Advocates and the Joint Energy Advocates also argue that, because Act 129 does not prohibit adjusting the total costs for inflation, the Phase V spending cap should be adjusted for inflation. Clean Energy Advocates Comments at 2, Joint Energy Advocates Comments at 13. PPL objects to NEEP's recommendation to increase budget limits for inflation, arguing that the budget limits are set by statute and can only be increased through new legislation. PPL Reply Comments at 4.

OSBA expresses support for maintaining the current budget limits, citing the need to consider the impact on customer rates. OSBA Comments at 3. In reply comments, OSBA again opposes proposals to raise the budget to reflect inflation, noting the substantial impact on customer bills. OSBA Reply Comments at 2.

b. Disposition

The Commission declines to adopt the recommendation by NEEP, the Clean Energy Advocates, and the Joint Energy Advocates to adjust Phase V EDC budgets for inflation, and continues to apply its existing interpretation of the statute, which views the EDCs' budgets as fixed in nominal dollars rather than real dollars.[33]

[33] Budgets are limited to an amount not to exceed two percent of the EDC's total annual revenue as of December 31, 2006, excluding Low Income Usage Reduction Programs established under 52 Pa. Code, Chapter 58. 66 Pa. C.S. § 2806.1(g).

3. Baseline for Targets

The reference annual consumption values utilized for the EEPDR Potential Study to express incremental savings are the forecast MWh sales for each EDC for the period of June 1, 2009, through May 31, 2010, which are the same forecasts utilized in the first four phases of the EE&C program.[34]

Previously, the Commission adopted the expected sales forecast for June 1, 2009, through May 31, 2010, as the reference consumption values against which to express incremental savings for each EDC and the EE&C program as a whole.[35] Although now somewhat dated, the SWE maintained this baseline when expressing Phase V reductions on a percentage basis in the EEPDR Potential Study. This convention allows for an "apples-to-apples" comparison with targets, on a percentage basis, from prior phases of Act 129. The Commission proposed to continue to use the forecast MWh sales for each EDC for the period June 1, 2009, through May 31, 2010, as the consumption baseline from which to express incremental savings in Phase V. Table 8 shows the baseline sales values for each EDC and statewide.

[34] *See* 66 Pa. C.S. § 2806.1(c).
[35] *See Phase II Implementation Order* at page 23; *Phase III Implementation Order* at page 50; *Phase IV Implementation Order* at page 16.

Table 8: Baseline Sales Forecast by EDC from June 1, 2009, to May 31, 2010

EDC	MWh
Duquesne Light	14,085,512
PECO	39,386,000
PPL	38,214,368
FirstEnergy	54,975,912
Statewide	**146,661,792**

a. Comments

PPL expresses support for the Commission's proposed approach for establishing baselines for targets. PPL Comments at 5.

The Clean Energy Advocates recommend adjusting the baselines for savings targets to the most recent year, arguing that electricity consumption is now steadily rising at three to four percent annually. The Clean Energy Advocates argue that continuing to use the June 1, 2009, through May 31, 2010 data, distorts the target and threatens the program's relevance. Clean Energy Advocates Comments at 2.

Similarly, the Joint Energy Advocates recommend using a more current baseline for savings targets, arguing that electricity consumption has been rising steadily and is projected to increase exponentially in the coming years. Further, the Joint Energy Advocates argue that using a more current baseline would provide a more accurate picture of energy use today and allow for targets that reflect real-world conditions. Joint Energy Advocates Comments at 13.

b. Disposition

The Commission declines to adopt the recommendation by the Clean Energy Advocates and the Joint Energy Advocates to use more recent baselines for targets. The Commission adopts the June 1, 2009, through May 31, 2010 expected sales forecast as the reference consumption values against which to express incremental savings for each EDC and the EE&C program as a whole. The continued use of the forecast MWh sales for the period June 1, 2009, through May 31, 2010, as the consumption baseline from which to express incremental savings in Phase V will facilitate comparison with targets, on a percentage basis, from prior phases of Act 129. Further, the use of the 2009–2010 consumption data is merely a reporting convention and does not impact the magnitude of the energy consumption reduction potential identified by the EEPDR Potential Study, which utilized more recent forecasts of energy consumption, nor the proposed energy consumption targets, established in units of MWh.

4. Proposed Reductions in Consumption

As previously noted, the SWE determined in its EEPDR Potential Study that electric consumption reduction programs will continue to be cost-effective.[36] Based on the SWE's determination, we believe that the benefits of a Phase V EE&C program will exceed the costs of such a program. We therefore proposed additional required incremental reductions in consumption for the five-year period beginning June 1, 2026, and ending May 31, 2031. We outlined our proposals regarding consumption reduction requirements as described herein.

The EEPDR Potential Study put forth energy and peak demand acquisition costs for four portfolio components: market rate traditional energy efficiency, low-income traditional energy efficiency, solar PV, and CHP.[37] The SWE's DR Potential Study

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[36] *See EEPDR Potential Study* at page xiii.

[37] The market rate traditional energy efficiency component is comprised of market rate residential (i.e., non-low-income), large Commercial and Industrial (C&I) and small C&I sectors.

(described in Section B.1) also identified cost-effective peak demand reduction potential and calculated peak demand acquisition costs by EDC. Given the wide range of acquisition costs across these five portfolio components, the Commission's assumed allocation of funding to the five components materially impacted the proposed targets. For example, any allocation of funding to the DR component will increase the MW targets and lower the MWh targets because DR programs are a low-cost option for peak demand savings but provide negligible reductions in energy consumption. This makes the target development exercise a question of funding allocation across the five portfolio components. Table 9 shows the proposed funding allocation by portfolio component along with weighted average statewide acquisition costs for illustration purposes. We used EDC-specific acquisition cost estimates by portfolio component to determine the proposed electric consumption and peak demand reduction targets.

Table 9: Acquisition Costs and Budget Allocations by Portfolio Component

Portfolio Component	Statewide Acquisition Cost ($/MWh)	Statewide Acquisition Cost ($/MW)	Budget Allocation
Market Rate EE	$380.20	$2,913,669	67%
Low-Income EE	$646.32	$4,613,152	13%
Solar PV	$157.31	$1,191,212	9%
CHP	$32.13	$230,920	1%
Demand Response	$0.00	$834,403	10%

The Commission's proposed allocation of Phase V funding was based on the following factors:

- **Resource adequacy is an increasingly important consideration for Pennsylvania**. Projected load growth in the region due to data centers, electric vehicles and heating electrification policies, along with planned retirements of thermal generation sources, creates a greater need for capacity reductions in Phase V compared to prior phases. Record-high clearing prices in the Base Residual Auction for the 2025–2026 delivery year made this need clear.[38] Allocating ten percent of Phase V funds to DR programming increases Phase V targets by over 100 MW statewide, compared to Phase V targets based on EE alone. This represents a 20% increase relative to a design with no assumed funding for DR. While the assumed funding allocation does not require an EDC to include a DR program in its Phase V EE&C plan, it places a premium on measures that reduce peak demand and help mitigate the growing resource adequacy challenges.

- **An assumed spending allocation to DR enables the EDCs to pursue managed charging of electric vehicles (EVs) in Phase V**. Embedding an assumed ten percent funding level for DR, along with our proposal that either coincident demand reductions from EE or verified demand reductions from load-shifting programs may satisfy peak demand reduction targets, provides the EDCs flexibility to include managed charging of EVs in their Phase V EE&C plans. The Commission recently adopted a Final Policy Statement Order[39] on Rate Design for EV Charging that encourages the EDCs to proactively mitigate the expected demand increases due to transportation electrification. A managed charging

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[38] *See* 2025–2026 Base Residual Auction Report. July 30, 2024. Available online at: https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.pdf

[39] *See Final Policy Statement Order on Electric Utility Rate Design for EV Charging*, Docket No. M-2023-3040755 (Order entered January 7, 2025). Available online at: https://www.puc.pa.gov/pcdocs/1861408.pdf

program within an EE&C plan could complement the rate signals described in the Final Policy Statement Order.

- **Allocating Phase V budget to solar PV helps offset the lower MWh reductions that come with a funding allocation to DR**. A ten percent allocation to DR equates to a ten percent reduction in Phase V consumption reduction because DR programs typically shift rather than save energy. Solar PV is a clean, low-cost resource familiar to the EDCs due to interconnection processes. Solar PV has become one of the largest measures in terms of MWh savings in Phase IV. Each of the EDCs currently has active solar PV programs in Phase IV and participation has grown rapidly.

- **Peak demand reductions from EE are no longer eligible to participate in the PJM Forward Capacity Market (FCM).** One of the reasons the Commission chose to set Phase IV peak demand reduction targets that could only be satisfied by coincident demand reductions from EE was to promote EDC nomination of Act 129 EE resources at PJM. FERC approval of recent PJM tariff changes that disallow EE participation in the FCM removes this consideration from Act 129 planning.[40]

- **The Commission maintains the importance of a requirement that EDCs obtain minimum percentages of consumption reductions from the low-income sector**. Energy costs represent a larger share of annual income for low-income households than for homes that do not meet the low-income definition, and all residential customers pay into Act 129 programs under the proposed cost recovery mechanism. Absent a low-income specific target, Act 129 programs could

[40] *See FERC November 2024 Order 189 FERC ¶ 61,095.* Available online at: https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241105-3046

become regressive, with low-income households receiving disproportionately fewer benefits due to a lack of available capital to invest in efficiency. The EEPDR Potential Study found that cost-effective savings remain for programs solely directed at low-income customers or low-income-verified participants in multifamily housing programs. The EEPDR Potential Study modeled a low-income spending carve-out consistent with historical EDC Act 129 spending levels in the low-income sector, approximately 13% of EEPDR budgets. The proposed budget allocations and associated low-income MWh targets match historical budget allocations.

- **CHP is the lowest cost resource type for both MWh and MW, but also unpredictable.** While acquisition costs for CHP are low, TRC test results for CHP projects are marginal, and these projects are large, complex, and have unpredictable timing. Therefore, the Commission recommends allocating the same share of the budget in Phase V as was allocated in Phase IV (one percent) to establish MWh and MW targets. CHP savings have varied substantially by EDC and program year over the history of Act 129 programs. The Commission maintains that CHP should be factored into the portfolio-level acquisitions costs and savings targets, since it is an eligible measure.

- **Act 129 established an *energy efficiency* and conservation program.** Although it has become more expensive with each subsequent phase, Market Rate EE has the highest TRC ratio of the five portfolio components, so the largest share of the budget is dedicated to EE.

The assumed budget allocations in Table 9 are not binding for the EDCs as they develop Phase V EE&C plans. An EDC could choose to design an EE&C plan with different funding allocations across the five portfolio components or even choose not to

offer a certain component type at all. However, some assumed blend was required to establish targets, and the Commission maintained that its proposed funding allocation represented a reasonable starting point for stakeholder comment. We invited stakeholders to specify in their comments which component types they believe should be increased or decreased and to describe their rationale.

a. Proposed Consumption Reduction Targets

The Commission proposed to adopt the five-year consumption reduction requirement for each EDC presented in Table 10 for Phase V based on the results of the EEPDR Potential Study and the funding allocations shown in Table 9. We noted that these electric energy consumption reduction targets are measured at the retail level. EDCs must report energy savings to the Commission at the customer meter level without adjustment for line losses. As in Phase IV, the Commission proposed that EE goals be measured using the sum of incremental annual savings.

Table 10: Proposed Consumption Reduction Targets, by EDC

EDC	Acquisition Cost ($/MWh)	Budget	Phase V Target (MWh)	Percentage of Baseline
Duquesne Light	$354.97	$97,729,760	275,318	1.95%
PECO	$363.88	$427,385,830	1,174,520	2.98%
PPL	$351.04	$307,506,880	875,992	2.29%
FirstEnergy	$337.77	$390,320,135	1,155,573	2.10%
Statewide	**$351.28**	**$1,222,942,605**	**3,481,403**	**2.37%**

I. Comments

EAP, claiming that statutory time constraints did not allow for additional process dedicated to the transparent development of the Phase V potential studies, urges the

Commission to use the Tentative Implementation Order proceeding to recalculate acquisition costs and reduction targets without allocating a portion of the budget to measures such as CHP and solar PV. EAP contends this will provide flexibility in plan design and reduce the risk of non-compliance. EAP Comments at 5.

PPL recommends the solar PV budget allocation used to develop the savings target be reduced from nine percent to five percent to be in alignment with the EEPDR Potential Study. PPL suggests that the four percent budget change should be shifted over to market-rate energy efficiency, with EDCs' overall targets readjusted based on updated budget allocations. PPL Comments at 8.

Comments from DEP, NEEP, and the Clean Energy Advocates all recommend higher savings targets for Phase V. DEP strongly believes the Commission should pursue more aggressive targets for each of the EDCs, especially as Pennsylvanians will likely face higher energy bills. Further, DEP acknowledges that, while Act 129 does not consider inflation in the budget limits, it expects that maturing programs should deliver more benefits per dollar invested through innovation, operational efficiencies, and repeatable successes. DEP Comments at 3.

The Clean Energy Advocates state that a savings target of less than 0.5% is far too low and that the goal should be increased to at least one percent per year. They argue that this higher target is more in line with the history of Pennsylvania programs and with similar initiatives in other states. The Clean Energy Advocates further argue that the EDCs' consistent failure to fully spend their Act 129 program budgets in each phase, while still exceeding their savings targets, is proof that the savings targets are too low. Clean Energy Advocates Comments at 2.

Similarly, NEEP comments that the proposed energy savings targets are too low and notes that they are lower than Phase IV targets. They argue that deeper savings can be achieved by leveraging multiple state and federal programs such as the IRA-funded Home Electrification and Appliance Rebate program. NEEP further states that the EDCs have consistently underspent available Act 129 funding, indicating that there is an opportunity to deliver additional cost-effective EE and to increase targets. NEEP Comments at 3.

KEEA recommends that the EDC program budgets should place greater emphasis on targeted investments in low-income and multifamily energy efficiency programs, as these underserved communities and segments often require deeper interventions to achieve long-term savings. KEEA Comments at 3.

OCA supports the Commission's efforts to outline a comprehensive mix of measures to benefit Pennsylvanian electric customers, inclusion of demand response, and budgeting allocated to the low-income sector. OCA Comments at 1. OSBA also supports the Commission's Tentative Implementation Order regarding Phase V of the Act 129 EE&C program. OSBA agrees that it is important to consider how the budgets allocated in this next phase can most effectively support both affordability and resource adequacy. OSBA Comments at 3.

PPL disputes NEEP's contention that greater levels of energy savings are achievable within the Phase V budget limitations. PPL notes that it cannot find any evidence supporting this observation and notes that the EEPDR Potential Study found fewer low-cost opportunities, reducing statewide potential. PPL Reply Comments at 4. EAP respectfully recommends dismissing suggestions to increase the Phase V savings targets and instead proposes increasing the assumed incentives and costs when setting EDC savings targets. EAP Reply Comments at 3.

II. Disposition

The Commission acknowledges comments from DEP, NEEP, and the Clean Energy Advocates recommending higher savings targets. However, commenters did not provide actionable evidence or supporting analysis to justify higher savings targets. Further, it is unclear whether commenters took into consideration the budget implications of an increased savings target. As discussed in the EEPDR Potential Study, the erosion of traditionally lower cost opportunities, such as non-residential lighting, coupled with increases in equipment and labor costs due to inflation, will put upward pressure on portfolio acquisition costs in Phase V. Under the budget limits imposed by Act 129, this will necessitate lowering savings targets, not increasing them. Finally, the Commission disagrees with comments from the Clean Energy Advocates and NEEP asserting that the historical failure of EDCs to spend their entire program budgets in each phase is evidence that savings targets are too low. As in past phases, estimated acquisition costs are based on the modeling of a comprehensive mix of measures, rather than a least-cost portfolio or a measure mix mirroring "business-as-usual" EDC program performance. Consistent with the Commission's encouragement of comprehensive programs, as further discussed in Section A.4.c of this Implementation Order, this approach is intended to afford the EDCs flexibility with respect to program design. Therefore, it is unlikely that the actual acquisition costs for EDC programs will match exactly the modeled values. The Commission finds that the savings targets are a key outcome of the modeling conducted in the EEPDR Potential Study, and consequently, rejects ad hoc adjustments thereto.

Supportive comments from OCA and OSBA regarding a comprehensive mix of measures, the inclusion of demand response, budget allocations for the low-income sector, and expected impacts on affordability and resource adequacy give us confidence that the proposed budget allocations are reasonable for the purpose of target development. For reasons discussed in Section A.5 of this Implementation Order, the Commission declines KEEA's suggestion to direct EDC program budgets to place a

greater emphasis on targeted investments in low-income and multifamily energy efficiency programs.

For reasons discussed in Section A.1.b.IV of this Implementation Order, the Commission declines EAP's request to remove budget allocations for CHP and solar PV from the assumed funding split for Phase V. However, we accept PPL's suggestion to lower the assumed funding allocation to solar PV from nine to five percent. Since solar PV has a lower acquisition cost than traditional EE, the overall compliance targets are sensitive to the assumed spending on solar PV. PPL and other commenters expressed uncertainty regarding solar PV equipment cost, supportive net metering policies, and Alternative Energy Credit (AEC) pricing in Phase V. While we disagree with parties who suggest that the assumed acquisition cost for solar PV is unreasonably low, reducing the assumed funding allocation to solar PV programming gives this contentious assumption less weight at the portfolio level. Our revised solar PV funding assumption aligns with the EEPDR Potential Study. As suggested by PPL, the assumed funding allocation to traditional EE was increased from 67% to 71% in the final consumption reduction targets. Table 11 shows the final consumption reduction targets, by EDC, expressed on a MWh and percentage basis along with the weighted average acquisition cost.

Table 11: Final Consumption Reduction Targets, by EDC

EDC	Acquisition Cost ($/MWh)	Budget	Phase V Target (MWh)	Percentage of Baseline
Duquesne Light	$373.61	$97,729,760	261,583	1.86%
PECO	$384.45	$427,385,830	1,111,685	2.82%
PPL	$371.28	$307,506,880	828,231	2.17%
FirstEnergy	$355.61	$390,320,135	1,097,605	2.00%
Statewide	**$370.69**	**$1,222,942,605**	**3,299,104**	**2.25%**

b. Annual Consumption Reduction Targets

The Commission proposed that the EDCs design their EE&C plans to achieve at least 15% of their consumption reduction target in each program year and that 15% is a reasonable goal in the design of the EE&C plans for a five-year phase. As in previous phases, we proposed that this requirement be limited to the Commission's review and approval of the EE&C plans and not be considered a target that would subject the EDCs to the penalty provisions prescribed under Section 2806.1 of the Act, 66 Pa. C.S. § 2806.1(f).

I. Comments

No stakeholder comments were received on this section.

II. Disposition

Therefore, the Commission directs the EDCs to develop EE&C plans that are designed to achieve at least 15% of their portfolio consumption reduction target in each program year. This requirement will be limited to the Commission's review and approval of the EE&C plans and is not a target that would subject the EDCs to the penalty provisions at subsection 2806.1 of the Act.

c. Comprehensive Programs

The Commission reiterated its continued belief that more comprehensive programs benefit electric customers and proposed that, for Phase V, the EDCs should implement a comprehensive mix of measures. In Section D.3 of the Phase V Tentative Implementation Order, the Commission proposed standards to ensure a variety of measures were applied equitably to all customer classes. We proposed that each EDC's EE&C plan include at least one comprehensive program for both the residential and non-residential customer classes. The EDCs should work with stakeholders to determine what these programs should include based on the unique attributes of each service territory. Additionally, we noted that, while cost-effectiveness is always a priority, an individual program can be implemented without being cost-effective, provided the EE&C plan as a whole is cost-effective. We believe it is beneficial for the EDCs to utilize the knowledge gained from implementing a comprehensive program in Phase IV,[41] as well as feedback provided by interested stakeholders, to determine what measures to incorporate into Phase V comprehensive programs.

I. Comments

The Low Income Advocates recommend that the Commission expand the EE&C plan requirement for comprehensive programs to include at least one comprehensive, whole-house program that includes direct installation of deep, long-term energy efficiency measures specifically for low-income households. The Low Income Advocates request an additional requirement that EDCs achieve a minimum of 25% of the low-income savings goal through comprehensive, whole-home programs that prioritize measures such as efficient appliances, envelope measures such as air sealing and insulation, HVAC upgrades, and water heating measures. The Low Income Advocates also recommend that the Commission define "comprehensive program" or

[41] *See Phase IV Implementation Order* at page 22.

issue guidance clarifying the kinds of measures the Commission intends EDCs to include in required comprehensive programs. Finally, the Low Income Advocates recommend that the Commission require the EDCs to report on comprehensive, whole-home programs. This enhanced reporting would ensure meaningful benefits for ratepayers, enable the Commission to assess the extent to which each EDC is promoting longer-lived, deeper-savings measures, and facilitate tracking and review by stakeholders. Low Income Advocates Comments at 20, 36-43.

CEEH-PA supports the recommendations of the Low Income Advocates that encourage the Commission to set policies and establish guidelines requiring EDCs to focus on delivering comprehensive, durable efficiency measures that drive deeper, longer-term energy and cost savings. CEEH-PA Comments at 21-22.

DEP acknowledges its understanding of the spirit of the Commission's recommendations for comprehensive programs in Phase V and recommends that the Commission propose more than one comprehensive program for residential and non-residential customer classes. DEP specifically recommends comprehensive programs such as, but not limited to, Passive House, U.S. Department of Energy Zero Energy Homes, and Leadership in Energy & Environmental Design (LEED), and it recommends exploring partnership opportunities with DEP's Building Operator Certification (BOC) and Building Retuning Training (BRT) programs. DEP recommends that the Commission define the terms "comprehensive" and "direct-install," and it suggests "comprehensive measure" could indicate that multiple weatherization, air sealing, and HVAC upgrades were attempted in a project. DEP asserts that providing a shared definition will provide clarity to all parties involved. DEP Comments at 5-7.

RMI supports the Commission's decision to encourage comprehensive programs. It also recommends that the Commission clarify the definition of comprehensive

programs by stating that they represent a coordinated strategy to deliver longer-term measures and/or better serve hard-to-reach customers. RMI recommends several edits to the guidance on comprehensive programs provided in Section A.4.c of this Implementation Order. Specifically, RMI (1) recommends that the EDCs "should," rather than "could," utilize knowledge gained from Phase IV comprehensive programs and stakeholder input; (2) recommends expanding the role of past program knowledge and stakeholder input to inform "comprehensive program design and included measures"; and (3) recommends emphasizing the transparency in comprehensive programs learnings and stakeholder input. RMI recommends incorporating these changes in the Phase V EE&C Plan Template and the EDC Annual Report Template. RMI Comments at 2, 5, 7.

NEEP recommends encouraging weatherization through residential contractors with Total Energy Pathways or similar approaches. NEEP suggests EDCs consider adopting the Total Energy Pathways (TEP) program, a contractor-driven certification-based program. NEEP Comments at 8.

FirstEnergy recommends that the Commission not require additional or increased programmatic or other requirements, such as additional comprehensive programs or minimum savings derived from comprehensive programs or measures. FirstEnergy comments that, because EDCs are subject to Act 129 penalties for failure to achieve their consumption reduction targets, they need flexibility in designing their Act 129 plans to meet their targets within their Act 129 budgets. In addition, FirstEnergy notes that the EDCs' savings targets are based on the SWE's EEPDR Potential Study, which did not consider the specific additional programs or requirements articulated by other stakeholders. FirstEnergy points out that each EDC's Act 129 plan will be filed and is subject to review by stakeholders and the Commission. The adequacy of EDCs' Act 129 plans and program offerings should be determined by the stakeholder and regulatory review process. FirstEnergy Reply Comments at 4-6. EAP, like FirstEnergy, advocates

against additional guidance regarding comprehensive programs and program design. EAP Reply Comments at 4.

II. Disposition

The Commission maintains its decision to require the EDCs to include at least one comprehensive program for residential customers and at least one comprehensive program for non-residential customers. Low-income households should be eligible to participate in the residential comprehensive program at no cost if the residential comprehensive program is not a dedicated low-income program. We disagree with stakeholders' suggestions to set specific targets and more specific definitions of comprehensive programs. While the EEPDR Potential Study estimated acquisition costs based on the modeling of a comprehensive mix of measures, it did not model specific comprehensive programs or program requirements. We find that a strict definition of "comprehensive" is not necessary, as each EDC's service territory presents different characteristics and requires different programs.

However, the Commission recognizes the keen stakeholder interest in the installation of comprehensive, longer-lived, deeper-savings measures through the EDCs' comprehensive programs. We agree that requiring enhanced tracking and reporting on this topic will provide valuable information to understand better how these different measures and program offerings perform in Phase V. Therefore, the Commission directs the Bureau of Technical Utility Services to work with the SWE to develop reporting requirements for comprehensive program offerings for the EDCs comprehensive programs in Phase V.

5. Prescription of Low-Income Measures and Carve-Out

In all prior phases of Act 129, the Commission required each EE&C plan to include specific measures for households at or below 150% of the Federal Poverty Income Guidelines (FPIG). It also established a minimum percentage for such measures that EDCs must offer in proportion to that sector's share of the total energy usage in the EDC's service territory.[42] Additionally, in Phases II, III and IV of the EE&C program, the Commission added requirements that the EDCs obtain minimum percentages of consumption reductions from the low-income sector.[43] In Phase I and Phase II, the Commission permitted the EDCs to include savings from specific low-income programs, as well as qualifying low-income customer participation in non-low-income programs and multifamily housing. EDCs could count multifamily project savings toward the carve-out goals up to the percentage of customers living in the multifamily housing with incomes at or below 150% of the FPIG. Beginning with the Phase III EE&C program, the Commission clarified that savings may only come from specific low-income programs or low-income verified participants in multifamily housing programs. Savings from all other non-low-income programs, such as upstream lighting programs or general residential programs, would not be counted for compliance.[44]

As part of the EEPDR Potential Study, the Commission directed the SWE to determine if the low-income sector could realize cost-effective consumption savings, and the extent of those possible MWh savings within the residential sector. The EEPDR Potential Study modeled a low-income spending carve-out consistent with historical EDC Act 129 spending levels in the low-income sector: approximately 13% of EE&C budgets.

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[42] *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(G), *Phase II Implementation Order* at page 54, and *Phase IV Implementation Order* at page 35.
[43] *See Phase II Implementation Order* at page 54; *Phase III Implementation Order* at page 69, and *Phase IV Implementation Order* at pages 33-37.
[44] *See Phase II Implementation Order* at page 54; *Phase III Implementation Order* at pages 69-70, and *Phase IV Implementation Order* at page 28.

The SWE determined that low-income customers at or below 150% of the FPIG could achieve approximately 8.3% of statewide portfolio savings when 13.3% of EEPDR budgets are allocated to specific low-income programs.[45] The low-income potential varies by EDC, from a low of 7.5% for PECO to a high of 8.9% for PPL. Note that these values assume that the entirety of the Act 129 budgets are spent on traditional EE without any allocation for CHP, solar PV, or DR.

For Phase V, as in all prior phases of Act 129, the Commission proposed that each EDC EE&C plan include specific energy efficiency measures for households at or below 150% of the FPIG, in proportion to that sector's share of the total energy usage in the EDC's service territory (*See* 66 Pa. C.S. § 2806.1(b)(1)(i)(G)).[46] As shown in Table 12 below, we proposed for Phase V that the EDCs provide a proportionate number of measures equivalent to the low-income sector's share of usage, as previously required in Phases II, III, and IV of the program.[47]

[45] *See EEPDR Potential Study* at page 35.
[46] *See Report of the Act 129 Low-Income Working Group*, Docket No. M-2009-2146801 (adopted via Secretarial Letter April 27, 2010), at 6.
[47] *See Phase II Implementation Order* at pages 53–58; *Phase III Implementation Order* at pages 61-70; *Phase IV Implementation Order* at pages 33-37.

Table 12: Proposed Phase V Low-Income Savings Targets

EDC	Proportionate Number of Measures (%)	2026–2031 Portfolio Target (MWh)	Low-Income Savings Target (MWh)
Duquesne Light	8.40	275,318	18,933
PECO	8.80	1,174,520	74,456
PPL	9.95	875,992	65,678
FirstEnergy	9.33	1,155,573	86,913
Statewide		**3,481,403**	**245,980**

The proposed low-income savings targets presented in Table 12 were derived by allocating 13% of each EDC's Act 129 budget to programs solely directed at low-income customers or low-income-verified participants in multifamily housing programs. The low-income targets represent 7.1% of the statewide MWh target. By EDC, the low-income targets range from 6.3% of the portfolio target (PECO) to 7.5% (PPL and FirstEnergy). Savings from non-low-income programs, such as general residential programs, would not be counted toward these targets.[48]

The Commission invited stakeholders to propose a different approach to harmonize the management and spending of Act 129 low-income funds with the Low Income Usage Reduction Program (LIURP) funds, which the Commission also oversees. As adopted in Phases II, III, and IV, EDCs that fail to meet this proposed Phase V low-income carve-out will not be subject to the penalties prescribed under subsection

[48] The Commission notes that is not proposing a low-income carve-out for the peak demand reduction requirements.

2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f). They will, however, be subject to the penalties prescribed under Chapter 33 of the Public Utility Code, 66 Pa. C.S. § 3301(a).

a. Comments

Stakeholder comments on the low-income carve-out and prescription of low-income measures are organized by topic due to the volume of comments received.

I. Savings Target

Stakeholder comments were divided on the low-income savings carve-out, with the EDCs and EAP contending that the targets should be lowered or replaced with a spending goal, while the balance of the stakeholder community generally favored increased carve-out savings goals and spending.

A number of stakeholders recommend setting more aggressive and higher low-income savings targets. DEP proposes that the Commission should set "more aggressive" low-income targets for each of the EDC service territories, noting that Pennsylvanians will likely face higher energy bills in Phase V and that low-income Pennsylvania households already face a "severe" energy burden. DEP Comments at 3-4. OCA requests that the Commission increase the low-income carve-out to maintain savings levels equivalent to Phase IV and increase the budget allocation to at least 14% of the Phase V budget. OCA Comments at 10. The Low Income Advocates recommend setting the statewide low-income acquisition cost to $958.60 to encourage EDCs to pursue longer-lived, deeper-savings, and comprehensive measures, such as weatherization and HVAC measures. They also recommend increasing the statewide Phase V low-income savings goal to 308,041 MWh. Low Income Advocates Comments at 19, 24. CEEH-PA supports increasing the low-income savings goal. CEEH-PA Comments at 21.

CEO and the Task Force support the Commission's proposal to require EDCs to obtain a certain level of energy savings from programs directed specifically at low-income customers. They also support the Commission's proposal that savings from general residential programs should not count toward the low-income targets. Furthermore, CEO and the Task Force also recommend increasing the savings goal for the low-income sector. CEO and the Task Force Comments at 4. Additionally, CEO and the Task Force request that the Commission adjust the acquisition costs and savings targets for low-income customers to accommodate the installation of deeper, more durable energy savings measures. They agree with the Low Income Advocates, who contend that, to date, the Act 129 low-income program requirements "have largely just skimmed the surface," leaving low-income ratepayers with a disparately high energy burden and that change is needed for low-income ratepayers to equitably share in the benefits of Act 129. CEO and the Task Force Reply Comments at 2.

The Low Income Advocates and CEEH-PA argue that the EEPDR Potential Study, by using Phase IV low-income program costs, did not account for how much Phase IV low-income programs included "longer-lived, deeper saving measures." Therefore, it is unclear whether the proposed acquisition costs for Phase V's low-income programs will suffice for the EDCs to pursue such measures. Low Income Advocates Comments at 24-28. They also argue that the EEPDR Potential Study did not adequately account for the potential in master metered multifamily housing and that low-income savings targets should be increased as a result. Low Income Advocates Comments at 47-51, CEEH-PA Comments at 18-20.

EAP's comments counter stakeholder proposals to increase low-income targets, asserting instead that the low-income savings targets are too high. EAP contends that the assumptions the SWE used in the EEPDR Potential Study overstate the certainty that federal weatherization or beneficial electrification funding for low-income households

will remain available throughout Phase V, or that federal tax credits supportive of solar PV and/or battery storage will be extended. EAP Comments at 16. The Low Income Advocates disagree with EAP and the EDCs' claim that savings targets are unreasonably high. Low Income Advocates Reply Comments at 3.

Duquesne Light comments that their proposed low-income savings target is not realistically achievable due to several factors. These include:

- The low saturation of electric space heating and water heating equipment in the Duquesne Light service territory;
- The erosion of savings due to Duquesne Light's LIURP;
- The reduction in Duquesne Light's proposed portfolio target compared to Phase IV;
- The slight increase in Duquesne Light's proposed low-income savings target in Phase V; and
- The modest decrease in low-income targets of the other EDCs from Phase IV to Phase V.

Duquesne Light Comments at 3-4. Duquesne Light opposes stakeholder comments supporting the expansion of low-income programs. Duquesne Light Reply Comments at 6. Furthermore, Duquesne Light agrees with the Low Income Advocates that reduced acquisition costs and higher goals will not promote the installation of deeper and more durable energy saving measures. Duquesne Light Reply Comments at 4.

FirstEnergy suggests increasing the acquisition cost used to calculate the Act 129 potential savings achievement, resulting in decreased participation and savings potential for the low-income carve-out. FirstEnergy Comments at 14. FirstEnergy suggests that the EEPDR Potential Study, by including federal funding as a cost share of eligible measures, inappropriately lowered the acquisition cost and increased low-income

participation and savings projections for the low-income targets, given the uncertainty in federal funding. FirstEnergy Comments at 14-15. FirstEnergy objects to comments submitted by OCA, the Low Income Advocates, CEEH-PA, and CEO and the Task Force requesting that the Commission increase the low-income savings target, as the budget allocation of 13% and the corresponding consumption reduction for the low-income sector are based on the EEPDR Potential Study and the SWE analysis of a set budget carve-out. FirstEnergy avers that imposing a higher consumption reduction requirement and corresponding increased costs for the low-income savings target will require reductions for the other customer sector programs. This, in turn, would result in higher overall acquisition costs and potentially decreased overall benefits. The higher savings targets would also pressure EDCs to focus spending on lower-cost, less comprehensive measures as opposed to longer-lived, whole-home measures. FirstEnergy also objects to comments from the Low Income Advocates recommending increasing the low-income acquisition costs and savings target. FirstEnergy notes that the Low Income Advocates have not presented their analysis on the impact of these changes to total portfolio costs nor cost-effectiveness. FirstEnergy Reply Comments at 6-7.

PPL opposes DEP's recommendation to increase the low-income goals for each of the EDC service territories, stating that an increase in consumption reduction targets ignores the increasing costs due to inflation and the impact of potential tariffs imposed by the federal government, as well as the need for EDCs to rely on higher cost measures to meet targets. PPL argues that the existing low-income savings targets are the primary reason that EDCs must integrate lower cost measures, including energy kits, into EE&C plans. PPL Reply Comments at 3, 5. PPL contends that future impacts of IRA funding were assumed, resulting in increased low-income savings targets, and argues that developments at the federal level make it increasingly likely that such funds may not be available in Phase V. PPL therefore recommends removing potential external funding from any EDC low-income savings target. PPL Comments at 8.

PECO requests that, if the Commission retains a savings carve-out in the Final Implementation Order, it refrain from imposing additional carve-outs and requirements on low-income programming, such as mandating a specific percentage of comprehensive measures or requiring a certain percentage of savings from multi-family housing. PECO argues that additional requirements would likely increase acquisition costs, thereby lowering either the low-income carve-out or the overall portfolio target. PECO suggests an alternative whereby the Commission could specify particular categories of measures (e.g., direct install measures) to include in an EDC's plan, with flexible percentages determined in the EDC-specific proceedings. PECO also requests that, if the Commission includes requirements for health and safety measures, it should adjust the savings target, because health and safety measures, such as mold remediation, are not expected to result in energy savings. PECO Reply Comments at 3-4.

EAP requests that the Commission consider replacing the low-income savings target with a low-income budget. EAP argues that a dedicated low-income budget will enable increased flexibility for EDCs to include comprehensive measures. EAP Comments at 16. All the EDCs support replacing the low-income savings target with a minimum spending goal. PPL Comments at 7, PECO Reply Comments at 4, Duquesne Light Reply Comments at 6, and FirstEnergy Comments at 14.

PPL proposes that a spending goal would allow EDCs to take a more comprehensive and transformative approach to low-income programs and measures. PPL Comments at 7. PPL recommends that the Commission replace the low-income savings target with a minimum spending goal for low-income programs. PPL argues that the presence of a consumption reduction target requires EDCs to apply low-cost, less impactful measures for low-income households in order to meet that target. PPL Comments at 7-8 and PPL Reply Comments at 5.

FirstEnergy proposes changing the low-income carve out so that it is based solely on low-income spending, without a commensurate target for savings. FirstEnergy Comments at 14. FirstEnergy reiterates its support for setting the low-income budget as a spending requirement and removing the discrete low-income consumption reduction target, arguing that this allows for better coordination and helps to mitigate competition among other non-Act 129 programs. FirstEnergy Reply Comments at 6-7.

PECO reiterates its support for a low-income spending target rather than a savings target, arguing that a spending target would afford EDCs greater flexibility to achieve outcomes and provide additional assurance regarding the level of spending on low-income programming. PECO recommends that the Commission approve a spending target mechanism, with the specific target amounts to be developed in the course of each EDC's individual Phase V EE&C plan proceeding. PECO Reply Comments at 4.

OCA does not support changing the low-income savings target to a spending goal. OCA Reply Comments at 3.

NEEP recommends implementing more targeted low-income programs that use data to identify potential participants, particularly those with the highest energy burden. NEEP Comments at 9. Advanced Energy United recommends that the Commission support the use of enhanced data and predictive analytics to improve utilities' ability to identify and reach customers who may be in need but are not already enrolled in any low-income programs. Advanced Energy United Comments at 14.

II. Other Carve-outs: Multifamily Low-Income Housing & Low-Income Solar PV

Similar to the comments pertaining to the low-income savings target, stakeholder comments were divided on the topic of additional carve-outs for multifamily low-income housing and low-income solar PV. The EDCs and EAP oppose additional targets within the low-income carve-out, while other stakeholders propose specific savings targets and reporting requirements for multifamily low-income housing.

The Low Income Advocates and CEEH-PA support the inclusion of multifamily housing units in the low-income programs and goals. Both stakeholders support establishing subcategories within the low-income carve-out for single family, individually metered multifamily, and master metered multifamily tenant units, or, at minimum, requiring tracking and reporting on these subcategories. They maintain that this would help to understand better how these different segments of the low-income sector are served and to facilitate further policy advancements in subsequent phases. In addition, both the Low Income Advocates and CEEH-PA support strengthening the low-income carve-out and increasing the comprehensiveness of program services in order to improve the delivery of meaningful and durable energy and bill savings. Low Income Advocates Comments at 47-51. CEEH-PA Comments at 21-22.

Additionally, CEEH-PA urges the Commission to direct the SWE to identify an achievable savings target for multifamily housing in its Phase VI potential study. CEEH-PA Comments at 23.

DEP supports including multifamily housing units in the consumption reduction targets within the low-income segment. DEP Comments at 4.

OCA recommends including a low-income carve-out for solar PV that requires a percentage of installations or savings to be achieved by low-income participants. OCA Comments at 17.

FirstEnergy opposes additional specific carve-outs within the low-income carve-out, such as those for solar PV, multifamily, comprehensive, or direct install programs. FirstEnergy argues that the Commission should reject these recommendations to provide the EDCs with the necessary flexibility to design and implement programs across all customer classes to meet their targets in a cost-effective manner. Additional incremental carve-outs potentially restrict the ability of the EDCs to design and implement EE&C plans to meet targets and could increase the cost of compliance. FirstEnergy Reply Comments at 7. FirstEnergy adds that the type and number of multifamily buildings varies among service territories and, as such, the EDCs should be given the flexibility to design their programs based on their unique service territories. FirstEnergy Reply Comments at 10.

PECO and PPL urge the Commission to refrain from imposing specific restrictions on low-income programming, such as mandating a specific percentage of savings from multifamily housing. PPL contends that there is not sufficient data available for each service territory to determine the eligibility, prior treatment, savings, and participation propensity within these subgroups to support setting such granular carve-outs. PECO Reply Comments at 4 and PPL Reply Comments at 5-6.

EAP opposes recommendations from other stakeholders to establish additional carve-outs for individually metered multifamily tenant units, master metered multifamily tenant units, and single family homes within the low-income savings carve-out. EAP Reply Comments at 3.

III. Comprehensive Programs and Measures

Stakeholder comments were divided on the topic of comprehensive measures and programs within the low-income carve-out, with the EDCs and EAP opposing additional targets within the low-income carve-out and a number of other stakeholders proposing specific savings targets and reporting requirements for comprehensive measures and programs.

The Low Income Advocates recommend that the Commission take steps to ensure the installation of longer-lived, deeper-savings measures through the EDCs' low-income programs. This includes requiring the EDCs to achieve at least 25% of the low-income savings goal through comprehensive whole-home program measures that prioritize direct installation of appliances, envelope measures such as air sealing and insulation, and heating and cooling equipment. In addition, the Low Income Advocates recommend the Commission require the EDCs to include detailed reporting on participation in the proposed whole-home program and that the Commission not allow Phase IV carryover savings to be applied to the whole-home program savings requirement. Low Income Advocates Comments at 19, Low Income Advocates Reply Comments at 4-5.

OCA is supportive of increasing the acquisition costs used to determine the low-income goal for Phase V, provided the acquisition costs are comprised of comprehensive measures such as air or duct sealing, insulation, and equipment upgrades. OCA recommends not reducing the low-income savings goal. OCA Reply Comments at 3.

CEEH-PA supports increasing the comprehensiveness of the measures of the low-income programs. CEEH-PA Comments at 21.

CEO and the Task Force propose that a certain level of low-income savings be obtained from direct install measures or comprehensive measures like shell measures, HVAC measures, and efficient appliances that will produce lasting savings for low-income customers and help decrease their high energy burden. CEO and the Task Force Comments at 5.

Duquesne Light opposes adding requirements to the types of measures offered in the EDCs' low-income programs, arguing that Phase V measures must be balanced to ensure an overall cost-effective plan. Duquesne Light Reply Comments at 3.

PPL opposes comments supporting a requirement for EDCs to achieve at least 25% of the low-income savings goal through comprehensive measures. PPL argues that they must integrate lower cost measures with more expensive comprehensive measures to offer a balanced set of measures and ensure a cost-effective plan. PPL adds that in Phase IV they have spent 33% of their low-income incentive budget on comprehensive measures, such as HVAC measures, water heater replacements, and appliances, but these measures only account for eight percent of savings achieved. PPL Reply Comments at 4-6.

FirstEnergy objects to comments requesting specific savings targets through comprehensive whole-home program measures or direct install delivery, arguing that these requirements are overly aggressive and would result in significant budget increases to the EDCs. FirstEnergy notes that its current Act 129 low-income programs include both direct installation and comprehensive programs, and FirstEnergy expects that these will continue in Phase V. FirstEnergy argues that the Commission should reject these recommendations in order to provide the EDCs with the necessary flexibility to design and implement programs across all customer classes to meet their targets in a cost-effective manner. FirstEnergy suggests that additional requirements would

potentially undermine coordination and create competition among programs, restrict flexibility to offer other comprehensive offerings that would serve additional low-income customers, and increase program administration efforts and budgets for low-income programs. In designing their EE&C plans, the EDCs consider a multitude of different measures, including comprehensive, long-lived measures. FirstEnergy Reply Comments at 7-9.

IV. Harmonizing LIURP with Act 129 Low-Income Programs

CEO and the Task Force propose that the EDCs be directed to contract with community-based organizations (CBOs) that operate LIURP and Weatherization Assistance Program (WAP) for the delivery of Act 129 Phase V low-income programs. CEO and the Task Force Comments at 5. NEEP also recommends that the EDCs partner with existing community organizations to help market energy efficiency programs and to provide community-based technical assistance. NEEP Comments at 9.

The Low Income Advocates recommend several changes to harmonize LIURP with Act 129 low-income programs. They request that the Commission require the use of common contractors and common auditing tools in the delivery of Act 129 and LIURP programming, and that the two programs should be consolidated for delivery by local WAP providers. The Low Income Advocates urge the Commission to require the EDCs to develop specific coordination programs with WAP and/or LIURP providers and to allow LIURP and/or WAP service providers to install Act 129 program measures. The Low Income Advocates recommend that the Commission mandate standardized eligibility criteria, application forms, energy audits, and data-sharing policies to facilitate coordinated and streamlined delivery of LIURP and Act 129 low-income programs. Low Income Advocates Comments at 52, Low Income Advocates Reply Comments at 6-8.

CEO and the Task Force agree with the Low Income Advocates recommendation to either mandate the use of WAP providers in the delivery of Act 129 services or require CSPs to use WAP providers in the delivery of those services. They propose that this would avoid duplication of services, reduce confusion among low-income ratepayers, and make for more efficient, comprehensive delivery of Act 129 measures. CEO and the Task Force Reply Comments at 3.

Duquesne Light agrees with using competitively procured common LIURP contractors, when possible. However, Duquesne Light opposes the recommendation to use common auditing tools. Duquesne Light argues that the recommendation to use common auditing tools is inconsistent with the Commission's recent LIURP rulemaking and therefore expands the scope of the Act 129 proceeding. Duquesne Light Reply Comments at 2-3.

PECO opposes proposals to require developing standardized eligibility criteria and audits, as well as the use of common contractors for LIURP and Act 129 low-income programs. PECO notes that even if permitted or encouraged by the Commission, developing and implementing such proposals as part of Act 129 plans would require the use of Act 129 funds that would otherwise be available for Act 129 measures, potentially hindering the achievement of savings goals. PECO Reply Comments at 6.

PPL disagrees with comments recommending that the Commission impose requirements for EDCs to use the same implementation contractors as LIURP or other low-income programs. PPL notes that its primary Low-Income CSP is headquartered in Pennsylvania and has over four decades of low-income program implementation experience in the Commonwealth. PPL also disagrees with the consolidation of Act 129 low-income programs, LIURP, and WAP. PPL avers that coordination between Act 129

and available assistance programs is already a priority, including coordination with LIURP. PPL Reply Comments at 7-8.

b. Disposition

I. Savings Target

EAP and the EDCs' requests to replace the savings carve-out with a minimum spending target for the low-income sector do not meet the Commission's goals for the carve-out. The Commission rejects this request and again highlights two aspects of this issue, noting that the following discussion does not constitute a comprehensive list of the Commission's goals for the low-income carve-out. First, the carve-out helps to ensure that low-income customers are able to access and participate in the EDCs' efficiency programs. A spending requirement could permit very high spending to acquire a relatively small number of program participants, potentially resulting in low overall savings and limiting customer participation. Second, the carve-out helps to ensure that low-income customers realize significant benefits from those programs. Additionally, the Commission notes that, in general, outcome-oriented metrics, such as savings targets, are better aligned with ensuring that Act 129 programs maximize benefits for Pennsylvania customers and residents.

The Commission acknowledges comments from the Low Income Advocates, CEEH-PA, DEP, OCA, and CEO and the Task Force, encouraging an increased low-income carve-out for a wide range of reasons. The Commission also acknowledges comments from EAP and the EDCs, contending that the low-income savings targets are too high, as summarized above. We, however, are not persuaded by either set of arguments presented, but are keenly aware of the multitude of comments requesting increases and decreases to the low-income carve-out, and that the consensus among stakeholders supports the decision to decline to modify the low-income carve-out. The Commission highlights that the low-income energy savings targets presented in the

Tentative Implementation Order are seen as reasonable and achievable. The Commission notes that these targets were set by allocating 13% of each EDCs' Act 129 budget to programs solely directed at low-income customers or low-income-verified participants in multifamily housing programs. The low-income targets represent 7.5% of the statewide MWh target, which is higher than the 5.8% of Phase IV savings that come from low-income households. By EDC, the low-income targets range from 6.7% of the portfolio target (PECO) to 7.9% (PPL and FirstEnergy). Because of the higher acquisition costs of low-income programs, to increase the budget share as the Low Income Advocates, DEP and other stakeholders recommend, could limit an EDC's ability to develop an EE&C plan with a well-reasoned and balanced set of measures tailored to usage and savings potential for each customer class.

The Commission finds that the Low Income Advocates' comments claiming that the EEPDR Potential Study did not adequately account for potential in master metered multifamily housing are inaccurate. The analysis of low-income potential in the EEPDR Potential Study, leveraging data from the 2023 Pennsylvania Non-Residential Baseline Study, explicitly incorporated an estimate of energy consumption in master metered residential housing likely to be on commercial electric tariffs. Further, the Commission notes that the proposed targets for low-income savings assume a budget cap. Therefore, even if the potential in master metered multifamily buildings had been underestimated, this would not impact the resulting savings targets.

The Commission acknowledges Duquesne Light's comments on the low saturation of electric space and water heating in the Duquesne Light territory and notes that this was taken into consideration in the development of the EEPDR Potential Study. The Commission does not find Duquesne Light's comments on erosion of savings potential due to LIURP compelling. The LIURP participation data provided by Duquesne Light indicating a very low share of space heating and water heating jobs related to total

program activity does not support the argument that limited remaining potential exists. Conversely, it may reasonably be considered evidence that LIURP has been ineffective at reaching deeper savings through equipment replacement opportunities that Act 129 programs could address. Further, the Commission finds several issues with Duquesne Light's estimation of the remaining population of low-income households that can be treated with Act 129 programs. First, the analysis removes any household that has participated in LIURP in the previous 10 years. This essentially assumes that there are no remaining opportunities in these households for additional savings. The data provided on the relative rarity of space heating and water heating jobs in LIURP alone calls this assumption into question. Second, Duquesne Light's analysis removes estimated behavioral program participants from the eligible pool of low-income customers. This is clearly inappropriate as behavioral programs are commonly used as marketing mechanisms for achieving deeper, equipment-based savings.

The Commission declines to adjust savings targets based on Duquesne Light's observation that, relative to its Phase IV targets, total program savings targets decreased substantially but low-income savings targets slightly increased. Opportunities for lower cost non-residential lighting in the Phase V EEPDR Potential Study are reduced relative to those modeled in Phase IV, but residential lighting was essentially removed from the potential in both the Phase IV and Phase V studies. Therefore, while the overall potential declined, in part, because of commercial lighting, it did not affect the low-income potential. Finally, the Commission disagrees with Duquesne Light's contention that they received different treatment than the other EDCs with respect to the development of low-income savings targets. The Commission confirms that the methodology used to develop the proposed low-income savings targets was consistent for all EDCs. The resulting differences reflect differing estimated acquisition costs which are a key outcome of the modeling conducted in the EEPDR Potential Study and are based on EDC-specific estimates of measure savings, costs, and baseline conditions.

In response to comments from EAP, FirstEnergy, and PPL regarding the treatment of federal funds in the development of low-income acquisition costs in the EEPDR Potential Study, the Commission clarifies that HER and HEAR funding and tax credits were not considered in the development of the acquisition costs proposed in the Tentative Implementation Order; therefore, no changes to the calculated acquisition costs are necessary. This issue is further discussed in Section A.1 of this Implementation Order.

II. Other Carve-outs: Multifamily Low-Income Housing & Low-Income Solar PV

The Commission is not supportive of the range of proposals suggested by the Low Income Advocates, CEEH-PA, and OCA related to an additional carve-out requirement for single family, individually metered multifamily, master metered multifamily tenant units, and solar PV. The Commission notes that FirstEnergy, PPL, and PECO all specifically oppose additional carve-outs for multifamily low-income housing in their reply comments, arguing for flexibility to design and implement programs across all customer classes to meet their targets in a cost-effective manner. The Commission agrees that these proposals collectively fall into a category of adding additional carve-outs, with associated increased administrative burden, which the Commission finds do not represent net improvements in program delivery.

In addition, the Commission rejects the suggestion for a solar PV carve-out within the low-income carve-out. Because there was no specific low-income consideration embedded in the solar PV portion of the EEPDR Potential Study, including a carve-out for solar PV could distort the acquisition cost of the low-income programs unfairly.

Regarding the comments from CEEH-PA urging the Commission to direct the SWE to identify an achievable savings target for multifamily housing in its Phase VI potential study, the Commission will take this into consideration when drafting the scope

of the work for the Phase V SWE.

III. Comprehensive Programs and Measures

The Commission acknowledges the range of proposals to ensure comprehensive program offerings and the installation of longer-lived, deeper-savings measures in the EDCs' low-income programs suggested by the Low Income Advocates, CEO and the Task Force, CEEH-PA, and OCA. However, the Commission is not supportive of additional carve-out requirements for comprehensive programs, whole-home programs, and direct install measures within the low-income carve-out. The Commission notes that FirstEnergy, Duquesne Light, and PPL all specifically oppose these various additional carve-outs in their reply comments. These proposals collectively fall into a category of creating additional carve-outs, with associated increased administrative burden, which the Commission finds do not represent net improvements in program delivery. While the EEPDR Potential Study estimated acquisition costs were based on the modeling of a comprehensive mix of measures, the study did not model specific comprehensive programs or program requirements.

However, the Commission recognizes the range of stakeholders interested in the installation of comprehensive, longer-lived, deeper-savings measures through the EDCs' low-income programs. We concur that requiring tracking and reporting on this topic will provide valuable information to better understand how these different measures and program offerings perform in Phase V and how the low-income sector is served by the programs in Phase V. Therefore, the Commission directs the Bureau of Technical Utility Services to work with the SWE to develop reporting requirements for comprehensive program offerings and whole-home, comprehensive measures for the EDCs' low-income programs in Phase V. This reporting will be a key component of the enhanced tracking and reporting for comprehensive program offerings noted in Section A.4.c of this Implementation Order.

IV. Harmonizing LIURP with Act 129 Low-Income Programs

The Commission rejects the proposal set forth by the Low Income Advocates, NEEP, and CEO and the Task Force to mandate that EDCs use common CSPs, particularly CBOs, for their Act 129 low-income programs and LIURP. The Commission agrees with Duquesne Light that using competitively procured common LIURP contractors is advisable when possible, but the Commission will not mandate the use of common contractors. Similarly, the Commission disagrees with comments requiring standardized eligibility criteria and auditing tools for LIURP and Act 129 low-income programs. Such standardization would require use of Act 129 funds on program administration that would otherwise be available for installation of Act 129 low-income measures in eligible low-income households.

In aggregate, the Commission finds the arguments put forth in comments and reply comments for changes to the coordination already in place to be unpersuasive, and the Commission will not direct any additional harmonizing of the management and spending of Act 129 low-income funds with LIURP at this time.

V. Proportionate Number of Measures

As no stakeholder opposed the proposal that each EDC EE&C plan include specific energy efficiency measures for households at or below 150% of the FPIG, in proportion to that sector's share of the total energy usage in the EDC's service territory, the Commission adopts the proportionate number of measures requirement as proposed in the Tentative Implementation Order.

6. Constraints on EE&C Plan Offerings

EDCs have considerable flexibility regarding designing the mix of programs and measures in their EE&C plans, and there is no requirement to follow the mix modeled by the SWE in its potential studies. However, there are several fundamental portfolio design assumptions in the SWE's EEPDR Potential Study that reflect the policy preferences of the Commission and received specific discussion in the Tentative Implementation Order.

a. Non-Residential Midstream Lighting

In Phase IV of Act 129, non-residential LED lighting measures have delivered more savings than all other measure categories combined. The three primary measure vintages for non-residential lighting and most other EE&C measures are Early Replacement, New Construction, and Replace on Burnout. The Early Replacement, or Retrofit, vintage is handled through the TRM Appendix C Lighting Audit & Design Tool for Commercial and Industrial Projects, which documents the specification of the replaced lighting equipment. New Construction lighting savings for both buildings and horticulture applications are based on installed lighting configurations exceeding building code allowances. The policy issue arises for Replace on Burnout (ROB) lighting, typically delivered via midstream channels at the point of sale through participating distributors. With midstream lighting, no data collection is required regarding the replaced lighting equipment and the 2026 TRM establishes baseline efficiency equal to "*the least efficient lighting product the participant could choose to purchase with comparable characteristics and performance.*"[49] As LED lighting becomes the industry standard technology for virtually all lighting applications, this creates serious concern about the use of limited program funds to incent LED equipment at the point of purchase. The Commission worried that many of these sales in Phase V would replace

[49] *See 2026 Technical Reference Manual, Volume 3*, Docket No. M-2023-3044491, at 26. Available online at: https://www.puc.pa.gov/pcdocs/1848580.pdf

first-generation LED systems and that nearly all would be LEDs even without program support. While a robust assessment of free ridership might adjust for this issue in the net savings analysis, Act 129 goals are based on gross savings. Implementation of large midstream/ROB lighting programs in Phase V could result in a situation in which the EDCs claim more gross lighting savings than the total contribution of non-residential lighting energy to their current retail sales.

The SWE explicitly removed ROB lighting from its EEPDR Potential Study and limited modeled savings to the stock of inefficient lighting. This share of inefficient, and thus eligible, lighting equipment declines over the study horizon. Section 2.5.5 of the EEPDR Potential Study report notes that *"this EEPDR MPS study assumes that opportunities for both market-driven (such as midstream) and retrofit measures are limited to the projected stock of baseline lighting equipment and once converted to LEDs will no longer represent a future opportunity."* Based on the modeling approach from the EEPDR Potential Study and our own policy concerns, the Commission urged the EDCs to minimize the contribution of midstream delivery of non-residential lighting measures in their Phase V EE&C plans. The Commission also emphasized focusing lighting programs on replacing the remaining inefficient lighting equipment stock in the Commonwealth.

I. Comments

PECO supports the continued midstream delivery of non-residential lighting measures in Phase V noting that midstream programs accounted for 54% of PECO's lighting energy savings in 2024 and that strong savings potential is expected in future years. PECO notes that midstream lighting programs operate at a lower cost per kWh of energy saved allowing other more comprehensive, less cost-effective measures to be offered. Finally, PECO claims that when midstream incentives are removed, customers

are more likely to install less efficient LED retrofit tubes instead of upgrading to higher efficiency integrated LED fixtures. PECO Comments at 23.

Advanced Energy United expresses support for continuing midstream delivery of non-residential lighting measures in Phase V arguing that such midstream programs have superior cost-effectiveness and are essential to maximize the impacts of available funds and ensure overall portfolio cost-effectiveness. Advanced Energy United Comments at 17. PPL respectfully disagrees with the Commission's position on non-residential midstream lighting and submits that less than two percent of the projects in its Non-Residential Programs claim to be replacing LEDs. PPL views the likelihood of claiming higher savings than the Company's lighting sales as low and recommends that the Commission not discourage non-residential midstream lighting in its Final Implementation Order. PPL Comments at 9. In its reply comments, PPL agrees with Advanced Energy United comments supporting continued midstream lighting programs and reiterates their position that midstream programs reduce customer barriers and will be integral to a successful Phase V. PPL Reply Comments at 10.

II. Disposition

PECO's comment about what customers would do in the absence of midstream incentives underscores the Commission's concern on the topic and undermines PECO's own position. While there are modest efficacy differences between different LED lighting equipment types, all LEDs are drastically more efficient than the non-LED baselines in the TRM. The Commission finds the comments on cost-effectiveness and acquisition costs very compelling. Given the volume of EDC comments in this proceeding lamenting the blended acquisition costs used to establish Phase V targets, we conclude that it is inappropriate to limit EDC flexibility to offer program designs with low administrative cost per kWh saved. We also find PPL's comment regarding the rarity of LED-to-LED replacement in Phase IV instructive. Therefore, for Phase V of

Act 129, the EDCs do not need to minimize the contribution of midstream delivery of non-residential lighting measures in their Phase V EE&C plans, provided that participating distributors can document each transaction that the replaced lighting equipment is not LED.

b. Customer-Sited Measures

The SWE's EEPDR Potential Study considered only customer-sited conservation opportunities of which the home or business would have knowledge. Typically, this involves the customer, or a contractor on their behalf, installing a piece of electric equipment or implementing behavior or technical controls to alter the way existing equipment operates. Often the participant pays the majority of the cost of efficient equipment. There are other potential EE&C measures that affect the EDC distribution equipment that transports electricity to homes and businesses. While these "front of the meter" (FTM) measures would lower customer energy consumption and therefore bills, they generally do not involve ratepayer participation or even awareness. Previous phases of Act 129 have allowed FTM measures such as conservation voltage reduction to contribute to EDC compliance goals. The Commission proposed limiting Phase V EE&C plans to customer-sited measures. While FTM measures may be a prudent investment and lead to desired outcomes, the Commission saw these types of investments as part of operating the distribution system rather than an EE&C plan component. This limitation of EE&C plans to customer-sited measures would disqualify solar PV installations that are not associated with an existing retail meter.

I. Comments

EAP objects to several of the policy preferences modeled by the SWE in the EEPDR Potential Study and to the associated EE&C plan constraints on the basis that they limit EDC flexibility. EAP also highlights that the proposed prohibition of FTM measures is a change from earlier phases of Act 129, which allowed FTM measures such

as conservation voltage reduction programs to contribute to savings targets. EAP asks the Commission to reverse this new position concerning front-of-the-meter measures that result in energy efficiency and further the Act 129 goal of conservation. EAP Comments at 14. PPL also urges the Commission to reconsider its proposed limitation to customer-sited measures. PPL avers that conservation voltage reduction provides a low-cost channel to reduce energy consumption and maintains that EDCs should have the flexibility to include it as an EE&C measure, given the aggressive targets set forth in the Tentative Implementation Order. PPL Comments at 9.

Duquesne Light encourages the Commission to avoid placing constraints on the potential offerings proposed in Phase V EE&C plans, since this is inconsistent with the sentiment of Chair DeFrank's statement at the Commission's February 20, 2025, meeting that called on stakeholders to recommend "all suggestions to enhance our EE&C programs."[50] Duquesne Light maintains that EDCs should be provided flexibility to propose the mix of measures and plan design that will result in a cost-effective portfolio to achieve targets, as they bear the risks of non-compliance. Duquesne Light points to the potential generation shortfalls in the region and notes that every kWh saved helps with resource adequacy, regardless of which side of the meter it originated from. Duquesne Light submits that FTM measures avoid the same volumetric supply-side costs as customer-site measures, and those reductions in cost benefit all customers. Duquesne Light further emphasizes that the use of the TRC Test, rather than the Participant Cost Test, for Act 129 economic screening is inconsistent with the proposed exclusion of FTM measures and should be removed. Duquesne Light Comments at 10.

[50] Statement of Chairman Stephen M. DeFrank at Docket No. M-2025-3052826. Entered February 20, 2025. Available online at: https://www.puc.pa.gov/pcdocs/1866657.pdf

II. Disposition

The Commission is persuaded by the viewpoints of EAP, PPL, and Duquesne Light on this matter. FTM measures like conservation voltage reduction can be low-cost, high-yield EE&C plan components and can help combat growing resource adequacy concerns in the Commonwealth. Based on a review of conservation voltage reduction offerings implemented by PECO and West Penn Power in Phase I, we expect the acquisition cost of FTM measures to be lower than that of traditional EE on a $/MWh and $/MW basis. Since no allocation of funding to FTM measures was assumed in the proposed Phase V targets, the inclusion of FTM measures should assuage EDCs' concerns about the assumed acquisition costs that informed their Phase V goals. Therefore, for Phase V of Act 129, the EDCs do not need to limit their proposed Phase V EE&C plans to customer-sited measures, but the projected contribution of FTM measures to the portfolio MWh and MW savings should be no more than ten percent.

c. Solar PV

I. Comments

OCA recommends that eligibility for solar PV incentives should be limited to participants who also receive incentives for other energy efficiency measures offered through Act 129. OCA Comments at 15. PPL objects to OCA's recommendation that solar PV measures be required to be paired with other Act 129 energy efficiency improvements, noting that solar PV offsets site electricity consumption and reduces load. Requiring solar PV, an approved measure in the 2026 TRM, to be paired with other measures will limit solar PV potential. PPL Reply Comments at 10.

II. Disposition

The Commission agrees with PPL that requiring the pairing of solar PV with other energy efficiency measures would unnecessarily limit the opportunity for reductions in

energy consumption, and the Commission rejects the recommendation from OCA. The Commission adds that OCA's recommendation would create a new eligibility requirement that is not applicable to other Act 129 measures. In general, the Commission opposes requirements for bundling measures and favors program designs that allow participants to select the measure(s) that make sense for them based on their technical and economic circumstances.

7. Accumulating Savings in Excess of Reduction Requirements

In its Phase II Implementation Order, the Commission recognized that many of the EDCs may achieve their Phase I consumption reduction targets before the end of Phase I. We recognized that a smooth transition between phases was paramount and would help minimize both customer confusion and transition costs. Therefore, the Commission allowed those EDCs that had achieved their Phase I consumption reduction target early to continue their programs and apply any excess savings towards their Phase II targets, provided Phase I funds were still available. We clarified that, in Phase II, EDCs should apply any savings exceeding the target at the particular customer sector level.[51] In our Phase II, III, and IV Implementation Orders, we again directed the EDCs to continue their programs through the end of each phase, even if they achieved their consumption reduction targets, so long as the funds were still available.[52]

For Phase V, we again proposed allowing the EDCs to count only those savings attained in Phase IV exceeding their MWh or MW targets for application towards their Phase V targets. For example, assume an EDC had a Phase IV target of 1,000 MWh and 100 MWh of carryover savings from Phase III. To have carryover into Phase V, the EDC must have attained over 1,000 MWh in Phase IV alone, excluding the 100 MWh of

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[51] *See Phase II Implementation Order* at pages 58-60.
[52] *Id*. at 25-26; *Phase III Implementation Order* at page 83; *Phase IV Implementation Order* at pages 45-46.

Phase III carryover.

Additionally, to address concerns expressed by Act 129 stakeholders with the excess carryover of savings that can be applied towards Phase V targets, and as an update to prior phases, we proposed permitting the EDCs to utilize carryover up to a maximum of 20% of their respective portfolios and low-income targets. Continuing the example above, if an EDC has a Phase IV target of 1,000 MWh and achieves 1,250 MWh of savings in Phase IV, and if the Phase V target is also 1,000 MWh, they can carry over a maximum of 200 of the 250 excess MWh of savings. The Commission believes that setting a maximum allowable carryover equal to 20% of the respective targets for each EDC is reasonable, as it is approximately equivalent to one-fifth of the five-year phase targets. We deemed that this approach would encourage EDCs to continue the full implementation of programs and not allow programs to "go dark" and encouraged stakeholders to comment on the appropriateness of the carryover level Additionally, this also addressed Act 129 stakeholder concerns regarding a scenario in which target attainment can be significantly achieved via excess carryover savings.

The Commission proposed basing the carryover for FirstEnergy on the net sum of carryover from Phase IV for the four formerly independent EDCs: Met-Ed, Penelec, Penn Power and West Penn Power.

a. Comments

OCA expresses support for the Commission's proposal to allow carryover and to limit carryover to 20% of the Phase V consumption reduction targets. OCA Comments at 11-12. OCA opposes suggestions from PPL and Duquesne Light that carryover should be uncapped and reiterates its support for capping carryover at 20% of the Phase V targets. OCA Reply Comments at 5-6.

DEP generally agrees with the PUC allowing the EDCs to carry over excess savings from one phase to the next, highlighting the importance of a smooth transition from Phase IV to Phase V, and the importance of the EDCs specific programs not "going dark." DEP Comments at 6.

EAP opposes the proposed limitations on consumption carryover. EAP comments that the concern "that target attainment can be significantly achieved via excess carryover savings" does not reflect past experience and suggests that limits on carryover will work against the goal of avoiding the shuttering of programs. EAP Comments at 15.

PPL opposes the Commission's proposed limitations on consumption carryover. PPL contends that limiting savings carryover to 20% of energy savings in excess of their Phase IV target will raise the cost of the programs for customers and that the limitation may have a cooling effect on the final year of Phase IV. PPL recommends that the Commission allow EDCs to carry over 100% of savings in excess of their Phase IV targets toward achieving their Phase V targets. PPL Comments at 10.

Duquesne Light opposes the Commission's proposed limitations on consumption carryover. Duquesne Light expects difficult market conditions in Phase V and that restricting carryover is therefore inappropriate; they add that the 20% cap could have the unintended effect of slowing down program implementation in the remainder of Phase IV. Duquesne Light avers that savings exceeding Phase IV targets reduce potential savings for Phase V and may make it more difficult to meet Phase V targets, therefore creating a disincentive to fully implement programs during Phase IV. Duquesne Light Comments at 11.

FirstEnergy opposes the Commission's proposed limitations on consumption carryover, commenting that limiting carryover to only a portion of what was achieved does not provide the same assurance nor give sufficient incentive to keep programs from "going dark" once Phase IV targets are achieved. FirstEnergy Comments at 17-18.

IECPA opposes the Commission's proposed limitations on consumption carryover and comments that EDCs should be permitted to carry over all savings from Phase IV without any cap. IECPA contends that capping carryover will penalize ratepayers by remitting costs through Phase IV of the EE&C program without fully recognizing the program savings these costs yielded and that, effectively, ratepayers are fined through potentially increased costs in Phase V that Phase IV carryover savings could have offset. IECPA suggests setting a cap no lower than 75%, rather than a cap of 20%, if the Commission determines that a cap on carryover savings is required. IECPA Comments at 2-5.

The Low Income Advocates oppose allowing any carryover, commenting that the Commission should require EDCs to design their Phase V plans to meet their Phase V goals without the use of any carryover. The Low Income Advocates comment that EDCs should only use Phase IV carryover savings in Phase V as a safe harbor if they cannot meet their Phase V targets after a good faith effort fully utilizing their Phase V budgets. Low Income Advocates Comments at 47. In reply comments, the Low Income Advocates reiterate their comments that the Commission should require EDCs to design their Phase V plans to meet their Phase V goals without the use of any carryover, and that they should only use carryover from Phase IV (up to the Commission's proposed 20% maximum) as a backstop if they cannot achieve their Phase V targets with Phase V- exclusive budgets. Low Income Advocates Reply Comments at 8-10.

The Joint Energy Advocates are generally supportive of the Commission's

proposal to allow a maximum 20% carryover of excess energy savings into Phase V, but they recommend that the Commission only allow applying carryover at the end of Phase V on a post hoc basis, rather than being deducted "off the top" at the beginning of the phase. Joint Energy Advocate Comments at 14.

PPL reiterates in reply comments that it disagrees with limits to carryover of consumption savings, commenting that, if carryover savings are completely eliminated, there would be no contingency to achieve savings targets if an EDC spends its entire EE&C plan budget without reaching the target and suggests that reducing or eliminating carryover increases costs for all customers. PPL Reply Comments at 6.

PECO reiterates its opposition to the proposed Phase V caps on carryover savings. PECO notes that carryover savings represent *verified* consumption reduction or peak demand reduction savings that have been achieved through *customer-funded* measures. Both EDCs and customers would benefit from the full utilization of carryover savings because: (1) full utilization encourages EDCs to continue offering energy savings measures to customers even after a phase target is achieved; and (2) full utilization may permit EDCs to pursue deeper, more comprehensive savings opportunities with their fixed budgets than would be possible without carryover. PECO Reply Comments at 5-6.

b. Disposition

The Commission maintains its decision to allow the EDCs to count only those savings attained in Phase IV in excess of their MWh or MW targets for application towards their Phase V targets. Additionally, we maintain our decision to impose a limiting mechanism on carryover in response to concerns expressed by Act 129 stakeholders regarding excessive carryover. Therefore, for Phase V of Act 129, EDC carryover of Phase IV MWh will be capped at a maximum of 20% of their respective portfolio and low-income consumption reduction targets. We are not persuaded by the

range of comments from the EDCs, EAP, and IECPA opposing the proposed carryover limiting mechanism. Nor is the Commission persuaded by the Low Income Advocates comments to not allow any amount of carryover. However, we agree with the Low Income Advocates that EDCs can, and should, design their Phase V plans to meet their Phase V goals without the use of any carryover, as the EEPDR Potential Study indicates Phase V goals are achievable without carryover. Our disposition on this matter is generally supported by comments from OCA, DEP, and Joint Energy Advocates, who acknowledge the importance of some amount of carryover but also recognize the potential pitfalls of excessive carryover to weaken compliance targets.

Commenters who oppose capping carryover point to the increased cost associated with potentially not allowing all Phase IV verified MWh to count towards Phase V targets. We dismiss this argument because it fails to consider the benefits of program investment. Since EE&C plans must have a TRC ratio greater than 1.0, the proposed reduction in cost is effectively a recommendation to reduce the net benefits of Phase V EE&C plans to the Commonwealth. By requiring EDCs to achieve at least 80% of the Phase V consumption reduction targets in Phase V, the Commission ensures more complete investment of Phase V funds. Finally, we do not share the concerns of parties who worry that this requirement will increase the likelihood of Phase IV programs "going dark." Based on a review of progress toward Phase IV compliance targets, the EDCs appear unlikely to reach 120% of the Phase IV MWh targets with MWh savings attained in Phase IV. The EDCs likewise appear challenged in meeting their Phase IV MW targets, so the EDCs will need to maintain programs to acquire as much MW as possible to meet Phase IV MW goals and position themselves for as much peak demand carryover as possible for Phase V.

8. Process to Challenge Reduction Requirements

In Phase II, the Commission set forth a process through which each EDC could

challenge the consumption reduction requirements initially adopted by the Commission.[53] In Phase III and Phase IV, the Commission proposed the same challenge process for both the consumption and peak demand reduction requirements.[54] As in the previous phases, the Commission proposed the same challenge process for both the consumption and peak demand reduction requirements for Phase V of Act 129. Specifically, in adopting this Phase V Implementation Order, the Commission adopted the consumption and peak demand reduction requirements for each EDC. These consumption and peak demand reduction requirements were finalized for any EDC that did not petition the Commission for an evidentiary hearing within 15 days of the entry of this Phase V Implementation Order.

If an EDC desires to contest the facts the Commission relied upon in adopting the consumption and peak demand reduction requirements contained in the Final Implementation Order, it has 15 days from the day of the entry of the Final Implementation Order, to file a Petition requesting an evidentiary hearing on its specific consumption and peak demand reduction requirements. The EDC contesting the consumption and peak demand reduction requirements shall have the burden of proof, in accordance with 66 Pa. C.S. § 332(a). The scope of any such proceeding will be narrow and limited to the consumption and peak demand reduction requirement issues. If an EDC does not file a Petition within 15 days of the entry of the Final Implementation Order, it will be considered to have accepted the facts and be bound by the consumption and peak demand reduction requirements in that Order as no disputed facts would remain.

If an EDC files a Petition within 15 days of the entry of the Final Implementation Order, the matter will be assigned to the Office of Administrative Law Judge for

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[53] *See Phase II Implementation Order* at pages 30-32.
[54] *See Phase III Implementation Order* at page 86 and *Phase IV Implementation Order* at page 48.

expedited hearings with certification of the record to the Commission by July 7, 2025. Petitions for intervention must be filed within 10 days of an EDC filing a hearing request.

At such hearings, the EDC will have the opportunity to present evidence and arguments as to its reasonable consumption and peak demand reduction requirements for Phase V. While the Commission will not entertain petitions from other parties, any other party may intervene in the EDC-requested hearing and present evidence. Given the narrow scope of the proceeding and time constraints, we believed it was appropriate to certify the record rather than issue a recommended decision. As part of this process, the parties will have the opportunity to file main and reply briefs directly to the Commission rather than filing exceptions to a recommended decision.

Furthermore, we directed the use of administrative counsel from the Commission's Law Bureau to represent the SWE in the proceedings, to introduce relevant SWE studies into the record, and to assist the SWE in discovery matters. The Commission believes this expedited process is both reasonable and necessary to complete all litigation, including that of the EE&C plan filings before June 1, 2026, when Phase V is to begin.

a. Comments

PPL supports the Commission's approach to challenge consumption reduction requirements. PPL Comments at 10.

b. Disposition

The Commission adopts the process through which each EDC can challenge the consumption reduction requirements initially outlined by the Commission in this section for Phase V.

9. Measuring Annual Consumption Reductions

Consumption reduction for Phase V is addressed at 66 Pa. C.S. § 2806.1(c)(3), which requires that, by November 30, 2013, and every five years thereafter, the Commission must adopt additional required incremental reductions in consumption, if the Commission determines that the benefits of the EE&C program exceed its costs. For Phase V of Act 129, the Commission proposed to adopt the five-year energy consumption reduction requirements outlined previously in this Order.

As in Phases II, III, and IV, the Commission proposed for Phase V to continue the use of the same savings approach, as defined here.[55] This approach develops estimates of the weather-normalized annual energy savings expected over the course of a measure's expected useful life, absent any dual baseline considerations. The Commission's proposal was based on the fact that the results of specific conservation measures were determined using the deemed or partially deemed approaches outlined in the 2026 TRM, which uses calculations derived from studies or measurement methods that already account for extraordinary weather or loads. Regarding custom measures not included in the 2026 TRM, the Commission proposed for Phase V that EDC evaluation contractors continue to estimate weather-normalized annual energy savings that consider and control for extraordinary weather conditions observed during the measurement and verification period. The Commission asserted its belief that this approach negates the need to weather-normalize the consumption reduction requirements or determine what qualifies as extraordinary load.

a. Comments

PPL supports the Commission's approach to measuring annual consumption

[55] *See Phase II Implementation Order* at page 85; *Phase III Implementation Order* at page 108; *Phase IV Implementation Orde*r at page 49.

reduction. PPL Comments at 10.

b. Disposition

The Commission adopts the approach to measuring annual consumption reduction, as initially outlined by the Commission in this section for Phase V.

B. Proposed Reductions in Peak Demand

Act 129 required the Commission to compare the total costs of the EDCs' EE&C plans to the total savings in energy and capacity costs to retail customers or other costs as determined by the Commission by November 30, 2013. If the Commission determined that the benefits of the plans exceeded the costs, Act 129 required the Commission to set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand, or an alternative reduction approach approved by the Commission (*See* 66 Pa. C.S. § 2806.1(d)(2)).

The Commission did not establish peak demand reduction targets for Phase II of Act 129 because the cost-effectiveness analysis of Phase I demand response programs was ongoing at the time of the Phase II Implementation Order.[56] Additionally, the SWE had not completed its Demand Response Study[57] or a demand response market potential study. Phase III of Act 129 required additional reductions in peak demand, satisfied only by dispatchable DR programs. The Phase III Final Implementation Order[58] and Phase III

[56] *See Act 129 EE&C Phase II Implementation Order,* Docket Nos. M-2012-2289411 and M-2008-2069887 (Order entered August 3, 2012), at pages 32-34. Available online at: https://www.puc.pa.gov/pcdocs/1186974.doc

[57] *See Act 129 SWE Demand Response Study Final Report*, Docket Nos. M-2012-2289411 and M-2008-2069887 (Amended November 1, 2013). Available online at: https://www.puc.pa.gov/pcdocs/1256728.docx

[58] *See Phase III Final Implementation Order*, at pages 36-44.

Clarification Order[59] provided clear instructions regarding the dispatch trigger, event duration, and maximum number of events per year. Phase IV of Act 129 also included peak demand reduction targets for each EDC, but only coincident demand reductions from energy efficiency measures could satisfy the Phase IV targets.[60] This historic variation in the design of peak demand reduction targets meant that there was no status quo framework entering Phase V. Prior to proposing any peak demand reduction targets for Phase V, the Commission first needed to put forth a peak demand reduction framework against which progress towards goals would be assessed.

1. Summary of SWE's DR Potential Study

The SWE performed a DR Potential Study to determine whether cost-effective potential exists for Act 129 DR programs. The DR Potential Study report was released via Secretarial Letter on February 21, 2025, at Docket No. M-2025-3052827. A stakeholder meeting was held on January 29, 2025, to review the study methodology and findings and gather input. The purpose of the DR Potential Study was to determine the amount of cost-effective DR potential available in each of the four EDCs' service territories. During the execution of this study, the Commission approved the consolidation of Met-Ed, Penelec, Penn Power, and West Penn Power into rate districts of a single FirstEnergy EDC.

The amount of DR potential achievable within Phase V, and the cost to acquire it, was dependent on the assumed program design. As an initial step in the DR Potential Study, the Commission directed the SWE to examine the design of Act 129 programs and how the peak demand reductions achieved might be recognized in the wholesale markets operated by PJM. The DDR programs implemented in Phase III of Act 129 operated

[59] *See Phase III Clarification Order*, Docket No. M-2014-2424864 (Order entered August 20, 2015), at 13-14,. Available online at: https://www.puc.pa.gov/pcdocs/1378016.doc
[60] *See Phase IV Final Implementation Order*, at pages 68-71.

independently of PJM, using a day-ahead load forecast trigger to determine on which days DR events would be called. The underlying premise of the Phase III design was that the reduced peak loads achieved by Act 129 DDR programs would reduce PJM's peak load forecasts for the zones served by the EDCs. In turn, this reduced summer peak load forecast would lower resource requirements, and the amount of generation capacity procured on behalf of Pennsylvania ratepayers. While the Phase III design was theoretically sound, accurate valuation required complex de-rating assumptions. The Phase III design was also plagued by concerns about dual-enrollment of customers in both Act 129 DR and PJM's emergency DR offerings.

In the Phase IV DR Potential Study, the SWE elected to model Phase IV DR potential under a coordinated design that leveraged PJM's Peak Shaving Adjustment (PSA) mechanism. The PSA mechanism relies on a temperature-humidity index (THI) trigger to determine when DR programs are dispatched. The PSA mechanism allows EDCs to formally declare their demand resources and have them directly reflected in regional planning parameters. PJM currently only considers summer capability in its recognition of PSA programs. Programs that target peak demand reductions in the winter months lack a clear valuation mechanism under the PSA framework. This posed a complication for Phase V of Act 129 as described in the 2026 TRM Final Order,[61] the Commission chose to bifurcate the Act 129 peak demand definition to include both summer peak and winter peak. Similarly, the 2026 TRC Test Final Order allocated capacity benefits between summer and winter peak[62] rather than the traditional capacity valuation approach, which only considers summer peak.

[61] *See 2026 Technical Reference Manual Final Order,* Docket No. M-2023-3044491(entered September 12, 2024), at 7. Available online at: https://www.puc.pa.gov/pcdocs/1848423.pdf
[62] *See 2026 TRC Test Final Order* at page 32.

The SWE's DR Potential Study describes two broad categories of wholesale recognition: the supply resource pathway and the demand resource pathway. The study discusses the advantages and disadvantages of each and concludes that there are too many administrative challenges associated with the supply resource pathway for it to be viable within Act 129 programing. The SWE explains that the demand resource pathway is not unlike the way most coincident demand reductions from EE are considered within Act 129. Aside from a small portion of Phase IV demand reductions that were nominated in the PJM capacity market, demand reductions from EE are assumed to be incorporated in PJM peak load forecasts and lower future capacity needs over the useful life of the equipment.

The demand resource pathway required the Commission to clearly establish the dispatch trigger and other key program design parameters in advance. The SWE's DR Potential Study included a simulation exercise to compare the effectiveness of different program designs. This was done by varying a set of program parameters and simulating the event outcomes if those parameters had been used to call DR events over the last 13 years (2011–2023). Effectiveness was measured using two different metrics.

1) **Five Coincident Peak (5CP)** – Performance is expressed as the percentage of the 5CP hours captured by DR performance hours in each scenario. The 5CP hours are defined for the PJM system as a whole and represent the five hours with the highest system demand for a given delivery year and season, which must occur on five different days.

2) **Effective Load Carrying Capability (ELCC)** – A measure of the relative importance of hours of availability for DR dispatch. The SWE calculated the ELCC metric for this study as the percentage of target load that is captured by a simulated DR event. The target load is all demand above 90% of the forecasted

system peak for a given year and season. Hours with higher demand contribute more to the total target load and thus weigh more heavily in the calculation of ELCC. The embedded assumption is that these hours and loads are driving the peak load forecast for the zone.

Based on the results of the simulation exercise and other administrative considerations, the SWE determined the most effective approach for the Phase V DR Potential Study to be the "daily load-shifting" DR program design. A daily load-shifting program is activated on each non-holiday weekday during the summer and winter peak period. The modeled performance hours are aligned with the Phase V definition for coincident peak demand savings from energy efficiency established in the 2026 TRM Volume 1.[63] Table 13 shows the specific coincident peak period definitions laid out in the TRM. A daily load-shifting design removes operational uncertainty around dispatch because the performance dates and hours are known with certainty in advance. The SWE highlighted that a common performance definition for daily load-shifting programs and energy efficiency could afford the Commission and EDCs flexibility in Phase V by way of a single peak demand reduction target that either daily load-shifting programs or coincident demand reductions from energy efficiency could satisfy, without concern for the de-rate factors required in Phase III.

[63] *See 2026 Technical Reference Manual, Volume 1* at page 10.

Table 13: Phase V Peak Demand Definition

Period	Summer	Winter
Months	June, July, and August	January and February
Day Types	Non-Holiday Weekdays	
Hours (Eastern Prevailing Time)	2pm to 6pm (Hours Ending 15, 16, 17, & 18)	7am to 9am and 6pm to 8pm (Hours Ending 8, 9, 19 & 20)

Although the SWE maintains that the daily dispatch mechanism is the clearest pathway for Act 129 programs to provide incremental peak load reductions that complement rather than compete with existing PJM emergency DR offerings, the DR Potential Study identified the following implementation and measurement challenges associated with daily activation of Act 129 DR programs:

- Daily dispatch allows for simplifications to both program administration and planning. However, there is a real threat of participant fatigue if the reductions are too severe or the disruption is too great during control hours.
- The impacts per participant would be smaller and measuring impacts would be more challenging because there are no adjacent non-event days to use as a baseline.
- Attribution of impacts between Act 129 programs and time-of-use (TOU) rates would be challenging if homes or businesses enrolled in both an Act 129 DR program and a TOU rate.

The cost-effectiveness analysis in the DR Potential Study was conducted in accordance with the directives of the 2026 TRC Test Final Order, including assumptions regarding the avoided cost of transmission and distribution (T&D) capacity. Because daily load-shifting aligns more closely with the coincident demand reductions from EE

measures, the Commission directed in the 2026 TRC Test Final Order that no de-rate factor be applied to verified DR impacts when estimating the avoided capacity benefits of daily load-shifting programs.

The SWE DR Potential Study presented two types of potential:

- **Realistic Achievable Potential (RAP)** is a projection of future DR potential at typical industry incentive rates and marketing levels. Incentive levels are sufficient to drive some amount of participation, but low enough so that the marginal costs are lower than the marginal benefits. The assumed load reductions are also set to levels that balance participant comfort and disruption with the program goal of lowering peak demand.

- **Maximum Achievable Potential (MAP)** is a more aggressive projection of future DR programming, achieved by offering more generous incentives and allocating more program budget to marketing and recruitment efforts. The assumed per-participant load reductions are also higher than RAP because the objective of the program is to maximize reductions in peak demand. The aggregate DR potential in megawatts (MWs) is larger with MAP, but the programs are less cost-effective.

In the Executive Summary of the DR Potential Study, the SWE encouraged the Commission and stakeholders to focus on the RAP scenario for goal setting and program design.[64] The SWE also suggested that the MAP perspective is less practical in a funding-constrained environment like Act 129, because any allocation of funding to DR

[64] *See DR Potential Study* at page 4.

means decreased funding for EE programs. The SWE also noted that reaching MAP projections within a five-year phase would be challenging because Phase IV did not include DR targets and EDCs do not have existing DR programs upon which to build.

The SWE examined the following five demand response strategies in the DR Potential Study and estimated the potential for each by EDC:

1) Commercial and Industrial Load Shifting.
2) Connected Thermostat Optimization.
3) Electric Vehicle Managed Charging.
4) Domestic Water Heating Load Management.
5) Behind-the-Meter Storage.

Table 14 shows the results by EDC and statewide along with relevant financial outputs.[65] The estimates of DR potential are an average annual value over the five-year phase and the financials are five-year totals. The table values reflect the RAP modeling perspective and are limited to the three programs with a statewide TRC ratio of 0.8 or higher: Commercial and Industrial (C&I) Load Shifting, Connected Thermostat Optimization, and EV Managed Charging. TRC costs, TRC benefits and Present Value of Net Benefits (PVNB) are shown in 2026 dollars and reflect a nominal discount rate of five percent.

[65] *See DR Potential Study* at page 9.

Table 14: Phase V DR Potential, by EDC

EDC	Summer DR Potential (Phase V MW)	Winter DR Potential (Phase V MW)	Budget Requirement ($1,000 Nominal)	Percentage of EE&C Budget	TRC Cost ($1,000)	TRC Benefit ($1,000)	PVNB ($1,000)	TRC Ratio
Duquesne Light	15.5	13.1	$13,307	13.6%	$10,454	$11,921	$1,467	1.14
PECO	44.1	39.0	$36,541	8.5%	$28,919	$32,995	$4,077	1.14
PPL	36.3	48.0	$32,261	10.5%	$24,828	$51,229	$26,401	2.06
FirstEnergy	60.8	69.4	$53,797	13.8%	$41,636	$52,892	$11,257	1.27
Statewide	**156.8**	**169.5**	**$135,906**	**11.1%**	**$105,837**	**$149,038**	**$43,201**	**1.41**

The values in Table 14 do not assume DR performance requirements would be waived for the first program year of Phase V, as the Commission did for Phase III to provide EDCs time to ramp up their DR programs. Omitting the first season(s) from the performance definition would reduce budget requirements and increase MW potential by removing the year with the lowest potential from the calculation of the Phase V average.

Dividing the EDC Budget Requirement by the average of the summer and winter DR potential columns returns the acquisition cost ($/kW-Phase) of Phase V daily load-shifting programs shown in Table 15. The acquisition costs for daily load shifting are shown separately since coincident peak demand acquisition costs have already been presented in Table 9. This unit cost is referred to as $/kW-Phase because the demand reduction values are an average over the five-year phase. The statewide average unit cost for peak demand reductions achieved via daily load-shifting is $833/kW-Phase in the SWE DR Potential Study.[66] Daily load-shifting programs are a lower cost option for peak demand reduction relative to energy efficiency but provide no reduction in energy consumption. A decision to allocate Phase V budget dollars to daily load-shifting rather than EE would prioritize peak demand reductions over reductions in overall energy

[66] *See DR Potential Study* at page 10.

consumption.

Table 15: Peak Demand Acquisition Cost for Daily Load-Shifting

EDC	Phase V MW	EDC Budget Requirement ($1,000)	Acquisition Cost ($/kW-Phase)
Duquesne Light	14.3	$13,307	$930
PECO	41.6	$36,541	$879
PPL	42.2	$32,261	$765
FirstEnergy	65.1	$53,797	$827
Statewide	**163.1**	**$135,906**	**$833**

a. Comments

Stakeholder comments on the SWE's DR Potential Study are organized by topic due to the volume of comments received.

I. General Study Process and Methods

EAP expresses concern regarding the lack of input solicited by the SWE from the EDCs or other stakeholders regarding DR program design and key parameters that affect the amount of achievable potential and cost to acquire it. EAP suggests that the January 29, 2025, Stakeholder Meeting[67] reviewing the study methodology and draft results occurred too late in the process for substantive public input. EAP Comments at 9. PPL believes that the SWE's estimates of DR potential are flawed because cost-effectiveness screening mechanics were different in the EE and DR potential studies. PPL Comments at 10. Specifically, PPL objects to the 0.8 TRC threshold used in the DR Potential Study to determine the offerings included in the Phase V Potential. PPL Comments at 5.

[67] *See Secretarial Letter announcing the MPS Stakeholder Meetings*. Available online at: https://www.puc.pa.gov/pcdocs/1862831.pdf

Duquesne Light points out that it is a member of the EAP, participated in the preparation of the EAP's reply comments, and supports the points made by EAP regarding DR. Duquesne Light Reply Comments at 4.

PPL also notes that the Commission's approach to peak demand reduction has been inconsistent across phases, and points out that the EDCs would need to create and launch DR programs from scratch in Phase V. Based on the associated uncertainties and risks, PPL recommends the Commission reduce or eliminate the peak demand reduction targets. PPL Comments at 10. While PPL opposes peak demand reduction targets for Phase V of Act 129, PPL agrees with the Commission's recommendation to use RAP instead of MAP, as the latter is impractical for EDCs. PPL Comments at 11.

Other stakeholders expressed general support for the DR Potential Study approach and inclusion of DR as part of Phase V of Act 129. Advanced Energy United supports the return of DR programs in Phase V and believes DR has great potential to directly contribute to Pennsylvania's peak load reduction needs. Advanced Energy United Comments at 3. The Clean Energy Advocates suggest that the EDCs have been overly-dependent on lighting retrofits in the first four phases of Act 129 while underutilizing other significant savings opportunities. Specifically, the Clean Energy Advocates state that the EDCs should begin to harvest the plentiful opportunities to aggregate Demand Response savings and that the Commission should require smart thermostat and battery storage pilots at a minimum. Clean Energy Advocates Comments at 3. KEEA asserts that Pennsylvania must follow other states' lead by integrating EVs, water heaters, and battery storage to reduce peak loads and enhance grid flexibility. KEEA believes the battery storage offering modeled by the SWE is a particularly valuable DR solution and supports the assumption that batteries can discharge back to the grid as they believe this helps maximize the value of distributed storage for both customers and grid operators. KEEA Comments at 8.

OCA applauds the Commission's tentative decision to consider load-shifting program as part of Phase V portfolios and speculates that inclusion of DR programs will provide greater overall net benefits than a portfolio limited to energy efficiency measures. OCA points out that load shifting can help offset a portion of new capacity needs related to data centers, EVs, and electrification. OCA submits that there are benefits to both of the wholesale recognition pathways discussed by the SWE in its DR Potential Study. OCA notes that while formal recognition and monetization of demand response opportunities is beneficial for ratepayers as it offsets the overall program cost, there are benefits to not basing programs around PJM revenue streams, as the capacity market pricing varies and market rules are subject to change. OCA surmises that the net benefits of DR outside of capacity market revenues are sufficient to maintain cost-effectiveness for most EDC programs. In light of these points, the OCA requests that the Commission consider ways to provide continuity for demand response opportunities across phases. Although the OCA suspects EDCs will offer more integrated EE/DR programming in Phase V, it recommends that EDCs report cost-effectiveness separately for EE and DR portfolios. OCA Comments at 13.

Uplight takes a stronger position on the topic of wholesale recognition and disagrees with the SWE and Commission's study design choice to model the Demand Resource (Shadow DR) pathway. Uplight points out that while the wholesale C&I DR market is robust, the residential DR market is largely non-existent in Pennsylvania and that allowing EDCs to bid their DR resources into the PJM market would alleviate issues around event dispatch and that revenues from PJM could be used to directly offset cost recovery. Uplight remarks that EDCs could also pursue Price Responsive Demand and notes that electric utilities in New Jersey have been directed to bid their demand response resources into the PJM Base Residual Auction. Uplight Comments at 10.

II. Daily Load-Shifting Program Design

Several stakeholders raised concerns about the daily load-shifting design modeled by the SWE in the DR Potential Study and expressed a preference for event-based DR programming. PPL objects to the daily load-shifting design because it perceives the framework as unproven and the associated potential as highly speculative. PPL Comments at 10. PECO also characterizes the daily load-shifting design as unproven and worries about deploying a new framework at scale given stringent regulatory requirements of Act 129. PECO Comments at 4.

Advanced Energy United recommends the Commission design a program including both a daily dispatch program and an event-based program. For the event-based program, Advanced Energy United recommends a trigger based on forecasted demand for the day (e.g., 92%). Given the discussion from the 2026 TRM Order and the history of DR programs in Act 129, Advanced Energy United recommends no cap or an appropriately high ceiling (e.g., 60 events per season) the total events and total event hours. Advanced Energy United suggests that the capacity value of this event-based model would not need to be de-rated given the high expected values for the 5CP and ELCC metrics identified in the DR Potential Study. Finally, Advanced Energy United discounts the administrative complexity of forecast-based triggers because response can be easily automated; they state that complexity is not a justifiable reason for overlooking the value of needs-based event triggers in DR program design. Advanced Energy United Comments at 8. KEEA supports both daily and event-driven DR strategies, asserting a more modern approach to DR includes optimizing thermostats on a daily basis and calling events to provide additional relief when the grid is most strained. KEEA Comments at 8. EnergyHub agrees with Advanced Energy United's recommendation that the Commission employ an event-based program dispatched on the basis of a projected peak demand threshold. EnergyHub maintains that this design would

ensure that resources are available when needed and result in higher kW/device reductions. EnergyHub Reply Comments at 2.

Oracle expresses strong general support for the reintroduction of DR programs into Phase V and recommends the Commission expand the Phase V peak demand reduction framework to allow for event-based DR programs in addition to the proposed daily load-shifting programs. Oracle comments that expanding Phase V to also include event-based DR will provide more opportunities for peak reduction and increase EDC flexibility for program design. Oracle Comments at 3.

PECO comments that daily load-shifting reduces the incentive to participate relative to event-based DR because of how often participants must curtail load. PECO also posits that daily load-shifting will deliver lower savings per-customer than an event-based design. PECO Comments at 7-9. EnergyHub agrees with PECO that the Final Implementation Order should allow for event-based DR resources to provide eligible demand reduction in addition to daily load shifting measures. EnergyHub asserts that event-based DR is a proven method that will ensure targets are met and better address the state's urgent peak load issue. EnergyHub Reply Comments at 2.

Uplight recommends against the daily dispatch design, stating it may result in calling resources when they are not needed and leading to customer fatigue that will diminish reductions on days that the grid is stressed. Uplight submits that a daily dispatch construct would lead to lower per-participant kW impacts and less effect on capacity prices. Uplight also advises that the daily load-shifting model is most valuable when customers are enrolled in TOU rates and notes that the EDCs have low enrollment in TOU rates. Uplight Comments at 10.

OCA sympathizes with the EDCs' concerns over the modeling of daily load shifting programs to develop the proposed Phase V peak demand reduction targets due to the limited examples of daily load shifting programs in other jurisdictions and uncertainty in customers' willingness to participate. OCA encourages the Commission to promote the development of daily load shifting programs on a pilot basis first to test key criteria before implementing them on a larger scale. OCA respectfully requests that the Commission allow EDCs flexibility to offer both daily load shifting and event-based demand response programs in Phase V. OCA Reply Comments at 3.

FirstEnergy disagrees with parties who suggest the Phase V DR framework should be expanded to support traditional event-based DR programs. FirstEnergy expresses its desire not to interfere with or compete with the PJM market and cites the DR Potential Study finding that the daily dispatch mechanism is the clearest pathway for Act 129 programs to provide incremental peak load reductions that complement rather than compete with existing PJM emergency DR offerings. FirstEnergy appreciates the flexibility in program design afforded by the common performance definition and maintains that it would be complicated, if not compromised, by expanding the Phase V Act 129 DR framework to support traditional event-based programs. FirstEnergy Comments at 14.

III. Offering-Specific Input

PECO suggests that each load shifting measure modeled in the DR Potential Study presents significant uncertainties and barriers. PECO Comments at 11. Stakeholder comments are organized by load shifting technology below and the Commission's disposition in Section B.1.b.III of this Implementation Order is similarly organized.

Advanced Energy United comments that behind-the-meter (BTM) batteries are a proven resource with significant amounts of flexibility to drive grid savings across an

expansive value stack, pointing out that many states and utilities already have, or are developing, BTM battery programs. Advanced Energy United cautions the Commission not to overinterpret the TRC Test results for battery storage in the DR Potential Study, noting resilience is not part of the TRC benefits and customers may install batteries for back-up power and view grid benefits and EDC incentives as a welcome bonus. Advanced Energy United goes on to suggest that no incremental cost should be assumed for customers who install batteries for reliability reasons, pointing out the wide range of utility incentive levels for BTM battery programs. Advanced Energy United questions the program design modeled by the SWE where EDC programs subsidize the upfront cost of batteries and suggests an alternative pay-for-performance program in which EDCs incentivize current battery owners based on their load-shifting performance. Advanced Energy United avers that this pay-for-performance model would fare much better under the TRC Test than the design modeled by the SWE in its DR Potential Study. Advanced Energy United Comments at 10.

Uplight is concerned that the TRC results for the battery storage program are due to faulty cost and benefit assumptions. Uplight submits that, since Dominion Energy proposed a Residential Battery Energy Storage Pilot with a TRC ratio of just below 1.0, a full-scale program deployed in Pennsylvania has the potential to exceed 1.0 TRC ratio. Uplight highlights the importance of allowing batteries to discharge back to the grid and not just offset existing load. Uplight contends that battery storage costs will continue to decrease over time and that TRC ratios should be measured across all programs rather than individually. Uplight Comments at 11. EnergyHub agrees with parties who support inclusion of BTM batteries as an eligible resource and highlights the DR Potential finding that battery storage would be among the lowest cost ways to achieve peak demand reduction goals. EnergyHub cites participation and MW capability metrics from battery programs in other jurisdictions and recommends that the Commission approve or direct

the EDCs to begin developing such programs ahead of the Phase VI cycle. EnergyHub Reply Comments at 6.

FirstEnergy expresses concerns regarding the viability of the C&I Load Shifting program; they question whether the enrollment assumptions based on California data are applicable for Pennsylvania given the differences in industry, weather patterns, retail electric prices, customer opinions, and other factors. FirstEnergy suggests that C&I Load Shifting program implementations rely on energy storage so that customers can maintain normal business operations, but the storage costs were not factored into the potential study modeling. FirstEnergy questions the willingness of certain industry segments to curtail energy use daily without energy storage due to the impact on their primary business operations or employee comfort at the incentive levels modeled by the SWE. FirstEnergy Comments at 20.

Advanced Energy United comments that C&I Load Shifting programs have proven successful in reducing capacity costs in several northeast states including Connecticut, Massachusetts, Rhode Island, New Hampshire, and New York; they point out that the Connected Solutions Program in Massachusetts produces a little over 1 MW per participant in load reduction. Advanced Energy United supports the performance-based incentive structure modeled by the SWE because some customers may not be able to produce load reductions in every single dispatch hour. A "pay-for-performance" model ensures that ratepayers are not paying for something they are not receiving and that participants who provide significant value to the system are not discouraged from participating. Advanced Energy United Comments at 9. FirstEnergy responds that these are traditional event-based programs that are not in alignment with the daily load-shifting program design adopted by the Commission. FirstEnergy Reply Comments at 11-12. FirstEnergy also speculates that the C&I Load Shifting program may interfere or compete with the PJM market through potential customer confusion, reduced customer

participation, and uncertain load impacts. FirstEnergy underscores that many C&I customers have direct access to the PJM market and reiterates its recommendation that the C&I Load Shifting Program should be excluded from the calculation of the proposed peak demand reduction targets to not interfere or compete with the PJM market. FirstEnergy Reply Comments at 15.

FirstEnergy believes that an EV Managed Charging program is the most viable of the daily load shifting programs presented but asserts that the potential is significantly overstated. FirstEnergy points out that the DR Potential Study relies on forecasts for EVs that are over 400% of what are currently registered in the Company's service territory; they compare PennDOT Battery Electric Vehicle (BEV) registrations from 2024 to the Potential Study forecast for the first program year of Phase V. FirstEnergy also highlights the uncertainty regarding Medium-Heavy Duty Electric Vehicle (MHDEV), given changing federal policies, tariffs, and other factors. FirstEnergy recommends revising the DR Potential Study projections to align with the current count of BEV registrations and that the SWE lower the future forecast to better recognize the implications of changing federal policies and tax credits on customer adoption. FirstEnergy Comments at 22.

Advanced Energy United supports including both active and passive EV managed charging as an eligible resource, averring that the assumptions in the DR Potential Study are generally reasonable. Advanced Energy United encourages the Commission to include EV Managed Charging in Phase V even though the TRC ratios were marginal for some EDCs because managed charging programs can drive significant locational benefits by managing and avoiding localized distribution system peaks. Advanced Energy United recalls the EDC opposition in the 2026 TRC Test Order to developing more granular

temporal or locational avoided distribution costs.[68] Given the EDC concerns about uncertain benefits and the potential for inaccuracy, Advanced Energy United suggests that EDCs develop managed charging programs to target bulk power system reductions and benefits for Phase V, but work concurrently to understand the value of more localized use cases and value streams in preparation for a potential Phase VI. Advanced Energy United Comments at 9. EnergyHub encourages inclusion of EV managed charging in Phase V program designs; suggesting that active managed charging will be critical to manage distribution system impacts of incoming EV load. EnergyHub Reply Comments at 5.

Uplight objects to the SWE modeling zero customer compensation for the connected thermostat offering. Uplight advises that participating customers in thermostat DR programs typically receive $50 to $100 per year and worry about the diminished customer benefit of a design in which customers don't receive payments for their contributions. Uplight Comments at 10. Advanced Energy United believes that the per-device kW savings assumed by the SWE for thermostat optimization are understated based on its review of ex post evaluations of summer peak shaving programs and lists several examples. Advanced Energy United Comments at 3-4.

FirstEnergy also criticizes the SWE's modeling assumptions for the Connected Thermostat Optimization measure in the DR Potential Study and finds the enrollment assumptions highly questionable. FirstEnergy raises concerns about customer fatigue and overrides of thermostat settings lowering peak demand reductions. FirstEnergy points out the novelty of winter DR in Pennsylvania and the Company's reluctance to rely on this measure for compliance with Act 129 targets. FirstEnergy Comments at 21. FirstEnergy recommends the SWE update the DR Potential Study analysis to include a

[68] *See 2026 TRC Test Final Order* at pages 42–43.

70% performance factor to mitigate the uncertainties with customer participation, opt-outs, and load impacts. FirstEnergy Comments at 25.

EnergyHub agrees with commenters that daily thermostat optimization is relatively unproven as a demand response program design, but underscores this as an opportunity for Pennsylvania to lead in innovation. EnergyHub describes its national experience delivering thermostat DR programs and suggests daily load-shifting be explored in addition to event-based DR on a pilot basis. They point out that enrollment friction is a persistent key barrier to scale, and as such, there are many more devices that could potentially deliver value to the grid than enroll in utility programs. EnergyHub states that many customers sign up for energy management features on their device but not their utility's demand response program and maintains that engaging these customers through a daily optimization program design could significantly increase demand response potential. However, they recommend the Commission collect more data on participation, opt-out rates, and per-device savings, and customer satisfaction before mandating it as the program design for Phase V. EnergyHub Reply Comments at 5.

NRG supports the SWE's analysis of connected thermostat DR potential and points out that smart thermostat rebates offered through EDC EE&C plans provide the necessary support for getting this technology into customer homes at scale. NRG points out that smart thermostat technology allows for automated adjustments either through the device or a smart phone app. NRG provides an overview of the thermostat optimization offering it provides retail electric customers in Texas and points out the potential value to the Electric Generation Supplier (EGS) in the form of lower capacity and transmission costs. NRG points out that, since the EGSs are responsible for their customers' energy, capacity, and transmission costs, the cost reductions from peak load management via smart thermostats lead to shared savings or a lower retail offer to the end use customer. NRG characterizes smart thermostats incentivized for only energy efficiency as a "missed

opportunity" and recommends that the load-serving entities responsible for energy, capacity, and transmission costs have the right to dispatch devices subsidized by EE&C programs. Finally, NRG acknowledges that its Home Base Essentials product is not the only market solution available but points out that one of the many benefits of relying on the competitive market to deliver Virtual Power Plant solutions is that competitors will begin to participate in utility programs and offer unique solutions to acquire customers and market share. NRG Comments at 9-12.

PPL has concerns about NRG's proposal and suggests that NRG appears to overlook Act 129's requirements surrounding the use and contracting of CSPs to implement the EE&C plans. While PPL supports efforts to explore the use of smart thermostat VPP programs, they point out that NRG's proposal does not appear to contemplate the EGSs becoming registered CSPs with the Commission. PPL Reply Comments at 9. FirstEnergy submits that the NRG proposal aligns with traditional event-based programs and not the daily load-shifting design recommended by the SWE and adopted in the Tentative Implementation Order. FirstEnergy Reply Comments at 12.

The Low Income Advocates oppose NRG's recommendation that EGSs be allowed to market smart thermostats through Act 129 programming and that they should be allowed to remotely adjust customers' smart thermostats during peak load events. They describe misgivings regarding EGS marketing and pricing and worry about EGSs gaining a foothold within Act 129 DR. While the Low Income Advocates are generally supportive of smart thermostat DR in Phase V, they suggest such a program should only be offered and administered by the EDCs so that customers have access to the regulatory protections and dispute processes available through the Commission. Low Income Advocates Reply Comments at 14.

Advanced Energy United also suggests that the role of EGSs was not fully considered in the DR Potential Study, recommending that the Commission consider how EGSs can aid in the deployment of smart thermostats to support the DR programs. Advanced Energy United asserts that EGSs service a significant portion of the load in Pennsylvania and submits that they can leverage their customer relationships to engage participants in DR programs. In support of this position, Advanced Energy United cites a recent decision by the Public Utilities Commission of Ohio (PUCO) that ordered American Electric Power's (AEP) smart thermostat programs be co-optimized with a customer's competitive retail supplier. Advanced Energy United notes that PUCO's order requires that suppliers be allowed to market smart thermostat devices and provide device rebates as part of retail offerings, and to exercise dispatch rights to obtain energy and capacity and transmission cost reductions. Advanced Energy United recommends the Commission consider the PUCO example of leveraging the competitive market to achieve greater load shifting and alleges that competition to deliver results drives the innovation required to reach and engage customers to participate in these programs. Advanced Energy United Comments at 12.

Renew Home describes Connected Thermostat Optimization as "*the concept of making small, often imperceptible adjustments that result in large load reductions when aggregated*" and suggests that hundreds of thousands of customers participating in Connected Thermostat Optimization will have a larger impact than fewer customers participating in event-based demand response programs. However, Renew Home believes the RAP scenario of the DR Potential Study underestimates the existing connected thermostat potential and overestimates the cost. Renew Home suggests that the acquisition cost for Connected Thermostat Optimization should be closer to $150/kW-year not $200/kW-year as modeled by the SWE. Additionally, they suggest that with personalization and customization, per-user impacts could be higher than the

summer and winter kW impacts estimated by the SWE in the DR Potential Study. Renew Home Reply Comments at 2.

IV. Additional Demand Response Strategies

Oracle remarks that the DR Potential Study did not consider Behavioral Demand Response (BDR) and thus limited the potential benefits of DR to customers who already have or can adopt a smart thermostat or other utility-controlled device. Oracle encourages the Commission to consider the use of behavior-based demand response options, as these programs have proven successful in Pennsylvania and can reach additional customers beyond those who adopt thermostats or other devices. Oracle also summarizes how BDR programs work and point out the robustness of the measured impacts due to the randomized control trial delivery model. As a point of comparison, Oracle notes that a recent New York potential study estimated 500 MW of summer demand reduction potential and 200 MW of winter demand reduction potential from BDR. To broaden participation and provide more options for demand reduction, Oracle recommends considering behavior-based programs, whether geared towards events or daily shifting, alongside device-based programs. Oracle Comments at 5. PPL supports Oracle's proposal to expand access to demand reduction programs for all residential customers by including BDR in addition to device control-based programs. PPL Reply Comments at 8.

KEEA also expresses support for BDR programs, noting they have proven successful in Pennsylvania and can reach additional customers beyond those who adopt thermostats or other devices. KEEA asserts that behavior-based daily load shifting programs are available in other states and supports their inclusion alongside device-based programs to broaden participation options. KEEA also recommends a pathway to providing geo-targeted distribution system relief given the growing need for investment in distribution infrastructure. KEEA suggests designing programs to target reductions in

local peak demand, helping avoid or defer costly distribution system upgrades, and asserts that planning for this dual benefit from the outset can enhance long-term grid reliability and cost-effectiveness. KEEA Comments at 8-9.

NEEP also supports the inclusion of BDR and avers that, when aggregated, large appliances can change demand and load on the grid as needed. NEEP points out appliance-based programs can complement time-varying price signals and lead to lower customer bills. NEEP comments that there are studies that allow for a side-by-side breakdown of residential energy usage by appliance to help program administrators make more informed decisions about which appliances to target. NEEP highlights that behavioral programs can be applied generally to reduce consumption in traditional home energy reports or use real time data feedback to lower peak demand in certain hours. NEEP Comments at 6.

PECO recommends that the Commission recognize TOU rates as a standalone EE&C measure and permit customers on TOU rates to participate in Act 129 load shifting programs. PECO emphasizes that TOU rates are one of the most prevalent approaches nationwide to drive daily load shifting and believes EDCs should have the flexibility to propose Phase V programs that incentivize enrollment on a TOU rate as a load shifting strategy. PECO suggests that Act 129 incentives could include general customer education, targeted behavioral programming, or a monetary incentive; they point out each of these strategies' use in Phase IV to generate energy savings. PECO also requests the flexibility to include customers that are already enrolled on a TOU rate in Act 129 load shifting programs such as EV Managed Charging. PECO Comments at 16. The Clean Energy Advocates also recommend including TOU rates and posit that, while PECO has offered an excellent TOU rate for some time, they have not promoted it well and it remains underutilized. The Clean Energy Advocates believe TOU rates offer significant potential benefits to both individual customers and to the grid generally.

Clean Energy Advocates Comments at 3. Oracle supports the comments of PECO and others noting that TOU rates are well-suited to provide the kind of daily load shifting contemplated by the DR Potential Study. They agree that peak demand reductions from TOU rates should be able to be counted towards demand reduction goals. Oracle Reply Comments at 3.

Uplight agrees with PECO that TOU rates should be a qualifying measure for achieving Phase V peak demand reduction targets and that customers on a TOU rate should be eligible to participate in other Phase V programs. Uplight emphasizes that TOU enrollment in Pennsylvania is limited despite most of the fixed costs of TOU deployment (installing smart meters, updating billing systems, getting tariffs approved, updating EDC webpages etc.) having already been incurred and avers that the incremental costs for adding more customers to these rates will be relatively low. Uplight introduces the concept of the "Demand Stack" and suggests that aligning energy efficiency, time-of-use rates, and demand response with a cohesive design creates a better customer experience, increases enrollment, and lowers acquisition costs. Uplight maintains that the grid does not care about silos of energy efficiency, demand response, and TOU – only that peak demand is reduced at the right times and that optimal stacking can only be achieved if TOU rates are included in Phase V programming. Uplight Reply Comments at 6.

V. Treatment of Outside Funding and Tax Credits

As discussed in Section A.1 of this Implementation Order, stakeholders questioned the SWE's assumptions around the availability of outside funding and tax credits and the associated implications for acquisition costs and achievable potential. PPL recommends not basing the Commission's savings targets on any assumptions that IRA and other external funding sources will be available in Phase V. PPL Comments at 13.

b. Disposition

I. General Study Process and Methods

The Commission agrees with EAP that opportunities were limited for upfront input from the EDCs and other stakeholders regarding DR Potential Study methodology. The process for Phase V planning was consistent with prior phases and designed to prevent an unwieldy process in which the SWE's work plan is subject to stakeholder suggestions. The purpose of the EE and DR potential studies is to provide the Commission with the technical analysis needed to determine if cost-effective potential remains and to inform proposed targets. The studies should not be collaborative with the EDCs, their CSPs, or other stakeholders. As EAP points out in reply comments to stakeholder requests for increased coordination of program delivery, collaboration and transparency have non-trivial implications on budgets and timelines. The Commission is skeptical that increased stakeholder input on study methods would improve the accuracy of the potential studies. In jurisdictions where potential study methods are more collaborative, parties tend to focus on the methodological points that favor their preferred policy outcomes. However, EAP's request for a more formal process for stakeholders to review and comment on the potential studies prior to entry of a Tentative Implementation Order is reasonable. The Commission will explore opportunities for enhanced review when developing the planning timeline for Phase VI of Act 129.

The Commission rejects PPL's suggestion that the DR Potential Study outputs are flawed due to a different economic screening approach for EE and DR. Since energy efficiency cost-effectiveness screening occurs at the measure level, no administrative or overhead costs are included in the calculation; it is simply a comparison of the technology's incremental cost to its expected savings. Unlike EE, DR cost-effectiveness screening occurs at the offering level and includes program administration costs. Contrary to PPL's comments, the decision to set the DR cost-effectiveness screening threshold at 0.8 results in a more equitable comparison across studies rather than a biased

one. PPL's assertion would unfairly bias the study outcomes in favor of energy efficiency because DR offerings would be screened at a TRC ratio of 1.0 *inclusive* of administrative and overhead costs while energy efficiency would be screened at the same TRC ratio of 1.0 *but exclude* administrative costs.

The Commission agrees with PPL that the Act 129 peak demand reduction framework has been inconsistent across phases and acknowledges that a new design for Phase V would require EDCs who elect to include DR in their EE&C plans to create and launch programs from scratch. However, the Commission disagrees that this justifies eliminating peak demand reduction targets. The proposed five-year phase length allows EDCs time to stand up new offerings with ample time to harvest benefits from the program once it reaches scale. The Commission and PPL are aligned regarding RAP versus MAP as the newness of the Phase V DR framework is a key reason the Commission chose to base proposed targets on the SWE's estimates of Realistic Achievable Potential rather than Maximum Achievable Potential.

The comments of Advanced Energy United, the Clean Energy Advocates, and KEEA are a useful contrast to the positions presented by EAP and PPL. Their comments are generally supportive of the DR Potential Study approach and outputs, although each has specific suggestions discussed below. OCA offers a helpful perspective on the topic of wholesale recognition pathways. The Commission agrees with the challenges outlined by OCA regarding formal recognition at PJM and believes the approach modeled by the SWE is more conducive to the continuity that the OCA requests. We reject OCA's suggestions regarding cost-effectiveness determination. The level at which to report cost-effectiveness was already addressed in the 2026 TRC Test Order. As Phase V does not include a separate dispatchable DR goal, the determination of cost-effectiveness shall occur at the EE&C plan level.

The Commission thoroughly examined each of Uplight's points regarding wholesale recognition during the DR Potential Study planning process and reached different conclusions. The SWE's discussion of these matters in Section 2.2 of the DR Potential Study outlines current thinking on the matter. Section 2.2.1 of the DR Potential Study contains a useful summary of the challenges with the Price Responsive Demand and why the Commission does not endorse EDCs pursuing that specific mechanism for wholesale recognition.

II. Daily Load-Shifting Program Design

It is challenging to separate stakeholder comments on the SWE DR Potential Study from input on the proposed targets and measurement approach. Since the DR Potential Study recommended the daily load-shifting design and based the modeled MW potential and costs on a daily load-shifting design, the Commission elects to address those comments in this section. Regarding the assertion that daily load-shifting program is unproven and speculative, the Commission does not disagree that daily DR is a less common strategy than event-based DR. However, we reject the suggestion that the modeled potential is speculative or somehow unattainable. The SWE's DR Potential Study includes numerous conservative assumptions regarding enrollment, ramp up trajectory, load impacts, and programmatic costs. The Commission and SWE had extensive discussions regarding the daily load-shifting design during the early stages of study, and we maintain that the daily design is the best option for Act 129 to complement, rather than compete with, the wholesale DR mechanisms offered by PJM.

The Commission agrees with Uplight that a daily dispatch design will lead to lower per-participant kW impacts than an event-based design. Tradeoffs between frequency and aggressiveness were a central theme of the DR Potential Study. The Commission disagrees with Uplight that daily load-shifting will have less impact on capacity prices. Uplight appears to base their position solely on per-participant impacts

during events, ignoring the number of participants and how load reductions impact peak load forecasts and capacity obligations.

The Commission recognizes that event-based DR is more familiar to the EDCs and their CSPs than daily load-shifting and that flexibility regarding event frequency would enable additional peak demand reduction opportunities. We also agree with stakeholder comments and reply comments that the grid is more constrained on some days than others but note that, as intermittent renewable generation becomes more prevalent in the Mid-Atlantic, gross demand will likely become a less important predictor of grid constraint. The Phase V timeline does not allow the SWE to model alternative event-based designs and we are not persuaded to expand Phase V DR targets to include an event-based component. However, if an EDC wishes to shift load more aggressively on days or hours with greater perceived value to the bulk power system or their own distribution network, that tactic would increase the average performance according to the measurement approach described in Section B.7 of this Implementation Order.

III. Offering-Specific Input

The alternative "bring your own battery" program design suggested by Advanced Energy United illustrates the flexibility of BTM storage as a grid resource and EDC program design tool. The SWE selected the "upfront subsidy" model for the DR Potential Study based on the limited saturation of battery storage in the Commonwealth to date. The Commission agrees with Advanced Energy United that a pay-for-performance model would likely lead to a higher TRC ratio. However, we predict a lower aggregate load reduction will be lower without Act 129 support to overcome upfront capital and installation costs.

The Commission does not find Uplight's misgivings about the benefit-cost analysis of BTM battery persuasive. The avoided cost assumptions for Phase V of Act

129 were thoroughly vetted in the 2026 TRC Test Order. The SWE's battery cost assumptions were based on industry standard sources and decline steadily over the study horizon. We agree with Uplight that batteries should be able to discharge back to the grid to realize full value and confirmed with the SWE that this is how the program was modeled in the DR Potential Study. Ultimately, battery storage potential did not affect the proposed demand reduction goals since it did not meet the TRC threshold of 0.8. That does not in any way limit EDC planners from including either type of BTM battery storage offering in their Phase V EE&C plans. We agree with EnergyHub that battery storage is a growing opportunity for peak demand management but defer to the EDCs on deciding whether to include a BTM battery program, measure, or pilot in Phase V.

The Commission finds FirstEnergy's concerns regarding the C&I Load Shifting program speculative and unfounded. The DR Potential Study included multiple conservation assumptions in adapting California data to Pennsylvania. The non-residential sectors of the FirstEnergy EDC have a summer peak of approximately 6,000 MW and a winter peak of approximately 5,500 MW. The Phase V RAP for a FirstEnergy C&I Load Shifting program is under 50 MW, or less than one percent of the sector's peak load contribution. While a daily load-shifting program may not be suitable for some non-residential accounts, the EDCs would only need to secure modest reductions from a fraction of the non-residential customer base to acquire the modeled RAP. The examples provided by Advanced Energy United regarding the success of similar programs in northeast states dispel the notion that this program design is unproven and has not been tested outside of California. Advanced Energy United raises an important consideration for daily load-shifting programs by highlighting that some participants may not perform every day of the summer and winter season. The Commission emphasizes that EDC average performance across all days in the season is the goal of the program. Invariably, there will be diversity in available load and individual performance across enrolled participants that evens out across the season. We

maintain that the pay-for-performance design and 85% performance factor included by the SWE in its DR Potential Study adequately address this issue.

The Commission agrees with Advanced Energy United that EV Managed Charging could provide locational benefits on EDC distribution systems, but notes that Act 129 peak demand reduction targets are more focused on the bulk power system. The Commission does not choose to include any specific EE&C measure or program via this Implementation Order. Those decisions belong to the EDCs and their stakeholders as they design and vet Phase V EE&C plans. We encourage EDCs to explore localized use cases and value streams as part of EE&C plan delivery but will not impose any specific requirements to do so in this Order.

The Commission agrees with FirstEnergy that EV adoption faces new headwinds under the current federal administration. The comparison of 2024 registrations to forecasted adoption in 2026 is misleading for technology experiencing exponential growth. FirstEnergy points out that the DR Potential Study forecast is 400% higher than current registration levels but fails to note that the S&P Global EV forecast PJM used in its 2024 Load Forecast Report shows a 400% rate of growth between 2024 and 2026 for the FirstEnergy zones (Allegheny Power Systems, American Transmission Systems, Inc., Met-Ed, and Penelec). Based on the concerns raised by FirstEnergy and the Commission's desire to understand the DR Potential Study results' sensitivity to the underlying EV adoption forecast, we directed the SWE to re-estimate EV Managed Charging Potential using the EV forecast[69] underpinning PJM's 2025 Long-Term Load Forecast.[70] Table 16 shows the results. Basing the EV Managed Charging model on PJM's 2025 EV forecast lowers Phase V RAP by approximately 4 MW. This represents

[69] *See* https://www.pjm.com/-/media/DotCom/planning/res-adeq/load-forecast/electric-vehicles.xlsx
[70] *See* https://www.pjm.com/-/media/DotCom/library/reports-notices/load-forecast/2025-load-report.pdf

a 22% reduction in summer potential and a 25% reduction in winter potential statewide for the EV Managed Charging offering. Because EV Managed Charging accounts for a limited share of the overall potential, this translates to a 2.5% reduction in total DR potential and less than one percent of the Commission's proposed Phase V peak demand reduction targets.

Table 16: EV Managed Charging Sensitivity Analysis

Summer RAP - DRMPS Report (2024 PJM EV Forecast)					
Year	PECO	PPL	Duquesne	FirstEnergy	Statewide
PY18	2.6	1.4	1.1	4.1	9.2
PY19	3.6	2.0	1.6	5.8	13.0
PY20	4.9	2.7	2.1	7.9	17.6
PY21	6.3	3.6	2.7	10.3	22.8
PY22	7.8	4.4	3.4	12.7	28.3
Average	5.0	2.8	2.2	8.1	18.2

Winter RAP - DRMPS Report (2024 PJM EV Forecast)					
Year	PECO	PPL	Duquesne	FirstEnergy	Statewide
PY18	2.4	1.4	1.0	4.0	8.8
PY19	3.3	1.9	1.4	5.5	12.1
PY20	4.4	2.5	1.9	7.4	16.1
PY21	5.5	3.1	2.4	9.3	20.4
PY22	6.8	3.9	2.9	11.5	25.1
Average	4.5	2.5	1.9	7.5	16.5

Summer RAP Sensitivity (2025 PJM EV Forecast)					
Year	PECO	PPL	Duquesne	FirstEnergy	Statewide
PY18	3.0	1.0	1.0	2.4	7.3
PY19	4.1	1.4	1.4	3.4	10.3
PY20	5.5	1.9	1.8	4.6	13.8
PY21	7.1	2.4	2.3	5.9	17.7
PY22	8.7	3.0	2.9	7.3	22.0
Average	5.7	1.9	1.9	4.7	14.2
MW difference	0.6	-0.9	-0.3	-3.4	-4.0
% difference (EV)	13%	-32%	-14%	-42%	-22%
Phase V Potential (DRMPS)	44.1	36.3	15.5	60.8	156.8
% difference (all DR)	1.5%	-2.5%	-1.9%	-5.6%	-2.5%

Winter RAP Sensitivity (2025 PJM EV Forecast)					
Year	PECO	PPL	Duquesne	FirstEnergy	Statewide
PY18	2.7	0.9	0.9	2.2	6.7
PY19	3.7	1.2	1.2	3.1	9.2
PY20	4.8	1.6	1.6	4.1	12.1
PY21	6.0	2.0	2.0	5.2	15.2
PY22	7.4	2.5	2.4	6.3	18.7
Average	4.9	1.7	1.6	4.2	12.4
MW difference	0.4	-0.9	-0.3	-3.4	-4.1
% difference (EV)	9%	-34%	-16%	-45%	-25%
Phase V Potential (DRMPS)	39.0	48.0	13.1	69.4	169.5
% difference (all DR)	1.1%	-1.8%	-2.3%	-4.8%	-2.4%

FirstEnergy shows the largest reduction in DR potential at approximately 3.4 MW, or five percent, of the modeled Phase V potential. The Commission is not persuaded to adjust FirstEnergy's peak demand reduction target over this issue because the reduction is less than 20% of the difference between FirstEnergy's estimated Phase V potential of 65.1 MW[71] and DR contribution to FirstEnergy's proposed Phase V target of 47.2 MW. The difference between the 65.1 MW in the SWE DR Potential Study and the 47.2 MW value is a function of budget allocation. Reaching the 65.1 MW of Phase V potential

[71] *See DR Potential Study* at page 10.

modeled by the SWE would require 13.8% of FirstEnergy's Phase V budget. Since the proposed targets assumed a ten percent budget allocation of funding to DR, ample DR potential remains in FirstEnergy territory after accounting for the lower EV adoption projections in PJM's 2025 load forecast.

For this same reason, the Commission rejects FirstEnergy's suggestion to derate connected thermostat potential by 30% based on perceived uncertainties. Since the Phase V peak demand reduction targets reflect only 72% of FirstEnergy's modeled Phase V daily load-shifting potential (10% / 13.8%), the requested derate is effectively already in place. Given its relationship with the ubiquitous Google Nest connected thermostat, we find that reply comments from Renew Home provide a useful contrast to the EDC positions regarding the DR Potential Study characterization of Connected Thermostat Optimization. Renew Home maintains that, if anything, there is more available thermostat optimization potential at a lower cost than is modeled in the DR Potential Study. Their reply comments help reinforce our position that stakeholder misgivings about daily thermostat optimization are exaggerated.

The Commission values the comments from NRG and Advanced Energy United regarding the potential role of EGSs as a provider of Connected Thermostat Optimization services. The SWE's DR Potential assumed that EDCs would rely on thermostat manufacturers to deliver optimization services, but these comments emphasize that there are multiple types of vendors in the thermostat optimization space well-positioned to partner with EDCs and customers in Phase V to deliver summer and winter peak demand reductions. The Commission encourages the EDCs to explore partnerships with EGSs as part of their Phase V EE&C plan development process. As suggested by PPL in reply comments, any EGS wishing to implement an Act 129 program must register as a CSP. Regarding the Low Income Advocates' concerns over EGS business practices, we submit that an EGS registered as an Act 129 CSP would be subject to the same guidelines and

oversight as any other Act 129 CSP. Section G of this Implementation Order provides additional guidance regarding the role of CSPs in Phase V of Act 129.

The Commission agrees with Uplight that the Connected Thermostat Optimization offering modeled by the SWE is a departure from the typical thermostat DR programs operated by Uplight and other CSPs. The financial structure modeled by the SWE does not prohibit EDCs from incentivizing participants into a more traditional program design than SWE's model. The Commission does not find Advanced Energy United's position persuasive regarding the per-device impacts assumed by the SWE. Each of the programs and studies referenced are event-based DR programs that rely on aggressive setbacks a few times per summer. The daily optimization design modeled by the SWE is less aggressive but occurs more frequently. The lower per-device impacts are appropriate given the program design modeled by the SWE, and necessary to mitigate customer fatigue.

IV. Additional Demand Response Strategies

Stakeholders should not interpret the exclusion of BDR, TOU rates, or any other measure offering from the DR Potential Study as the Commission's position on measure eligibility. The Phase IV Demand Response Potential included a detailed analysis of BDR and found 55.2 MW of cost-effective summer DR potential statewide.[72] The SWE excluded BDR from the Phase V DR Potential Study because of perceived challenges with operating the program daily, but this omission in no way limits an EDC from including BDR in its EE&C plan. Stakeholders provided extensive comments on the

[72] *See Pennsylvania Act 129 Phase IV Demand Response Potential Study*. Released March 2, 2020, at Docket No. M-2020-3015229. Available online at: https://www.puc.pa.gov/pcdocs/1656475.pdf. Pages 61-66.

benefits of BDR, so we encourage the EDCs to review those comments when developing their Phase V EE&C plans.

While the DR Potential Study was conducted using "territory-wide" avoided costs consistent with the 2026 TRC Test Order, rather than at a geospatial level that considers varying distribution benefits across each EDC service territory, the Commission agrees with KEEA that locational targeting can amplify the value of EE&C programs.

The issue of TOU rates raised by PECO and the Clean Energy Advocates is slightly more complex because an EDC (or EGS) can offer a TOU rate to its retail customers irrespective of the contents of its Act 129 EE&C plan. PECO's request to allow EDCs to "incentivize enrollment on a TOU rate" articulates a key distinction on this matter. The Commission opposes simply claiming the load shifting benefits of a TOU rate that an EDC happens to offer its customers—however, we support including TOU rates as an EE&C plan component if, as suggested by PECO, an EDC were to leverage its Phase V EE&C plan to provide customer education, targeted behavioral programming, or monetary incentives to accelerate TOU adoption and bolster load impacts. In a recent statement on Duquesne Light's TOU Pilot Program,[73] Chairman DeFrank noted that TOU rates have had extremely limited uptake in the Commonwealth to date but may have an improved value proposition in coming years. Chaiman DeFrank also referenced his statement on this Order[74] calling on parties to explore new and creative ways to most effectively utilize the tools at our disposal and pointed to TOU rates specifically as one of the available tools to address the growing resource adequacy and energy affordability issues in the Commonwealth.

[73] *See* https://www.puc.pa.gov/pcdocs/1873929.pdf
[74] *See* https://www.puc.pa.gov/pcdocs/1866657.pdf

The Phase IV Implementation Order addressed the topic of TOU rates. In response to stakeholder comments about the opportunities to leverage smart meter deployment to reduce peak demand through price signals, the Commission pointed out the complications that arise due to the Commonwealth's competitive market for generation supply. The Phase IV Implementation Order pointed out that EDCs have little control over the proportion of customers that shop for supply or the pricing structure that electric generation suppliers offer. The Commission explained that it had directed the SWE to exclude TOU pricing from the Phase IV DR Potential Study over concerns about EDC's risk due to factors outside of their control.[75] The Commission stands by the choice to exclude TOU rates as a peak demand reduction strategy in the Phase V DR Potential Study but reiterates that the exclusion of a strategy in the Potential Study does not dictate measure eligibility. EDCs that include TOU rates in their proposed Phase V EE&C plans should clearly describe how Act 129 support will lead to improved outcomes over simply offering the rates in tariffs.

V. Treatment of Outside Funding and Tax Credits

The BTM battery storage modeling by the SWE assumed that federal tax credits for solar PV systems paired with storage would remain in place during Phase V of Act 129. While the federal tax credits for solar PV and storage have been in place much longer than IRA-funded programming, we acknowledge that it is not guaranteed that the tax credits will remain in place for Phase V of Act 129. Importantly, the BTM battery storage offering did not meet the TRC threshold for inclusion in RAP or Phase V potential; therefore, the proposed targets assumed no contribution from battery storage load-shifting programs. Alternative study assumptions with lower or removed tax credits would only lower the TRC ratio and increase the estimated acquisition cost. Since the program has no contribution to the potential estimates upon which the targets were based,

[75] *See Phase IV Final Implementation Order,* at pages 58-59.

the Commission sees no need to revisit the DR Potential Study assumption based on speculation regarding what changes may occur at the federal level. As recommended by PPL, the modeled contribution of the demand response portfolio component to Phase V peak demand reduction goals makes no assumption of the amount of outside funding.

2. Methodology Used to Set Peak Demand Reduction Targets

In Phase I, Act 129 required the Commission to set additional incremental requirements for reductions in peak demand for the 100 hours of greatest demand, or an alternative reduction approach approved by the Commission (*See* 66 Pa. C.S. § 2806.1(d)(2)). The EEPDR and DR Potential Studies each identified cost-effective potential for Phase V. The two studies produce very different levels of consumption reduction and peak demand reduction per program dollar spent. Questions related to any proposed peak reduction targets include:

- Should Phase V peak demand reduction targets be designed around DDR programs like in Phase III or EE programs like in Phase IV, or should peak demand reduction targets reflect a mix of the two, like in Phase I?
- Should the Commission set targets based on summer peak demand reductions or winter peak demand reductions? If peak demand reductions in both seasons are a priority, should the Commission establish separate targets for each season, or a single target based on the composite performance across the two seasons?
- If EE&C plans can include DR programs, what conditions determine the hours over which performance will be measured?
- During which summer(s) or winter(s) are peak demand reductions from DR programs measured for purposes of determining compliance?

For Phase V of Act 129, the Commission proposed to establish targets based on the acquisition costs modeled in the SWE's Potential Studies and the funding allocation

described in Section A.4. The SWE modeled summer and winter separately but reported peak demand reduction potential in both the EEPDR Potential Study and DR Potential Study as the average of the summer and winter potential. The Commission therefore used the same averaging method to develop the proposed peak demand reduction targets. Section B.7 of this Implementation Order provides additional details on how the Commission proposed to measure EDC compliance with Phase V peak demand reduction targets.

As suggested by the proposed ten percent budget allocation to DR in Table 9, the Commission proposed that either coincident demand reductions from EE or verified demand reductions from daily load-shifting DR programs may satisfy Phase V peak demand reduction targets. The Commission seeks to establish targets and policies that provide the EDCs with flexibility in addition to achieving the desired technical and economic outcomes. A fungible megawatt framework affords the EDCs considerable flexibility in the design of their Phase V EE&C plans. An EDC might include exclusively EE and distributed generation measures in their plan, but its mix of programs would need to prioritize load-following measures that deliver above-average kW reductions relative to kWh savings. Even with the assumed ten percent allocation to DR, the statewide ratio of target MW to target MWh was lower for the proposed Phase V targets than the Phase IV compliance targets and significantly lower than Phase I.

The Commission's rationale for the budget allocation assumptions that underpin the proposed peak demand targets were discussed in Section A.4. Stakeholders were instructed to provide comments regarding allocation of budget to the five program types in response to that section. The Commission notes that the SWE's DR Potential Study identified more daily load-shifting potential in its maximum achievable potential scenario than could be acquired with a ten percent allocation of funding to DR. However, the costs were higher, so a significant increase in the assumed allocation of budget to DR,

such as from ten percent to twenty percent, might necessitate an adjustment to the assumed acquisition cost.

a. Comments

DEP supports Phase V peak demand reduction targets that may be satisfied with either coincident demand reductions from EE or load-shifting programs so that EDCs have the flexibility to use their own judgement on how best to deploy funding. DEP would like to see each EDC deploy a program for each technology type as identified in the DR Potential Study and learn how to optimize them in preparation for (a possible) Phase VI. DEP warmly welcomes collaboration on furthering DR strategies throughout the Commonwealth and believes the time is now to become proficient in the tools for innovative program design. DEP Comments at 5. FirstEnergy disagrees and insists that requiring DR programs for each technology goes against the Commission's stated objectives in the Tentative Implementation Order regarding EDC flexibility to meet Phase V targets with either coincident demand reductions from EE or daily load-shifting programs. FirstEnergy recommends that the Commission should not require specific DR programs and should rely on the stakeholder and regulatory review process to ensure the adequacy of the EDCs' Act 129 plans and program offerings. FirstEnergy Reply Comments at 13.

FirstEnergy and PECO each take exception to the Commission's stated goal of EDC flexibility regarding how peak demand reduction targets are achieved. FirstEnergy points out that coincident demand reductions from traditional EE, solar PV, and CHP only amount to 152.3 MW of the Company's 199.3 MW peak demand reduction based on the budget allocations and acquisition costs presented in the Tentative Implementation Order. Based on this analysis, FirstEnergy concludes that it would face a 47 MW shortfall if load-shifting programs were not included in its Phase V EE&C plan. FirstEnergy Comments at 18-19.

PECO conducts a similar analysis and concludes that its Phase V peak demand reduction target cannot realistically be achieved within the allotted budget without demand response programs. Unlike FirstEnergy, the PECO analysis reallocates the ten percent DR budget proportionately to market rate EE, low-income EE, solar PV, and CHP. Because traditional EE and solar PV have a higher demand acquisition cost than DR, this alternative portfolio design returns 170.9 MW of peak demand savings, which is approximately 15% lower than PECO's proposed target of 202.4 MW. PECO Comments at 6-7.

PECO asserts that the peak demand reduction target does not afford the EDCs the necessary ramp-up time to deploy and grow an unprecedented new program. The rationale for PECO's position is twofold. The first issue is the trajectory of program expansion over the course of Phase V. PECO notes that the DR Potential Study assumes rapid growth during the early years of the phase followed by a leveling off in the second half of the phase. PECO believes the opposite is more likely and that programs would see limited expansion during the early years of Phase V, with growth concentrated in the second half of the phase. PECO's second argument is that, because Phase V begins on June 1, 2026, it is almost impossible to achieve any savings during the summer of 2026. Considering these issues, PECO recommends that the Final Implementation Order includes a ramp-up period for daily load shifting resources and directs EDCs to calculate savings based upon the average from PY20–PY22, rather than the full five-year period.

FirstEnergy also describes the challenges it sees regarding ramping up new DR programs and believes the PY18 savings projections should be reduced to recognize the time required to contract, start up, enroll customers, and implement programs. FirstEnergy avers that the DR Potential Study projections are much higher than is possible for PY18 given the need to design, market, and implement new program designs. FirstEnergy's concerns are not limited to the first year of Phase V and claims it is

uncertain that additional participation is achievable in PY19–PY22 to make up for the underperformance that is sure to occur in PY18. FirstEnergy Comments at 24.

OCA respectfully recommends the Commission revise its proposal to calculate demand reductions from load shifting as an average peak demand reduction across all of Phase V. OCA cites the ramp-up time needed for an EDC to develop the programs, properly market them, and enroll participants. OCA supports PECO's recommendation of averaging savings from PY20–PY22, rather than the full five-year period. OCA Reply Comments at 3.

Renew Home submits that, alone, it has more than 100,000 customers signed up for connected thermostat optimization statewide in Pennsylvania, ready for daily dispatches as soon as summer 2025. Renew Home notes that more than 24,000 homes have heat pumps or electric resistance heating and could participate in daily adjustments this coming heating season. Renew Home clarifies that the numbers they present will only increase with the inclusion of Ecobee and other capable thermostats. Renew Home Reply Comments at 2.

EnergyHub recognizes EDC concerns that Pennsylvania utilities do not have existing programs to build from but advises that new DR programs can be built and scaled rapidly. EnergyHub describes its services and claims they are able to launch new programs in 90 to 120 days and scale them rapidly afterwards. EnergyHub suggests that the EDCs can ensure readiness for the beginning of the Phase V cycle by issuing Requests for Information in summer 2025 and beginning the Request for Proposal (RFP) process for CSPs ahead of Commission approval of the programs. EnergyHub recommends the Commission exclude PY18 from Phase V targets for load-shifting programs as was the case in Phase III. EnergyHub Reply Comments at 4. Uplight agrees that achieving peak demand reductions in summer 2026 will be challenging and

recommends EDCs be allowed to focus on enrollment for the summer portion of PY18 and start calling events in the winter season of PY18. Uplight Reply Comments at 11.

b. Disposition

The Commission appreciates DEP's input on the key topic of satisfying Phase V peak demand reduction targets with coincident demand reductions from EE, demand response, or both. Our intent is to promote EE&C plans with a focus on peak demand reduction without being overly prescriptive in how to achieve those reductions.

The FirstEnergy analysis whereby the ten percent funding allocation to DR is simply removed from the Company's budget rather than reinvested in other types of EE&C programs is not useful for assessing EDC reliance on DR programs. It merely shows that reducing the available budget would disadvantage an EDC in meeting its compliance targets. PECO's analysis makes clear the intended point that the Company would have difficulty meeting its Phase V peak demand reduction target without including a load shifting program. The Commission does not dispute that an EDC who did not wish to include DR in its Phase V EE&C plan would need to offset that decision with portfolio design choices that prioritized coincident demand reductions. Examples of this type of choice include:

- **More aggressive promotion of CHP.** The modeled demand acquisition cost for CHP is one-quarter the cost of DR.
- **More aggressive promotion of solar PV.** Solar PV is approximately 45% more expensive than DR on a $/MW basis, but it is considerably less expensive than traditional EE and low-income EE.
- **Target EE measures that deliver above average kW reduction per kWh saved.** Demand acquisition costs range widely for EE measures. An EDC

that chooses not to include DR in its Phase V EE&C would need to prioritize HVAC and other load-following measure types over measures with high kWh-to-kW ratios.

The Commission rejects the suggestion that a ten percent assumed budget allocation to DR removes EDC choice in whether to offer DR in Phase V. We also do not suggest that meeting peak demand reduction goals without one or more load-shifting programs would be easy. EDC flexibility should not come at the expense of challenging goals. EDCs who exercise their flexibility not to include DR programming will limit their own flexibility with respect to EE measure mix because of the need to prioritize coincident demand reductions.

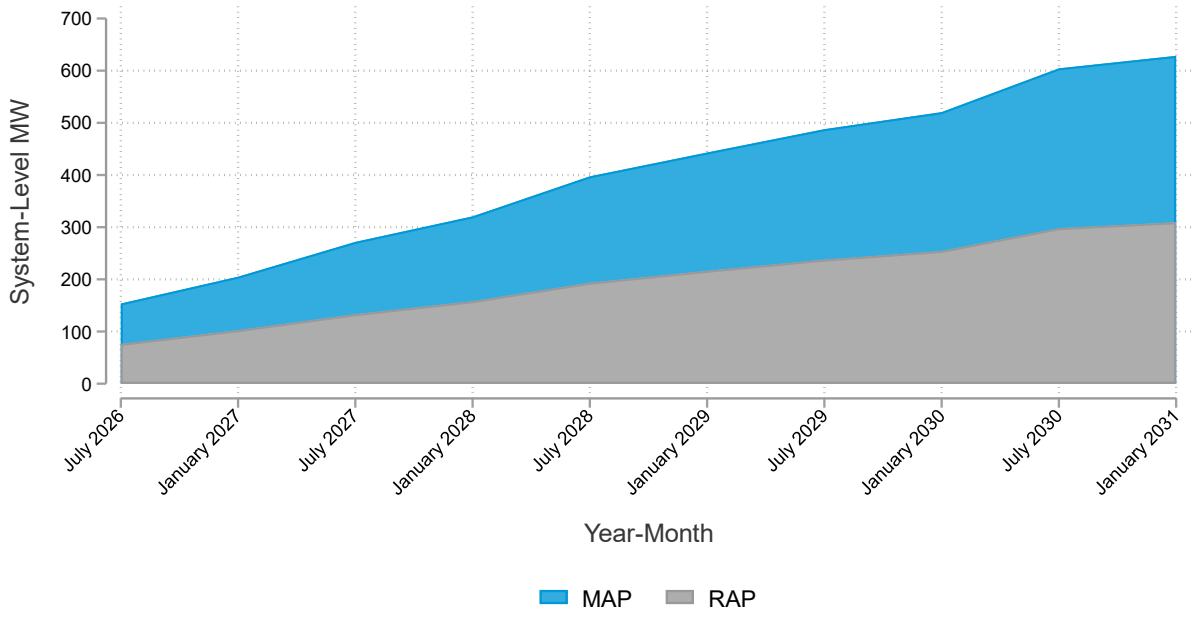
In the Tentative Implementation Order, we noted that the ratio of MWh-to-MW in the proposed Phase V goals was lower than the Phase IV ratio despite an assumed ten percent allocation to DR. Table 17 shows the calculations using the Final Phase V targets with the ratio expressed both ways. Since Phase IV demand reduction goals could only be achieved via coincident demand reductions from EE and distributed generation, and Phase V goals require fewer MW to be acquired per unit of consumption reduced, the Commission rejects the notion that Phase V goals could not also be met exclusively with traditional EE and distributed generation.

Table 17: Ratio of MWh and MW Targets—Phase IV and Phase V

Phase	Statewide MWh Target	Statewide MW Target	MWh:MW Ratio	MW:MWh Ratio
Phase IV	4,513,871	809.0	5,580	0.000179
Phase V	3,299,104	583.3	5,656	0.000177

The Commission rejects without prejudice PECO and FirstEnergy's supposition that load-shifting program growth will be slow during the initial years of Phase V. PECO provides no data or rationale for its objections to the steady growth trajectory assumed in the DR Potential Study and shown in Figure 1.[76] Reply comments from EnergyHub and Uplight on the topic are not persuasive.

Figure 1: Phase V Achievable Potential Time Series



It is also unclear why an EDC could not deliver peak load reductions in summer 2026 when Phase V EE&C plans would be developed approximately nine months earlier and when connected thermostats, a key piece of load control equipment, have already been purchased and installed through Phase III and Phase IV EE&C rebates. In fact, reply comments from Renew Home indicate that thermostat optimization could be delivered at a larger scale than the RAP scenario of the DR Potential Study in summer 2025, a full year before Phase V begins. Waiving the performance requirements in PY18

[76] *See DR Potential Study* at page 8.

and PY19 as suggested by PECO would all but guarantee slow program ramp up during a period of heightened resource adequacy concerns. By assessing performance across all five summers and winters of Phase V, EDCs are incentivized to go to market quickly or make up for slow starts via added volume in the second half of Phase V. We recommend the EDCs research vendor capabilities as part of the EE&C plan development process to better understand how quickly and at what cost they can ramp up specific offerings.

3. Baseline for Targets

Since Phase I of Act 129, the Commission has utilized the average load for the 100 hours of highest load for the period June 1, 2007, through May 31, 2008, as the reference peak load values against which to express peak demand reductions for each EDC and for the EE&C program as a whole.[77] Although now somewhat dated, the SWE maintained this same baseline when expressing Phase V reductions on a percentage basis in the EEPDR and DR Potential Studies. This convention allows for an "apples-to-apples" comparison with targets, on a percentage basis, from prior phases. The Commission proposed to continue to use the legacy peak demand values shown in Table 18 for each EDC from the period June 1, 2007, through May 31, 2008, as the consumption baseline from which to express incremental savings in Phase V.

[77] *See Phase I Implementation Order* at page 9.

Table 18: Baseline Peak Demand Values from 2007-2008 by EDC

EDC	MW
Duquesne Light	2,518
PECO	7,899
PPL	6,592
FirstEnergy	9,515
Statewide	**26,524**

a. Comments

Stakeholder feedback on the baseline peak demand values was mixed. PPL agrees with the Commission's baseline approach if the Commission chooses to maintain peak demand reduction targets for Phase V. PPL Comments at 11. The Clean Energy Advocates assert that it is unreasonable and impractical to use 17-year old data as the baseline for peak demand reduction targets and suggest adjusting baselines annually so that EDCs do not target the wrong peak. Clean Energy Advocates Comments at 4. NEEP also recommends the Commission consider updating baselines for peak demand reductions to reflect more extreme seasonal conditions. NEEP Comments at 6.

The Joint Energy Advocates state that maintaining a demand response baseline from 2008–2009 is no longer useful because it does not reflect current peak demand conditions, climate data, or consumption trends. The Joint Energy Advocates believe that relying on an outdated baseline risks misaligning DR targets and failing to provide meaningful relief to customers and the grid. Joint Energy Advocates Comments at 14.

b. Disposition

The Commission acknowledges the stakeholders' criticism of the baseline peak demand values in Table 18. The baseline values will be almost 20 years old by the time Phase V begins and these legacy values are lower than contemporary summer peak demand forecasts for the Commonwealth. We reiterate that peak load values from the 2007–2008 delivery year were not used to estimate DR potential, establish EDC targets for Phase V, or inform the peak demand performance definition. The SWE relied on PJM's 2024 Load Forecast Report and data request responses from the EDCs as the technical foundation for its potential studies. The legacy 2007–2008 values are simply a reporting convention—a common denominator against which to compare the MW targets across phases. The Commission adopts the proposed baseline values for Phase V of Act 129. Stakeholders who wish to compare Phase V peak demand reductions to a contemporary peak demand forecast should refer to Table 15 (Summer) and Table 16 of the DR Potential Study.[78]

4. Proposed Peak Demand Reduction Targets

For Phase V, the Commission proposed that each EDC's peak demand reduction target match the MW values shown in Table 19. The exact calculated MW targets based on the EDC-specific acquisition cost estimates and assumed funding allocation described previously are rounded to the nearest tenth of a MW, or 100 kW, for reporting simplicity. We reiterated that these peak demand reduction values are expressed at the system-level, so any meter-level demand reduction estimate, like the ones provided in the TRM, must be scaled by the applicable line loss factor for reporting.

[78] *See DR Potential Study* at pages 38-39.

Table 19: Proposed Peak Demand Reduction Targets, by EDC

EDC	Acquisition Cost ($/MW)	Budget	Phase V Target (MW)	Percentage of Baseline
Duquesne Light	$2,017,158	$97,729,760	48.4	1.92%
PECO	$2,111,183	$427,385,830	202.4	2.56%
PPL	$1,952,969	$307,506,880	157.5	2.39%
FirstEnergy	$1,958,878	$390,320,135	199.3	2.09%
Statewide	**$2,012,739**	**$1,222,942,605**	**607.6**	**2.29%**

We proposed assessing compliance with the peak demand reduction targets in Table 19 using an average of the EDC's gross verified summer peak reduction and winter peak demand reduction. This would allow an EDC to offset underperformance in one season by overperforming in another season. Establishing a peak demand reduction target that includes both summer and winter performance inherently indicates that both seasons are important. To ensure some balance across seasons, the Commission proposed that each EDC's EE&C plan includes a mix of measures and programs projected to acquire at least 75% of the proposed target in each season. For example, an EDC with a Phase V peak demand reduction target of 120 MW would need to file an EE&C plan projecting no less than 90 MW of summer or winter peak demand reduction. We proposed limiting this requirement to the Commission's review and approval of the EE&C plans, not subjecting the EDCs to the penalty provisions prescribed under 66 Pa. C.S. § 2806.1(f).

We proposed that at the conclusion of Phase V, in consultation with the selected Phase V SWE, the Commission determine EDC compliance with the peak demand reduction targets listed in Table 19. EDC evaluation contractors should evaluate, report, and compare verified gross peak demand savings to the targets in each EDC Annual

Report. EDCs that fail to meet the peak demand reduction targets will be subject to penalties under subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f).

a. Comments

Stakeholder comments were divided on the proposed peak demand reduction targets, with the EDCs and EAP contending that the targets should be lowered, removed, or subject to less stringent penalties. The balance of the stakeholder community favored increased allocation of funding to EE&C plan components that target peak demand reduction and suggested more aggressive assumptions regarding the potential for daily load-shifting programs. FirstEnergy reiterates its concerns with the C&I Load Shifting Program and suggests excluding the associated MW from the calculation of the peak demand reduction targets. FirstEnergy asserts that the best way to encourage the EDCs to propose innovative DR program designs is to remove the risk of compliance penalties. They believe this would allow EDCs to focus on delivering programs that are aligned with the Commission's intent rather than on mitigating uncertainty and risk. FirstEnergy Comments at 24.

EAP alleges that the peak demand reduction targets and underlying acquisition costs multiply EDC compliance risk unnecessarily and questions whether the investment of EDC resources to achieve demand reduction via load-shifting during Phase V is reasonable. EAP suggests that Act 129 is fundamentally a consumption reduction program, urging the Commission to reconsider its assumed allocation of funding to daily load shifting programs that do not reduce consumption and to prioritize reductions in overall electric energy consumption over peak demand reduction. EAP recommends that the Commission either forego or reduce the mandated peak demand reduction targets but allow for the inclusion of voluntary programs involving daily load-shifting measures to inform future phases of Act 129. EAP Comments at 12.

PPL reiterates its concerns with the DR Potential Study and believes it is unreasonable to establish a mandatory peak demand reduction target based on assumed spending on new and unproven daily load shifting programs. PPL suggests the Commission utilize its discretion to reduce or eliminate the peak demand reduction targets, while permitting EDCs the flexibility to incorporate DR in their Phase V EE&C plans. PPL recommends that if the Commission sets peak demand reduction targets, failure to meet those targets should not be subject to the penalties set forth in Section 2806.1(f) of the Public Utility Code. PPL Comments at 6. EnergyHub disagrees and stresses the importance of keeping peak load reduction targets intact considering the state's urgent resource adequacy challenges. EnergyHub cites its long experience implementing DR programs and asserts that the proposed peak demand reduction targets and participation assumptions are reasonable. EnergyHub suggests that the peak demand reduction targets could be increased by assuming a higher per-thermostat load reduction. EnergyHub Reply Comments at 3.

KEEA also urges the Commission to revisit the proposed peak demand reduction targets, but suggests increasing them because the DR Potential Study utilized conservative cost inputs and understated avoided cost of generation capacity assumptions. KEEA claims that these methodological choices led to artificially low MW goals and that a more accurate and current assessment of DR cost-effectiveness would support more ambitious targets that better reflect the opportunity and urgency to relieve peak load and lower system-wide costs. KEEA Comments at 7.

Uplight recommends that the Commission increase the assumed funding allocation to DR and recalculate the peak demand reduction targets to reflect the median of the RAP and MAP scenarios modeled in the DR Potential Study. Uplight contends that the estimated DR potential is too low due to the SWE's overestimating costs and underestimating benefits. Uplight points to the exclusion of BDR from the DR Potential

Study as further evidence that the exclusive use of the RAP scenario as the basis for the proposed targets leads to MW goals that are too low. Uplight Comments at 5. PPL disagrees with Uplight and other stakeholders who recommend that the Commission increase the peak demand reduction targets and suggests these parties fail to account for the cost associated with DR and the reduced energy conservation that comes from allocating more funding to DR programs. PPL describes the Uplight proposal as an arbitrary increase that is unsupported by budget constraints, based on an unproven DR construct, and difficult to achieve in Phase V. PPL Reply Comments at 8.

DEP supports the proposed ten percent budget allocation towards DR and the proposed framework that considers both summer and winter peaks. DEP believes that peak demand reduction should become a larger part of Act 129 planning based on opportunities and technologies at hand during Phase V implementation. DEP Comments at 5. The Clean Energy Advocates support the proposed peak demand reduction targets and contend that Act 129 needs to focus more on reducing summer peak air conditioning use. The Clean Energy Advocates point to the increasing summer temperatures in the Commonwealth and allege that the historic focus on lighting measures has left opportunities for cooling savings virtually untouched. Clean Energy Advocates Comments at 3.

Uplight agrees with allowing for peak demand reduction targets to be met either with EE or load-shifting programs and points out that measures that generate greater coincident peak savings are generally going to return higher TRC ratios. Because of this, Uplight recommends setting a higher peak demand reduction target as compared to the energy savings target to maximize the capacity benefits of the EE&C investments. Uplight Comments at 12.

Finally, Advanced Energy United and Uplight both suggest adding a low-income peak demand reduction target similar to the low-income consumption targets established in Section A.5 of the Tentative Implementation Order. Advanced Energy United worries that many load-shifting programs rely on technologies that are more common in higher income households so these customers will be most likely to enroll and retain the benefits. Consequently, Advanced Energy United states that low-income customers should receive elevated incentives or equipment rebates to encourage their participation and lower their energy burden. Advanced Energy United reiterates its support of BDR as a load-shifting strategy since it does not require expensive technology and is free for the customer to participate in. Advanced Energy United recommends a low-income peak demand reduction target for each EDC equal to or greater than seven percent of the total peak demand reduction target without explicit consideration of cost-effectiveness since reduced energy burden is not considered a benefit in the TRC Test. Advanced Energy United Comments at 13. Uplight raises each of the same points as Advanced Energy United and highlights the relative difference a $100 incentive makes on energy burden for a low-income household compared to a typical household. Uplight Comments at 13.

FirstEnergy opposes the suggestion by Uplight and Advanced Energy United to establish a low-income peak demand reduction target for each EDC. FirstEnergy questions the premise that peak demand reductions are more beneficial to low-income households than consumptions, objecting to the suggestion that cost-effectiveness not be considered for low-income DR. FirstEnergy maintains that establishing a demand reduction carve-out potentially detracts from providing more beneficial or comprehensive programs to low-income customers. They also point out that the SWE's DRPS did not consider or analyze low-income customer participation, program savings or acquisition costs separate from the general residential sector. FirstEnergy Reply Comments at 10-11.

The Low Income Advocates share Advanced Energy United's concern that many load-shifting programs rely on technologies only found in higher income households, but do not support a specific low-income DR carve-out. They are concerned that a specific low-income carve-out may divert attention from the delivery of comprehensive, deep-measure efficiency programs more capable of reducing energy and bills over the long term. Low Income Advocates Reply Comments at 13-14. Although they oppose a peak demand reduction low-income carveout, the Low Income Advocates offer a series of recommendations to optimize DR programming for low-income households. Their suggestions include direct installation of equipment, disclaimers of potential negative consequences, decoupling DR participation from EGS contracts, the ability to opt-out of events without financial penalty, and cross-marketing with HVAC and weatherization programs. Low Income Advocates Reply Comments at 16-17.

EAP issues a cross-cutting response to stakeholder comments that suggest expanding or strengthening Phase V peak demand reduction targets. EAP avers that EDCs are structurally, legally, and operationally prohibited from bidding DR resources into PJM markets as commentators suggest. EAP rejects suggestions for DR pilots and reiterates its position that peak demand reduction targets should be reduced or eliminated. EAP urges the Commission to resist the "call" of other commentators to add to the complexity and inflexibility of Act 129 obligations and requirements and instead focus on the flaws and constraints of the SWE potential studies. EAP Reply Comments at 5-6.

b. Disposition

The Commission rejects the suggestion to include a low-income peak demand reduction target. The inclusion of a low-income consumption reduction target ensures that residential EE&C plans will not disadvantage the households that face the highest energy burden in the Commonwealth. Comments by EAP, PPL, and FirstEnergy underscore that each additional target the Commission establishes exposes the EDCs to

additional compliance risk given the associated statutory penalties. As a result, the Commission will not add an additional compliance target. Each additional target reduces the degrees of freedom that are clearly of paramount importance to the EDCs. We also share the concern of the Low Income Advocates that a specific low-income peak demand carve-out could divert focus from comprehensive efficiency programs that more directly reduce household energy bills. As noted by FirstEnergy in reply comments, the DR Potential Study did not model potential or acquisition costs specific to the low-income sector. We concur with commenters who asserted that smart thermostats, EVs, and battery storage are likely less common in low-income households and suspect that load-shifting potential would be disproportionately more expensive to implement for low-income households. Given the growing resource adequacy challenges facing the region, the Commission elects to establish a single peak demand reduction target for each EDC and allow them the flexibility to design an EE&C plan that achieves that target.

Some stakeholders believe that the DR Potential Study was too conservative and led to peak demand reduction targets that are too low. Other commenters insist that the DR Potential Study was too aggressive and yielded unreasonably high goals. We are not persuaded by the perspectives set forth by parties on either side of this issue that suggest the proposed targets were based on flawed inputs or faulty assumptions. The Commission does not share EAP's stance that Act 129 programs should focus on reductions in consumption primarily. Projected load growth from data centers and electrification coupled with the retirement of thermal generating units has created growing concerns regarding resource adequacy. Establishment of minimum MW reduction targets with penalties for underperformance ensures that the projected investment of over $1.2 billion dollars in ratepayer funds over a five-year period will help preserve the reliability of the electric grid in addition to lowering energy consumption.

As discussed in Section A.4.a.II of this Implementation Order, the Commission was convinced by stakeholder comments to lower the assumed funding allocation to solar PV from nine percent to five percent and increase the assumed funding allocation to traditional EE from 67% to 71%. This change raises the weighted average peak demand acquisition cost and lowers each EDC's MW target by approximately four percent.

Table 20 shows the peak demand reduction targets for Phase V of Act 129. Compliance with the peak demand reduction targets shall be assessed using an average of the EDC's gross verified summer peak reduction and winter peak demand reduction. EDCs that fail to meet the peak demand reduction target will be subject to penalties under subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f). To promote balance across seasons, each EDC's EE&C plan should include a mix of measures and programs projected to acquire at least 75% of the proposed target in each season. The seasonal minimum shall be limited to the Commission's review and approval of the EE&C plans, not subjecting the EDCs to the penalty provisions prescribed under 66 Pa. C.S. § 2806.1(f).

Table 20: Final Phase V Peak Demand Reduction Targets, by EDC

EDC	Acquisition Cost ($/MW)	Budget	Phase V Target (MW)	Percentage of Baseline
Duquesne Light	$2,102,662	$97,729,760	46.5	1.85%
PECO	$2,194,266	$427,385,830	194.8	2.47%
PPL	$2,035,823	$307,506,880	151.0	2.29%
FirstEnergy	$2,043,305	$390,320,135	191.0	2.01%
Statewide	**$2,096,503**	**$1,222,942,605**	**583.3**	**2.20%**

5. Accumulating Savings in Excess of Peak Demand Reduction Targets

For the same reasons enumerated in Section A.7 of this Implementation Order, the Commission proposed to allow EDCs to "carryover" 50% of the excess peak demand savings acquired in Phase IV and apply it towards Phase V peak demand reduction targets. While the Phase V peak demand definition differs slightly from the Phase IV definition, a diverse EE&C plan should return comparable MW totals under the two definitions. If an EDC's Phase IV peak demand reduction target was 100 MW and its Phase IV verified gross peak demand reduction was 110 MW, that EDC would have 5 MW of peak demand carryover toward its Phase V peak demand reduction target.

a. Comments

PPL disagrees with the Commission's proposal to limit EDCs' carryover to 50% of the excess peak demand savings acquired in Phase IV. PPL asserts that discounting carryover by 50% of excess peak demand savings will raise the cost of the programs for customers because EDCs will need to spend additional customer funds to replace the discounted peak demand reductions. PPL further asserts that discounting carryover may have a cooling effect on the final year of Phase IV, as EDCs will be wary of exceeding targets. PPL recommends that the Commission allow EDCs to carry over 100% of the excess peak demand reductions from Phase IV to Phase V. PPL Comments at 12. PPL reiterates in reply comments that it disagrees with any limiting mechanism on carryover savings, suggesting that discounting or capping carryover increases costs for all customers. PPL Reply Comments at 6.

Duquesne Light also opposes limits to peak demand carryover and reiterates many of the same concerns it expressed in comments on Section A.7 of the Tentative Implementation Order regarding energy carryover. Duquesne Light suggests that capping carryover peak demand savings is unnecessary, runs counter to stated program

continuity goals, and could have unintended impacts on program implementation. Duquesne Light Comments at 12.

FirstEnergy opposes limitations on carryover for peak demand reduction. FirstEnergy asserts that limiting carryover to only a portion of what was achieved does not provide the same assurance nor applicable incentive to keep programs from "going dark" once Phase IV targets are achieved. FirstEnergy Comments at 25.

PECO reiterates its opposition to the proposed Phase V caps on carryover savings. PECO notes that carryover savings represent *verified* consumption reduction or peak demand reduction savings that have been achieved through *customer-funded* measures. PECO posits that both EDCs and customers would benefit from the full utilization of carryover savings because (1) full utilization encourages EDCs to continue offering energy savings measures to customers even after a Phase target is achieved, and (2) full utilization may permit EDCs to pursue deeper, more comprehensive savings opportunities with their fixed budgets than would be possible without carryover. PECO Reply Comments at 5-6.

The Low Income Advocates oppose allowing any carryover, commenting that the Commission should require that EDCs design their Phase V plans to meet their Phase V goals without the use of any carryover. Low Income Advocates Comments at 47.

b. Disposition

As with the carryover of energy savings discussed in the disposition of Section A.7, the Commission is not persuaded to modify its proposal to allow EDCs to carryover 50% of the excess peak demand savings acquired in Phase IV and apply it towards Phase V peak demand reduction targets. Comments regarding the cost implications of

discounted carryover fail to consider the *benefits* that the Commonwealth foregoes when EDCs underinvest in Act 129 programs. We also find the EDC position tenuous that discounting peak demand carryover will have a cooling effect on Phase IV programs. The Commission is skeptical that EDCs would reduce the intensity of Phase IV implementation and forego potential carryover into Phase V given the concerns around risk of statutory penalties for non-compliance which permeate their comments and reply comments. Our proposal strikes a balance by allowing some carryover savings to the next phase, incentivizing programs to maintain operation, while ensuring Phase V targets are challenging and require EDCs to invest most of their Phase V budgets to comply. For Phase V of Act 129, EDCs may apply 50% of the excess peak demand savings achieved in Phase IV to Phase V peak demand targets.

6. Annual Peak Demand Reduction Targets

The Commission proposed that the EDCs design their EE&C plans to achieve at least 15% of their peak demand reduction target in each program year. We believe 15% is a reasonable goal in designing the EE&C plans for a five-year phase. As with the consumption reduction targets, we proposed limiting this requirement to the Commission's review and approval of the EE&C plans and not subjecting the EDCs to the penalty provisions prescribed under 66 Pa. C.S. § 2806.1(f).

a. Comments

The Commission received no comments on this topic.

b. Disposition

EDCs should design their EE&C plans to achieve at least 15% of their peak demand reduction target in each program year. As with the consumption reduction targets, this requirement shall be limited to the Commission's review and approval of the

EE&C plans and not subject to the penalty provisions prescribed under 66 Pa. C.S. § 2806.1(f).

7. Measuring Peak Demand Reductions

The Commission's authority to establish peak demand reduction targets for Phase V of Act 129 is addressed at 66 Pa. C.S. § 2806.1(d)(2), which requires the Commission, by November 30, 2013, to compare the total costs of EE&C plans to total savings in energy and capacity costs to retail customers. If the Commission determines that the benefits of the plans exceed the costs, the Commission shall set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand or an alternative reduction approved by the Commission.

The Commission proposed continuing with the status quo approach for peak demand savings whereby targets are established at the system-level. This means EDCs must scale up calculations of savings at the meter-level to account for line losses prior to reporting progress toward goals. EDCs and their evaluation, measurement, and verification (EM&V) contractors should use the EDC and sector-specific line loss values documented in the 2026 TRM.[79] However, the Commission proposed two important changes to the definition of peak demand. These would impact the types of EE&C programs that can deliver peak demand reductions and how to measure EDC performance towards the proposed peak demand reduction targets in Table 19 or the final targets in Table 20.

1) **Reported and verified peak demand reductions shall be the average of summer and winter performance**. The first four phases of Act 129 only considered summer peak demand reductions, but winter constraints have become

[79] *See 2026 Technical Reference Manual, Volume 1* at page 13.

increasingly important in regional planning. The 2026 TRM provides the algorithms and assumptions needed to estimate winter demand reductions for prescriptive EE measures and the Commission is confident in the EDCs and their EM&V contractors to estimate winter peak demand savings for custom measures. The Commission prefers a single target based on the average of the two seasons over separate targets for summer and winter peak demand reductions because it affords the EDCs flexibility in the EE&C plan design process and allows them to manage to a single demand reduction target. An EDC with a peak demand reduction target of 100 MW might acquire 112 MW of summer peak demand reduction and 92 MW of winter peak demand reduction based on the mix of programs and measures adopted by participants. In this example, the extra performance for the summer season offsets lower performance for the winter season to return an average of 102 MW that exceeds the 100 MW target.

2) **Phase V peak demand reduction targets may be satisfied with either coincident demand reductions from EE or verified demand reductions from load-shifting programs.** This proposal would make Phase V of Act 129 like Phase I when peak demand reductions could be satisfied with either EE or DR programs. This proposal allows EDCs the flexibility to pursue load-shifting programs but does not require it. If an EDC can design its EE&C plan to include enough EE measures with strong coincident demand reductions to meet its target, then no load-shifting programs are needed. However, through the first three years of Phase IV of Act 129, several EDCs appear behind schedule in meeting their peak demand reduction target; the ability to design program offerings that focus primarily on peak demand reductions seems prudent. It is important to pair this proposal of "interchangeable MW" with clear instructions detailing how MW reductions from load-shifting programs will be counted. The Commission's proposal is presented later in this section of this Implementation Order. Verified

gross peak demand reductions from distributed generation projects such as solar PV and CHP should also count towards Phase V targets.

For Phase V of Act 129, the Commission proposed measuring peak demand reductions from EE measures using the savings approach described in Section A.9 of this Implementation Order, where estimates are weather normalized to reflect the expected load reduction over the life of the measure based on long-run average weather conditions. The definition of peak demand is documented in the 2026 TRM.[80]

- The summer peak demand period for Act 129 programs is non-holiday weekdays June through August from 2:00 pm to 6:00 pm Eastern Prevailing Time.

- The winter peak demand period is non-holiday weekdays January through February from 7:00 am to 9:00 am and 6:00 pm to 8:00 pm Eastern Prevailing Time.

Measures in the 2026 TRM include algorithms and assumptions for calculating $\Delta kW_{\text{summer peak}}$ and $\Delta kW_{\text{winter peak}}$. For some measures, the calculation of peak demand savings involves the use of a coincidence factor, which the TRM defines as "[t]he ratio of the (1) sum of every unit's average kW load during the PJM summer or winter peak load period to the (2) sum of the non-coincident maximum kW connected load for every unit."[81] For some measures, the calculation of peak demand savings involves the use of energy to demand factors (ETDFs), defined as "[t]he average energy consumption during seasonal peak hours divided by the total annual energy consumption."[82]

[80] *See 2026 Technical Reference Manual, Volume 1* at page 10.
[81] *See 2026 Technical Reference Manual, Volume 1* at page 5.
[82] *See 2026 Technical Reference Manual Final Order* at page 9.

For custom measures not included in the 2026 TRM, the Commission proposed that EDC evaluation contractors continue to estimate weather-normalized annual peak demand savings that consider and control for extraordinary weather conditions observed during the measurement and verification period.

Coincident demand reductions from EE measures persist for the effective useful life (EUL) of the program-supported measure. In PY15, the statewide weighted average EUL was 11.39 years.[83] Act 129 follows an incremental annual accounting framework where only the first-year annualized savings of a measure count towards goals. As a result, a measure that saves 5 kW with an EUL of three years contributes identically toward goal achievement as a measure that saves 5 kW with an EUL of 15 years. EUL is considered in the TRC Test so the measure with a 15-year EUL will generate more lifetime TRC benefits. If peak demand reductions from daily load shifting programs are to compare with coincident demand reductions from EE in Phase V, the Commission maintained load-shifting programs should be credited with their average impact over the phase rather than counting each program year's reductions as new progress toward goals. Specifically, the Commission's proposal for measuring peak demand reductions from Phase V load-shifting programs was to:

1) Measure the average reduction in demand over the season-specific peak demand definition described above. The performance definition for load-shifting programs will be the same as the definition for EE programs.

2) Average the summer and winter performance for a given program year. The EDCs would report this quantity in their final annual reports to the PUC along

[83] *See SWE Final Annual Report: Act 129 Program Year 15,* at page 17. Available online at: https://www.puc.pa.gov/media/3262/swe_py15_final_annual_report120424.pdf

with the season-specific achievement.

3) Compute the average peak demand reduction across the five years of Phase V as the progress towards the peak demand reduction target. Future program years would be assigned a zero value in this calculation for PY18–PY21 annual reports. For example, if an EDC load-shifting program produced verified reductions of 12 MW in PY18 and 13 MW in PY19, they would report (12 + 13 + 0 + 0 +0) / 5 = 5 MW toward its Phase V compliance target in its PY19 annual report.

The proposed accounting framework above takes the average of all five program years. In Phase III, the Commission waived peak demand reduction targets for PY8 to allow EDCs time to ramp up their DR programs. The Commission asserted that such a waiver is not necessary for Phase V because performance is defined as the average across the five-year phase. If an EDC load-shifting program is slow to ramp up and delivers little or no performance in PY18, the EDC has four more years to make up for the slow start.

Behind-the-meter energy storage measures are a unique offering that received specific discussion in the Tentative Implementation Order. Since EDCs would need to incentivize the upfront capital cost of new battery storage systems or other storage technologies in exchange for an agreement to discharge the resource during the peak demand period, the Commission proposed that EDCs follow an EE accounting framework for new storage installations. Under an EE framework, once the verified summer and winter demand reductions from a storage project are calculated by the EM&V contractor, the reductions can be assumed to persist for the life of the technology and claimed towards goals. Alternatively, if an EDC simply enters into an agreement with a customer with an existing storage system to charge and discharge in a way that

contributes peak demand reductions, those impacts would be claimed like other load-shifting programs. The Commission also proposed that the Phase V SWE add a storage protocol to the Pennsylvania Evaluation Framework.

a. Comments

Oracle supports the proposal to allow Phase V peak demand reduction targets to be satisfied with either coincident demand reductions from EE or verified demand reductions from load-shifting programs because it allows EDCs the flexibility to offer a wider array of programs and to capture demand reductions from more customers. Oracle also agrees with measuring performance using both summer and winter demand reductions, as both provide value to customers and the grid. Oracle disagrees with the proposed approach to measuring peak demand reductions from Phase V load-shifting programs and suggests adding an option to measure the performance of event-based programs that only considers program performance on event days. Oracle Comments at 3. Uplight also respectfully disagrees with the proposed measurement approach for load-shifting programs and suggests an alternative approach that measures peak demand reduction across all hours of called events. Uplight Comments at 9.

PPL disagrees with the Commission's proposal to assess compliance with the peak demand reduction targets using an average of the EDC's gross verified summer peak reduction and winter peak demand reduction. PPL maintains that this proposal creates unnecessary complications and reduces EDC flexibility to design Phase V EE&C plans tailored to the peak reduction opportunities of their territories. PPL worries that the decision will reduce the impact of seasonally-focused measures such as cooling and requests additional clarity on the averaging process for single season measures since it is not explicitly described in the 2026 TRM. PPL Comments at 11.

PECO does not explicitly oppose basing compliance with Phase V peak demand reduction targets on a mix of summer and winter performance, but questions the simple average proposed in the Tentative Implementation Order. PECO remarks that averaging summer and winter peak period performance effectively gives more weight to each day of the winter period due to three-month summer period vs. two-month winter period and questions whether that was the Commission's intended outcome. PECO emphasizes that it is a summer peaking utility with higher capacity savings in the summer season and underscores that its EE&C plan should be optimized for the summer to provide the most system benefits. Instead of averaging summer and winter peak demand savings, PECO advocates for an EDC-specific weighting method based on the 2024 summer and winter peak to calculate progress towards target. PECO Comments at 8.

PECO raises concerns with the daily load shifting event period for the summer season and advises that it may inadvertently drive local capacity issues on certain circuits. To address the potential for adverse impacts to individual circuits, PECO recommends that the Final Implementation Order either adjust the summer peak period to begin at 3:00 pm and end at 7:00 pm or allow for event periods to differ by customer segment and/or distribution circuits to avoid snapback on constrained circuits that peak near or after 6:00 pm in the summer. PECO Comments at 10-11.

PECO also submits that the 2026 TRM demand response measure characterizations[84] are not a good fit for daily load shifting programs due to the lack of comparable non-event weekdays and non-participant matches in the C&I sector. To address these issues, PECO recommends that the PUC provide specific guidance and standards for measurement and verification (M&V) specific to daily load shifting. PECO

[84] *See 2026 Technical Reference Manual, Volume 2* at pages 231-233; *2026 Technical Reference Manual, Volume 3* at pages 354-356.

requests that at least one of the M&V protocols allow for the measurement of impacts at the individual customer level to enable performance-based DR incentives, particularly for large C&I customers. Finally, PECO advocates for EDC flexibility to make dispatch choices to facilitate evaluation, such as calling baseline/non-events days or holding out customers as part of experimental design, without having those decision counts against the calculated peak demand reduction. PECO Comments at 17-19.

PECO reiterates its support for event-based DR, expresses agreement with other parties who share its position on event-based DR, and requests that savings only be calculated based upon event days. PECO reaffirms its own comments that basing compliance on the average of summer and winter demand reduction is inappropriate since it is a summer-peaking utility. PECO asserts that it is not clear how demand reductions would be measured in both seasons. PECO Reply Comments at 7-8.

b. Disposition

PECO offers two thoughtful suggestions regarding the measurement of peak demand reductions in Phase V. We are not persuaded to adopt EDC-specific weighting approaches between summer and winter demand savings or to take into consideration the number of days in each season. Both potential studies used a simple average of summer and winter MW to estimate the acquisition costs upon which the proposed targets were based. Since plan components like solar PV have very different demand acquisition costs by season, a different weighting would require recalculating the EDC targets. Given the EDC flexibility discussed in Section B.4 to overachieve in one season and underachieve in the other season (subject to the 75% EE&C plan minimum), the simple average approach does not prevent an EDC from prioritizing one season over the other based on available opportunities or avoided costs. We appreciate that PECO will likely prioritize summer demand reduction in its EE&C plan based on the economics and peaking profile

of its service territory but maintain that the growing regional winter resource adequacy concerns justify equal weighting of summer and winter demand from a goals standpoint.

The Commission finds PECO's concerns about ending summer load-shifting at 6:00 pm compelling and agrees that the hour from 6:00 pm to 7:00 pm could be more important than the hour from 2:00 pm to 3:00 pm for substations or circuit feeders that predominantly serve the residential sector. EDC flexibility is a key theme in this Order, and PECO's comments highlight the importance of flexibility on this issue. The performance definition for load-shifting programs will match the definition as EE programs with respect to days (non-holiday weekdays in January, February, June, July, and August) and number of hours (four per day), but EDCs may propose an alternative performance window in their Phase V EE&C plans. The EE&C plan should provide a rationale for the alternative window. The Commission prefers a single alternative window (e.g., 3:00 pm to 7:00 pm, rather than 2:00 pm to 6:00 pm), but we are open to proposals that differentiate the window based on local distribution system needs such as morning versus evening winter peaking circuits or early versus late afternoon summer peaking circuits. Aside from this additional flexibility, Phase V measurement of peak demand reductions from EE and load-shifting programs shall follow the approach proposed in the Tentative Implementation Order.

The Commission rejects suggestions from Oracle and Uplight to create an alternative measurement approach for event-based DR programs based on our opinion that the daily load-shifting model offers the best opportunity for Act 129 programs to complement the event-based DR offerings at PJM. As discussed in Section B.1 of this Implementation Order, we recognize that some days have greater need and value than others to the grid. If an EDC elects to shift load more aggressively on days or hours with greater perceived value to the bulk power system or their own distribution network, that tactic would increase the average performance under the Phase V measurement approach.

Consider a hypothetical summer week in which an EDC achieves 4 MW of load shifting on Monday, Tuesday, Thursday, and Friday but intensifies operations to shift 8 MW on Wednesday in response to expected grid constraints. Under the Phase V averaging methodology, the average performance for the week would be 4.8 MW thanks to the additional shifting on Wednesday.

The Commission rejects without prejudice PPL's suggestion that averaging summer and winter peak demand reduction limits EDC flexibility. In fact, this approach maximizes EDC flexibility because an EDC can choose to acquire more demand reduction in one season to offset lower reductions in the other season if the savings opportunities and economics in its service territory support that strategy. A less flexible approach involves establishing separate peak demand reduction targets for summer and winter, each subject to penalties for non-compliance. We agree with PPL that the 2026 TRM does not explicitly address averaging summer and winter kW, so we offer the following guidance. If PPL or PECO have additional questions, the Commission can direct the SWE to issue a guidance memo.

- Each EE&C measure will have a summer kW impact and a winter kW impact. For a single-season measure like air conditioning, the winter kW savings would be zero, and the summer kW savings would be non-zero.
- EDC evaluation contractors will produce separate realization rates for summer and winter kW savings.
- EDCs will report the total summer demand savings and winter demand savings in their annual reports.
- The compliance savings for a given program or the portfolio is simply the arithmetic mean of the summer and winter MW savings at the system-level.
- If a program saves 2 MW of summer demand and 5 MW of winter demand, the program's contribution to the Phase V peak demand target is (2 + 5) / 2 = 3.5 MW.

- If a program saves 2 MW of summer demand and 0 MW of winter demand, the program's contribution to the Phase V peak demand target is (2 + 0) / 2 = 1 MW.

The Commission concurs with PECO that the demand response measures in the 2026 TRM do not provide sufficient guidance to EDCs, CSPs, and evaluation contractors regarding the measurement of daily load shifting program impacts. If one or more EDC elects to propose a daily load-shifting program in its Phase V EE&C plan, we will direct the SWE to update the Pennsylvania Evaluation Framework with specific M&V guidance for the type(s) of programs proposed. EDCs are also encouraged to prepare Interim Measure Protocols for review and approval by the SWE at any time to promote alignment on estimation techniques. The Commission agrees that EDCs should be held harmless for load reductions they sacrifice in service of enhanced measurement accuracy, but this policy should not be used as a back door to deliver event-based DR programs. We will request the SWE author clear guidelines on this issue as part of updates to the Evaluation Framework.

C. Coordination with Other State Conservation Programs

The planned deployment of conservation programming funded by IRA in Pennsylvania[85] creates policy questions with respect to collaboration across program administrators. While the IRA-funded programs coordinated by the DEP are a relatively new and noteworthy addition to the Commonwealth's energy conservation landscape, there are several other conservation programs with which Act 129 programs should coordinate, such as:

- Alternative Energy Portfolio Standards Act (AEPS Act) credits administered by InClime with oversight by the PA PUC.

[85] *See* https://www.dep.pa.gov/Citizens/Energy/Pages/Inflation-Reduction-Act.aspx

- LIURP and the Low Income Home Energy Assistance Program (LIHEAP).
- HER and HEAR programs managed by the DEP Energy Programs Offices.
- DEP's Agricultural Energy Efficiency Rebate Program.
- DEP's Reducing Industrial Sector Emissions in Pennsylvania (RISE PA) Program.
- DEP's Solar For All Program.

1. Braided Funding

The availability of increased funding from outside of Act 129 should help accelerate conservation programming in the Commonwealth. It is important that the EDCs collaborate rather than compete with other program administrators. The Commission maintained its disposition from the 2026 TRC Test Final Order[86] and previous proceedings regarding claiming of savings whereby EDCs may claim the full gross verified savings for any EE&C project they support. This accounting perspective should promote collaboration over competition and lead to improved outcomes for ratepayers. Pooling funds from multiple sources can attract more prospective program participants and potentially allow the EDCs to accomplish more with the same funding. In a sensitivity analysis within the EEPDR Potential Study, the SWE estimated an increase in aggregate electric savings due to the availability of external funding. Much of that modeled increase came from the low-income households, the expected focus of IRA-funded programs. Federal tax credits factored into the SWE's modeling of the adoption curves and economics of solar PV. Similarly, the assumed TRC ratios were improved and acquisition costs lowered for battery storage in the DR Potential Study based on the expected availability of federal tax credits.

[86] *See 2026 TRC Test Final Order* at pages 79-81.

The 2026 TRC Test Final Order also established that reasonably quantifiable outside incentives reduce the participating customers' costs; therefore, the reduction will be treated as a reduction in incremental cost for Phase V of Act 129.[87] Since EDCs should already track the external funding of the EE&C projects they incentivize to produce accurate TRC Test results, the Commission proposed that EDCs track and report all outside funding by source, as well as the leverage ratio for each of their EE&C programs and the portfolio as a whole. We proposed defining the leverage ratio as the amount of known external funding for Phase V EE&C projects relative to the Act 129 incentives issued for those same projects. For example, a hypothetical EDC program might issue $4 million in participant incentives during PY18. If those PY18 projects also received $1.4 million in incentives or tax credits from outside of Act 129, the leverage ratio would be 37%, or 1.4 divided by 4. The Commission proposed that the SWE incorporate the necessary tables in figures in its EDC Annual Report Template for Phase V to provide stakeholder visibility into this metric on an ongoing basis.

a. Comments

Stakeholders unanimously support the concept of coordination between Act 129 and other conservation programming in the Commonwealth but their positions differ with respect to many of the underlying details. EAP notes that the EDCs already work to coordinate Act 129 programs with other state administered programs that assist participants in lowering electric energy usage and reducing customer bills. EAP supports coordination with programs that do not limit EDCs' ability to count savings towards Act 129 goals and agrees with the Commission's determination that EDCs may claim the full gross verified savings for any EE&C project they support. EAP also agrees that EDCs should attempt to braid or stack funding from other state-administered conservation programs for the benefit of customers participating in Phase V EE&C plans. EAP

[87] *Id.* at 81.

Comments at 16. FirstEnergy appreciates the Commission's recognition of the benefits of braided funding and its interest to produce accurate TRC Test results of the Act 129 program. FirstEnergy Comments at 26. PPL also agrees with the Commission that non-Act 129 program coordination is important but cautions that the future of IRA and currently available tax credits are unreliable in the current political environment. PPL Comments at 13.

PPL, FirstEnergy, and PECO express concern with the Commission's proposal that "EDCs track and report all outside funding by source, as well as the leverage ratio for each of their EE&C programs and the portfolio as a whole." PPL suggests that this requirement would be an undue administrative burden because the EDCs would need to rely on customers to provide that information, and those customers may be unwilling or unable to do so. Accordingly, PPL also opposes the Commission's proposal that the SWE update the EDC Annual Report Template to include reporting on braided funding. PPL Comments at 14. FirstEnergy questions the EDCs' ability to enforce customer disclosures regarding outside funding sources and worries that expanding rebate applications will create barriers to participation and increase administrative complexity for CSPs. FirstEnergy Comments at 26. PECO believes that requiring an EDC to track and report external funding sources and leverage ratios is unreasonable and beyond the reasonable scope of plan implementation. PECO Comments at 24.

The Low Income Advocates characterize EAP's support of full attribution of savings from other programs while opposing each of the specific proposals that facilitate coordination as "having their cake and eating it too." They believe EAP and the EDCs' positions regarding coordination discount the value of administrative efficiencies that can be achieved through coordination and amount to freeloading rather than leveraging. The Low Income Advocates maintain that EDCs should not be allowed to claim the full gross verified savings for projects they support through braided funding from other programs

without tracking and reporting those outside funding sources and meeting higher low-income goals and specific requirements for longer-lived, deeper-saving measures. Similarly, they insist that EDCs should not be permitted to claim full savings achieved from other jobs yet refuse to pay for things that are permitted under Act 129 based on the vague notion that it interferes with the autonomy and independence of their plan implementation. Low Income Advocates Reply Comments at 12.

The Clean Energy Advocates strongly support coordination and maintain that, to coordinate with federal programs, EDCs must use the same standards and specifications required by those federal programs. The Clean Energy Advocates suggest the Commission direct the EDCs to align standards for equipment and appliances with the HEAR, HERS, and Weatherization Assistance Programs. Clean Energy Advocates Comments at 4.

NEEP comments that coordination also provides opportunities to streamline involvement for administrators, contractors, distributors, and other market actors. They suggest that this can create partnerships and resources that would still be available after the state has spent down DOE funding, ensuring stability and long-term market transformation. NEEP Comments at 4. KEEA believes that, while the Commission's recognition of the uncertainty surrounding IRA funded programs is understandable, these external funding sources present a major opportunity to enhance the impact of Act 129. They suggest that strategically coordinating with HEAR and other state and federal programs can expand customer access to energy-saving technologies without imposing undue costs on ratepayers. KEEA recommends a coordination strategy that lowers the upfront cost of EE for customers, supports strategic electrification, and maintains cost-effectiveness. KEEA Comments at 9.

CEEH-PA notes that, to meaningfully braid and stack program funding, programs must coordinate the contractors installing the measures. CEEH-PA suggests that the contractors that deliver the utility-run LIURP programs, LIHEAP emergency furnace repair services, WAP, and low-income home repair programs are best suited to serve the unique needs of low-income families in their community, stack program funding, and complete comprehensive projects. CEEH-PA maintains that contractor coordination will help eliminate redundant administrative structures, save ratepayer dollars, and maximize the benefit of all who receive income-qualified services. Under the CEEH-PA single-service delivery proposal, contractors would install Act 129 measures at the same time as they are performing weatherization services, conducting home repairs, or installing other equipment. CEEH-PA Comments at 27. CEEH-PA recommends that the Commission direct EDCs to include a program coordination plan within their EE&C plan that details how the EDC will work with contractors to ensure effective coordination of affordable multifamily projects and other low-income program services from energy audit through quality evaluation. CEEH-PA Comments at 28.

EAP opposes suggestions that the Commission should require the use of common contractors or common auditing across Act 129, LIURP, and WAP. EAP worries that common contractors or vendors could create increased risk should the contractor(s) go out of business, engage in illegal or immoral acts, or otherwise imperil their ability to provide services. EAP contends that requiring utilities to use the same contractors as state-funded programs risks undermining the access that is desired, and the efficiency, flexibility, and innovation that utility-led initiatives can offer. EAP further speculates that mandating the use of state-selected contractors could limit utilities' ability to choose the most qualified, cost-effective vendors for their specific programs and constrain program implementation. EAP urges the Commission to preserve EDC discretion in contractor selection to help ensure programs remain accountable, efficient, and responsive to ratepayer interests. EAP Reply Comments at 6-7.

Several parties commented on health and safety coordination specifically. The Joint Energy Advocates express concern that the Tentative Implementation Order did not address the need to resolve incidental health and safety issues in order to provide holistic energy efficiency services. They believe the Commission must prioritize improved coordination between Act 129 programs and other available health, safety, and home repair funding streams so Pennsylvania's most vulnerable residents can participate in energy efficiency programs. Specifically, the KEEA and the Joint Energy Advocates suggest Commission should facilitate a structured and coordinated approach that includes:

1) **Comprehensive Building Assessments** – Establish a standardized assessment protocol that evaluates both energy efficiency needs and health and safety barriers.
2) **Streamlined Coordination Across Programs** – Develop a centralized intake and referral system to connect eligible households with the full suite of available assistance programs.
3) **Optimized Project Sequencing** – Implement clear guidelines for the proper sequencing of health, safety, and efficiency upgrades.
4) **Enhanced Contractor Coordination** – Establish scheduling protocols to ensure that contractors across different programs work in a coordinated fashion, minimizing delays and disruptions for residents.
5) **Targeted Funding Allocation** – Encourage EDCs and state agencies to leverage braided funding strategies that combine resources from multiple programs to cover the full scope of home improvements.

Finally, the Joint Energy Advocates recognize the Health and Safety Pilots offered by PECO and PPL in Phase IV and recommend that each EDC develop a Health and Safety Pilot in Phase V to ensure broader EE access and report on pilot outcomes to

stakeholders to promote continuous refinement. KEEA Comments at 4. Joint Energy Advocates Comments at 8.

EAP opposes recommendations to develop health and safety pilot programs, require utilities to establish referral processes to local or state-run health and safety programs, or require the EDCs to track and report on homes deferred from receiving Act 129 services. EAP points out that commenters have not estimated the impacts of such pilots on budgets, savings potential or cost-effectiveness and suggest these types of pilots will add administrative costs and reduce savings. EAP Reply Comments at 3.

NEEP and the Joint Energy Advocates suggests the Commission require EDCs to plan coordination of efficiency programs with other state and local healthy home programs such as to lead and asbestos remediation programs, Indoor Air Quality (IAQ) improvement programs, aging-in-place programs, hoarding support, and pest management programs administered through the Department of Community and Economic Development (DCED), the Department of Human Services (DHS), and the Department of Health (DH) and community organizations. They list several coordination elements the Commission should consider including direct referrals to home remediation services, streamlined enrollment processes, regular staff engagement to align timelines, and prioritizing the use of contractors trained in both energy efficiency and home remediation. NEEP and the Joint Energy Advocates maintain that this integration would help the EDCs address the structural and environmental barriers that often prevent energy efficiency upgrades and lead to more comprehensive home improvements and greater long-term energy savings. NEEP Comments at 7. Joint Energy Advocates Comments at 7. NEEP envisions a coordinated system and approach, whereby customers requiring building improvements would be directed to a centralized system for all available assistance across utility, state, and community-based programs to address upgrades needed for health, safety, comfort, and affordability. NEEP Comments at 7.

The Low Income Advocates also call for additional guidance around mitigation of health and safety issues and notes that the Commission's list of "new and noteworthy" programs that could be coordinated with Act 129 does not explicitly reference any health and safety, home repair, housing preservation, and community development programs operated by the Department of Community and Economic Development, the Department of Human Services, the Department of Health, and the Pennsylvania Housing Finance Agency. The Low Income Advocates suggest the Commission require each EDC to explain in their EE&C plan how it will address health and safety issues that arise in the delivery of Act 129 services and report annually on the number of homes that are deferred due to health and safety issues. Low Income Advocates Comments at 61. In addition to requiring EDCs to report on leveraged dollars at the program and portfolio level, the Low Income Advocates suggest required project-level reporting for any leveraged project with a combined investment of over $200,000 to prevent EDCs from being a "free rider" on IRA programs. Low Income Advocates Comments at 56.

OCA supports the Commission's proposal for the EDCs to track and report outside funding by source and leverage ratios. OCA also requests that the EDCs track any administrative costs incurred by the EDCs to support the braiding of funds and speculates that IRA coordination will increase EDC administrative costs. OCA recommends that the Commission establish a limit on administrative costs and require review of any expenditure that exceeds the amount. OCA's intent is to show both the costs and benefits of a braided funding strategy so parties can consider the return on investment and whether this is an appropriate use of Act 129 budgets. Since no IRA funding was assumed in the EEPDR Potential Study, the OCA recommends not counting any low-income customer-related savings resulting from braided funds towards the achievement of the carve-out; rather, it recommends counting such savings toward the portfolio consumption and peak demand reduction targets. OCA Comments at 17.

Duquesne Light agrees that tracking the labor required to braid outside funding is important and further recommends these braided incentive labor costs be characterized as "incentives" in reporting cost-effectiveness, like the treatment of labor for the direct installation of measures. The labor cost, and the outside incentives the labor renders, directly benefit the participating customer by reducing costs and helps to overcome the barriers to efficient equipment adoption. Duquesne Light strongly opposes OCA's recommendation that EDCs should not be allowed to attribute savings from braided funds toward the low-income carve-out. Duquesne Light maintains that EDCs must be able to report the savings associated with their investment of program dollars and urges the Commission to preserve its position on savings from co-funded projects in the low-income or any other sector. Duquesne Light Reply Comments at 5.

b. Disposition

While the Commission is generally supportive of EDC coordination with other program administrators, we find several of the stakeholder proposals regarding coordination details overly prescriptive and outside the scope of this docket. The alignment of minimum appliance and equipment standards for program-support proposed by the Clean Energy Advocates is a useful EE&C plan consideration, but we fear that tracking and mirroring changes to the requirements of other programs would be administratively complex and offer limited value. If consumers and contractors are made aware of the different program opportunities, most will naturally select an efficiency level that allows them to capture all funding streams. If an EDC requires heat pumps to have an HSPF2 value of 9.5 and the HEAR program requires an HSPF2 value of 10.0, we see limited risk of widespread adoption of units with an HSPF2 of 9.5 or more but less than 10 as those households would forgo the HEAR incentive. Typically, the EDCs and other program administrators rely on external certification standards such as ENERGY STAR®. The Commission sees value in EDCs reviewing which certification standards

other program administrators rely on, but we will not require alignment for specific technologies.

The Commission agrees with CEEH-PA and other parties who suggest EDC EE&C plans include information regarding planned coordination of contractors and other market actors. We expect to issue a proposed Phase V EE&C Plan Template via Secretarial Letter in July 2025 that calls for proposed coordination details, among other program management and implementation strategies. The comments and reply comments on this topic will help shape our proposed Phase V EE&C Plan Template.

Multiple parties point to remediation of health and safety issues that prevent energy efficiency installations as an important area for coordination between Act 129 and other program administrators. We reject the suggestion that each EDC must offer a health and safety pilot in Phase V. PECO and PPL should be able to leverage the learnings of their Phase IV health and safety pilots in Phase V planning. The Commission is generally wary about appropriating limited Act 129 funds to health and safety upgrades. While these upgrades clearly address an important social need and can unlock conservation potential, they do not directly produce energy and peak demand savings. The low-income savings targets established in Section A.5 of this Implementation Order presume a certain volume of energy savings per dollar of program spending, so we must be careful not to require investments that do not return energy savings. However, remediation of health and safety issues is an ideal area for coordination. NEEP, the Joint Energy Advocates, and the Low Income Advocates highlight multiple potential collaboration partners to address health and safety concerns. The Commission will include in its proposed EE&C Plan Template a section for EDCs to describe its plans to address health and safety issues that arise in the delivery of Act 129 services. We will also direct the Phase V SWE to include a table in the EDC Annual

Report Template for EDCs to list the number of homes deferred and referred due to health and safety issues to increase stakeholder visibility on this topic.

The Commission is not persuaded by the misgivings of PPL, PECO, and FirstEnergy regarding the challenges of collecting data on outside funding. We agree that the data is likely to be imperfect, but imperfect data is better than none at all. We reject the Low Income Advocates' suggestion of project-level reporting for leveraged projects of any size as doing so could expose potentially sensitive customer-specific data. For Phase V of Act 129, we adopt the proposed leverage ratio definition and will direct the SWE to add the relevant tables and figures to the Phase V EDC Annual Report Template.

The Commission adopts OCA's suggestion to also track any administrative costs incurred by the EDCs to support the braiding of funds. OCA astutely points out that this tracking is necessary to compare the costs and benefits of a braided funding. As suggested by Duquesne Light in reply comments, these costs should be classified as incentives for cost-effectiveness and other reporting. However, we reject OCA's suggestion that any low-income savings resulting from braided funds should not be counted towards the achievement of the low-income carve-out. The policy OCA suggests would strongly discourage EDC coordination in the low-income sector and provide EDCs a disincentive to report braided funding.

2. Heat Pumps and Other Fuel Switching

Act 129 has a clear focus on reductions in electricity consumption and peak demand. While the Commission recognizes the greenhouse gas reduction potential of such initiatives, beneficial electrification programming that encourages customers to replace fossil fuel equipment with electric equipment runs counter to the objectives of Act 129 and should not be included in Phase V EE&C plans. However, the expected expansion of other state and federal conservation programs in the Commonwealth creates

an opportunity for the EDCs to support this type of initiative without violating the intent of Act 129. Specifically, if another state program incentivizes the fuel switching upgrade, the EDCs can and should incentivize the home or business to install a high-efficiency electric unit. Consider the following hypothetical example:

- A residential household with oil space heating and domestic water heating participates in the IRA-funded HEAR program managed by DEP.
- The home installs a high-efficiency cold climate air source heat pump and a heat pump water heater.
- The EDC that serves the home provides an incentive for the air source heat pump and heat pump water heater, then claims savings relative to a code-minimum electric baseline unit following the algorithms and assumptions in the 2026 TRM.
- The availability of Act 129 incentives allows the HEAR program to treat the home at a lower cost than would be possible absent Act 129 program support or offer a higher total incentive through the combination of HEAR and Act 129 incentive dollars.

The Commission recognized the uncertainty regarding the timeline and other implementation details of IRA-funded programs. However, this external funding presents a unique opportunity to amplify the benefits of Act 129 investments and support electrification efforts in the Commonwealth without violating the intent of the Act 129 by leveraging the flexibility of other programs to support beneficial electrification. The Commission proposed that each EDC include in its EE&C plan high-efficiency heat pump and heat pump water heater measures available to HEAR and other non-Act 129 program participants along with a description of how program delivery will target these bundled, or interwoven, funding opportunities.

a. Comments

Stakeholders generally support Act 129 incentives for high-efficiency heat pumps and heat pump water heaters when another program incentivizes a fuel-switching upgrade. KEEA notes that this strategy aligns with Act 129's core goal of cost-effective energy consumption reduction and leverages external funding while encouraging EDCs to promote the highest-performing models. KEEA Comments at 9. The Joint Energy Advocates endorse the proposal because it promotes strategic coordination and expands customer access to energy-saving technologies. Joint Energy Advocates Comments at 15. NEEP specifically supports the proposed EE&C plan narrative regarding how EDCs will leverage non-Act 129 funds and work with non-Act 129 programs to support beneficial electrification. NEEP Comments at 9. Advanced Energy United supports the proposed requirement for the EDCs to offer high-efficiency heat pump and heat pump water heater incentives to non-Act 129 program participants. Advanced Energy United Comments at 16. The Low Income Advocates express strong support for the Commission's proposal and encourage the Commission to issue further guidance requiring the inclusion of enabling measures or whole-home incentives to help ensure electrification projects reduce overall household energy burden. Low Income Advocates Comments at 57. The Clean Energy Advocates recommend that the EDCs more aggressively implement heat pumps and heat pump water heater measures and induction stoves/cooktops. Clean Energy Advocates Comments at 2.

EAP agrees with the Commission's assessment that beneficial electrification programming runs counter to the objectives of Act 129 and shouldn't be part of Phase V EE&C plans. EAP also expresses support for coordinated heat pump incentives assuming the HEAR participant meets the eligibility requirements of the EDC program and the EDC can claim the verified savings toward its compliance targets. EAP Comments at 17. RMI highlights its agreement with the Commission's hypothetical oil-heated home example and estimates that Pennsylvania has more than 850k homes

heated by delivered fuels. RMI suggests that these are disproportionately older homes in rural areas that lack the price protections associated with regulated utility service. RMI further notes that the low-income focus of the IRA funding presents a unique opportunity to support these household types in adopting electric alternatives. RMI emphasizes the importance of reduced friction for customers and stakeholder engagement on program design and shares reference materials on best practices for braiding program funding. RMI Comments at 3.

Other parties question the Commission's interpretation of Act 129's focus on electricity reductions. Advanced Energy United respectfully disagrees that beneficial electrification programming runs counter to the objectives of Act 129 because replacing fossil fuel equipment with efficient electric equipment can reduce total energy consumption. Advanced Energy United maintains that Act 129 incentives should be considered if converting from a fossil fuel appliance to an electric appliance reduces overall energy consumption. Advanced Energy United Comments at 15. The Low Income Advocates respectfully disagree with the Commission's assertion that Act 129's focus on electric usage reductions should preclude the use of EE&C plans to provide beneficial electrification measures. The Low Income Advocates acknowledge that Act 129 specifies electric reduction measures and requires electric consumption reductions but maintain that beneficial electrification does not necessarily run counter to the statutory intent to reduce energy usage in the service territory. The Low Income Advocates opine that electric fuel switching measures would have a TRC of 0 but suggest this not preclude them from EE&C plans. Low Income Advocates Comments at 71. Duquesne Light supports the position of parties advocating fossil-fuel to electric beneficial electrification where fuel switching reduces energy use and lowers customer energy bills. Duquesne Light emphasizes the plain language purpose of Act 129 is to "reduce energy demand and consumption within the service territory of each electric

distribution company in this Commonwealth" and recommends the test for customer "affordability" be the Participant Cost Test. Duquesne Light Reply Comments at 4.

The Sierra Club contends that there is no tension between the Act 129 directive to reduce energy demand and beneficial electrification because electrification has the effect of reducing overall energy consumption. The Sierra Club fully agrees that, particularly where other state and federal programs support beneficial electrification, EDCs should incentivize installation of high-efficiency electric units. Sierra Club Reply Comments at 2.

Stakeholders also took positions on the topic of fuel switching from electricity to fossil fuel. The Low Income Advocates urge the Commission and EDCs to reconsider allowing electric to fossil fuel conversion through Act 129 programs because it is inconsistent with Pennsylvania policies towards decarbonization and market trends supporting building electrification. Low Income Advocates Comments at 73. UGI cautions against adopting a strict prohibition on electric to natural gas fuel switching in EE&C plans. UGI requests that the Commission reject the Low Income Advocates' proposal and maintain regulatory certainty that EDCs may propose and justify fuel switching from electric to gas because doing so serves the customer's interest given the relative retail prices of the two fuels. UGI highlights that electric to fossil fuel measures are rarely utilized in Act 129 programs and questions the premise that these measures increase greenhouse gas emissions given Pennsylvania's electricity generation fuel mix. UGI Reply Comments at 2. The Sierra Club contends that EDC incentives to de-electrify or re-carbonize homes or businesses are inconsistent with both the aims of Act 129 and the prudent harmonization of Act 129 programs with other state and federal beneficial electrification opportunities discussed in the Tentative Implementation Order, and should not be approved. Sierra Club Reply Comments at 2.

UGI questions the Commission's recommendation that EDCs pursue coordination with other programs that support electrification given Act 129's purpose is to reduce electric demand and consumption. UGI offers a portfolio of voluntary EE&C programs and seeks allowance to continue incentivizing high-efficiency gas and electric equipment for all qualifying customers, regardless of their prior fuel source. UGI Comments at 2. UGI also seeks clarification on how fuel switching would operate if IRA programs were no longer available or if there were material changes to IRA funding. UGI Comments at 3. The Low Income Advocates suggest that all ratepayer funded EE&C programming should be held to standards at least as high as programs explicitly mandated by statute. They believe it is inappropriate for the Commission to allow the use ratepayer funded EE&C programs to convert electric heating customers to gas heating. Low Income Advocates Reply Comments at 17-18.

PPL points out that the lack of available information on the HEAR program design, implementation, and coordination from the Pennsylvania DEP and recommends that the Commission withdraw the requirement for EDCs to describe how they will target these bundled funding opportunities, as EDCs cannot reasonably comply with the requirement. PPL Comments at 14.

b. Disposition

Stakeholder support was nearly unanimous for stacking heat pump and heat pump water incentives with other programs that prioritize fossil fuel to electric fuel switching. We are not persuaded by interpretations of Act 129 that suggest EDCs can directly pursue measures that increase electricity consumption, even if those measures lead to an overall reduction in energy consumption. Legal interpretations aside, the current compliance target framework is predicated on reductions in electricity consumption. The introduction of beneficial electrification measures would require a different set of compliance metrics that encourages, rather than penalizes, the EDCs for measure

installations that increase electricity consumption. None of the commenters who oppose the proposed exclusion of beneficial electrification propose an alternative compliance metric for beneficial electrification.

The Commission disagrees with the Low Income Advocates that beneficial electrification measures would necessarily have a TRC ratio of 0.0. The 2026 TRC Test Final Order[88] treats reductions in fossil fuel consumption as a benefit so the TRC ratio would only be 0.0 if the marginal cost of the fossil fuel avoided were exactly the same as the marginal cost of serving the additional electric load. The Commission does not view cost-effectiveness screening as a primary barrier to beneficial electrification. Rather, as described above, the language of Act 129 itself and the status quo compliance metrics prevent the inclusion of beneficial electrification measures in Phase V of Act 129.

The Commission declines to adopt a more definitive position on fuel-switching from electricity to fossil fuel in this proceeding. These measures were removed from the 2026 TRM, and the 2026 TRC Test Final Order did not establish a minimum efficiency level for fossil fuel equipment to qualify for Act 129 fuel-switching incentives. However, our proposed targets for Phase V assume a modest one percent allocation of program budgets to CHP. As stated in the 2026 TRC Test Final Order, EDCs wishing to incentivize fuel switching measures should include in their EE&C plan a proposed minimum standard and provide justification for the threshold to receive program support.

For Phase V of Act 129, each EDC should include in its EE&C plan high-efficiency heat pump and heat pump water heater measures available to HEAR and other non-Act 129 program participants along with a description of how program delivery will target these bundled, or interwoven, funding opportunities. In the event of the

[88] See *2026 TRC Test Final Order* at page 60.

scenarios described by UGI in which the HEAR program is no longer available, the Act 129 measures would remain available but likely see lower participation. In the scenario envisioned by PPL in which DEP does not make available information regarding program design and implementation, EE&C plan descriptions of targeting strategies would be very brief and simply note the lack of available information.

3. Data Sharing Between EDCs and State Agencies

Stakeholder comments filed in the 2026 TRC Test Final Order proceeding[89] proposed that enhanced data sharing between the EDCs, the DEP, and the Pennsylvania Department of Community and Economic Development (DCED) is essential for improving the overall outcomes of conservation programming in the Commonwealth. The Commission agreed that increased data sharing between EDCs and state agencies is important for Phase V of Act 129 given the expected increase in external (to Act 129) funding sources. The Commission encouraged stakeholders to provide specific suggestions regarding the types of data and mechanism for sharing in comments. We noted that comments containing detailed recommendations, along with reply comments to those recommendations from other stakeholders, would help the Commission arrive at its disposition on this matter and clarify the process descriptions to solicit in the Phase V EE&C Plan Template. The Tentative Implementation Order highlighted that cybersecurity and protection of personally identifiable information would be a key element of any data-sharing process considered by the Commission.

a. Comments

The Clean Energy Advocates capture a general sentiment among stakeholders that smoother data sharing is needed across the EDCs and state agencies delivering conservation programs, and will improve the cost-effectiveness and customer service of

[89] *See 2026 TRC Test Final Order* at page 44.

programs. Clean Energy Advocates Comments at 5. Oracle suggests that the need for data sharing is most acute in the low-income sector because being able to find vulnerable customers is the first step to increasing enrollment. Oracle contends that some energy-burdened customers are not aware of programs that may benefit them, and the EDC cannot proactively engage them without insight into the customers' needs. Oracle characterizes data availability as a key input to its advanced analytics process to identify more households that meet income eligibility criteria and a first step in breaking down barriers between programs. Oracle envisions a system where EDCs and state agencies share and leverage household information for targeting and outreach on what programs they applied for, whether they were approved, and whether their income was verified. Oracle Comments at 2-3.

The Joint Energy Advocates and NEEP suggest the Commission establish standards for secure, consumer-protective aggregate data sharing across providers that serve the same household. However, they insist that data sharing should be limited to the information necessary to facilitate cross-program engagement and only occur with informed, affirmative customer consent. As such, the Joint Energy Advocates recommend the development of a standardized consumer consent process and a list of common data points for collection and sharing. Joint Energy Advocates Comments at 7. NEEP also recommends that the Commission establish standards for secure, consumer-protective aggregate data sharing across providers that serve the same household. NEEP maintains that EDCs should share usage data and contact information with agencies that administer home energy programs including DEP, DCED, and DHS. NEEP points out that EDCs and state agencies commonly work with CSPs and other third parties and recommends that guidelines, processes, and enforcement mechanisms be established for those entities. NEEP Comments at 10.

KEEA avers that the lack of data sharing is one of the primary barriers to effective coordination and suggests the Commission develop a model Memorandum of Understanding (MOU) and standard consent forms to streamline agreements between utilities, weatherization providers, and housing agencies. KEEA also requests coordination of waitlists and deferral lists across programs to ensure customers who are deferred from one program due to health and safety issues are automatically considered for other relevant assistance. KEEA Comments at 3. The Joint Energy Advocates also suggest that comparison of deferral lists, and program waitlists would go a long way toward coordination efforts. The Joint Energy Advocates also endorse the development of a model MOU to facilitate data sharing arrangements because standardized forms and processes would make local agencies more likely to enter data and information sharing agreements with EDCs. The Joint Energy Advocates suggest that standardization would improve Commission oversight and believe that a Coordination Working Group would be helpful in the creation of standardized forms and guidance. Joint Energy Advocates Comments at 7.

EAP does not believe that the development of a data sharing program between EDCs and other state agencies offering energy conservation programs should be discussed, determined or implemented in connection with this Phase V Implementation Order. EAP asserts that such an endeavor is too complex to be resolved in the current proceeding given the need to resolve a multitude of issues relating to Act 129 Phase V. EAP Comments at 17. PPL respectfully requests that the Commission not include detailed recommendations or prescriptive methods for data sharing in this Order because data sharing is a highly complex issue with risk related to secure handling of customer information. PPL questions if the Commission's data sharing provisions would meet minimum security requirements across multiple organizations without detailed input from those organizations. PPL Comments at 14. PECO views data sharing between EDCs and state agencies as a significant issue with implications well beyond Act 129 programs and

should be considered in a separate, dedicated proceeding. PECO maintains that such a proceeding would permit the Commission, EDCs, government agencies and other stakeholders to take the time necessary to address a range of key issues, including:

1) What entities will share data and have access to shared data.
2) The types of data that will be shared and how that data will be used.
3) Where the data will be stored and the cybersecurity requirements that should apply to data transmission and storage.
4) Requirements for customer consent and what entity will obtain and maintain records of consent.
5) Who will bear the costs associated with the data transmission and storage.

KEEA expresses its strong support of enhanced data sharing in reply comments and claims that now is precisely the right time to establish a clear path for data sharing between EDCs and state agencies administering complementary programs. KEEA agrees with NEEP that formal statewide policies will enable better coordination and deeper savings. KEEA cautions that dismissing data sharing as too complex or speculative to address in this proceeding risks undermining the efficiency gains that Act 129 and the IRA aim to deliver. KEEA alleges that what's needed is the regulatory direction to establish secure, aggregated data sharing protocols and formal collaboration with other agencies. KEEA Reply Comments at 1.

PECO urges the Commission to refrain from imposing any data sharing requirements on EDCs in this Implementation Order. PECO Comments at 25. Duquesne Light opposes requirements for EDCs to share extensive customer identifying information, usage records, and program participation activity and suggests that the parties who request enhanced data sharing significantly underestimate the time, expense, and risk entailed by centralized access to EDC customer data. Duquesne Light

recommends that the Commission reject these proposals on the basis of cyber-security threats and budget constraints. Duquesne Light Reply Comments at 7. FirstEnergy supports PECO's comments on data sharing and believes it should be considered in a separate, dedicated proceeding and does not believe any data sharing requirements should be imposed on the EDCs in the Final Implementation Order. FirstEnergy Reply Comments at 17.

KEEA recommends the Commission establish a formal PUC process for data gathering and oversight which builds upon previous data access proceedings and lays out the elements it believes the process should address. KEEA Comments at 11. The Joint Energy Advocates accentuate that the issue of data sharing is broad in scope and strongly recommends that the Commission establish a formal PUC process for data gathering and oversight that adopts best practices from other states and industries to ensure robust cybersecurity protections while allowing for necessary data transparency. Joint Energy Advocates Comments at 17. NEEP recommends the Commission establish a formal stakeholder process for data collection and transparency. NEEP Comments at 10. Oracle supports the comments of utilities and others noting that data sharing considerations are best considered in a dedicated working group or stakeholder process. Oracle Reply Comments at 3. OCA agrees with the request of PPL and other parties to hold a separate proceeding and/or docket to allow all parties to sufficiently address issues on data sharing, such as establishing the level of data shared, protocols for sharing, and developing a data breach process. OCA Reply Comments at 8.

Several parties point to the Universal Service Working Group[90] (USWG) as a starting point for guidance on enhanced data sharing. CEEH-PA recommends that the Commission develop standardized application and audit forms that can be adopted by each of the EDCs and build a common website for EE&C program information and

[90] *See* https://www.puc.pa.gov/electricity/universal-service/universal-service-proceedings/

referrals for related programs. CEEH-PA encourages the Commission to expand on the efforts of the USWG to help streamline access to and knowledge about EE&C programs. CEEH-PA Comments at 32. The Low Income Advocates recommend the Commission build on the work of the USWG to develop standardized guidance governing data sharing between EDCs, state agencies, and program administrators. Low Income Advocates Comments at 57, Low Income Advocates Reply Comments at 12. The Low Income Advocates recall that the USWG was specifically charged with exploring ways the Commission could support and enhance the LIHEAP data sharing policy between the DHS and utilities. The Low Income Advocates note that the resulting data sharing policy was developed collaboratively through detailed policy considerations and an iterative process. The Low Income Advocates agree that the complexity of this topic is not conducive to the compressed comment and reply comment period of this Implementation Order and recommend the Commission build off the work of the USWG in a separate proceeding. Low Income Advocates Comments at 57.

PECO asserts that a separate data sharing proceeding would permit the Commission, EDCs, and other stakeholders to fully address each proposal and notes that separate proceedings do not foreclose the possibility of implementing the results of those proceedings in Phase V EE&C plans. PECO points out that, should the Commission determine that any of the proposed data sharing mechanisms or program standardizations are appropriate and resolve issues associated with the scope and cost, those mechanisms could be implemented in Phase V either through proposals during individual EDC plan proceedings or through the established Act 129 amendment processes. PECO Reply Comments at 6-7.

b. Disposition

Stakeholder comments on this topic underscore both the importance and complexity of data sharing across program administrators. The Commission finds

persuasive the position of parties who submit that this Order is not the appropriate forum to issue detailed guidance on data sharing, customer consent, and cyber security practices. The objective of this Implementation Order is to establish compliance targets for Phase V of Act 129 and provide the EDCs with the necessary guidance to develop their Phase V EE&C plans. While relevant to Act 129, data sharing is a much broader topic best addressed in a dedicated proceeding. To address these important issues, we believe the creation of a working group, culminating in recommendations to the Commission is the appropriate process. Therefore, the Commission directs the Bureau of Technical Utility Services, with the assistance of the Bureau of Consumer Services and the Law Bureau, to convene a working group within 45 days of the issuance of this Implementation Order to work with stakeholders to explore the following topics.

- An inventory of current data sharing processes and policies stemming from the USWG or other relevant proceedings.
- The types of data that should be shared across program administrators and the expected benefits of sharing that information.
- Requirements for customer consent to have potentially sensitive information shared.
- Guidelines for third-party CSPs who may collect or utilize customer data on behalf of program administrators.
- A template Memorandum of Understanding, which can be used to standardize and expedite sharing agreements across parties.
- Recommendations for the data storage and exchange procedures between parties. For example, should parties "push" data to one another on a regular cadence or "pull" information on an as-needed basis?
- How the administrative costs of data sharing should be divided across parties.

The working group report should provide recommendations to the Commission on potential solutions and next steps to foster secure data sharing between program administrators.

4. Support with AEPS Act Registrations

Pennsylvania's AEPS Act[91] promotes the development and use of alternative and renewable energy sources and seeks to reduce the Commonwealth's reliance on traditional fossil fuels. The AEPS Act requires EDCs to obtain a prescribed percentage of their retail electric sales from qualifying alternative energy resources. The Alternative Energy Credits (AECs) required by the AEPS Act are categorized into three tiers: Tier I Non-Solar, Tier 1 Solar, and Tier II. Many energy efficiency projects can earn Tier II credits and Solar PV projects can earn In-Commonwealth Tier 1 Solar credits. The average price of Tier II credits, which have the highest percentage requirement of the three credit tiers, has risen sharply over the last five years. The 2026 TRC Test Final Order provides direction regarding the calculation of avoided AEPS costs attributable to reduced retail sales by the EDCs associated with energy efficiency.[92] The Commission maintains that Act 129 programs should contribute more AECs than current registration patterns indicate. AEPS registration would provide an additional recurring revenue stream for program participants on top of the upfront EDC rebate, and the additional supply of AECs could help drive down the cost of compliance for the EDCs.

Given the sharp increase in value, the Commission proposed each EDC include in their EE&C plan a process to help facilitate AEPS registration for C&I participants of Act 129 programs to register their EE projects and take advantage of the elevated market prices. This facilitation process could include AEPS program information with Act 129

[91] *See* 73 P.S. §§ 1648.1–1648.8 and 66 Pa. C.S. § 2814. *See* also 52 Pa. Code §§ 75.1–75.72.
[92] *See 2026 TRC Test Final Order* at page 44.

rebate applications, CSP support with the AEPS registration process, EDC sharing of project documentation with the AEPS administrator, EDC sharing of reported gross and verified gross savings calculations, or EDC sharing of meter data. The Tentative Implementation Order noted that EDCs should not retain the rights to AECs or earn proceeds from the sale of AECs. Those proceeds should flow to the participant or project developer to help offset their project costs.

a. Comments

FirstEnergy agrees with promoting and providing information regarding the AEPS program to program participants, but opposes the use of Act 129 budgets to provide support or assistance to customers to participate in the AEPS program. FirstEnergy cites the administrative cost and potential for cross-subsidy of certain customers at the expense of others as the basis for its opposition. Specifically, FirstEnergy requests that the administrative cost of any required support or assistance be reflected in higher acquisition costs and lower targets. FirstEnergy Comments at 26. EAP also opposes the Commission's proposal and maintains that it is the EDC's decision, not the Commission's, whether to include AEPS support measure(s) in a Phase V EE&C plan. EAP contends that the proposal limits plan design flexibility and does not provide measurable and verifiable savings that can be counted towards compliance. EAP Comments at 18.

The Clean Energy Advocates favor EDC facilitation of AEPS registration of energy efficiency credits for C&I customers and suggest that energy efficiency and demand response is likely to become even more important in the portfolio standard in the future. Clean Energy Advocates Comments at 4. KEEA agrees and submits that helping participants register their Act 129 projects for AECs can provide an important supplementary benefit that improves project economics, supports broader clean energy objectives, and potentially reduces overall AEPS compliance costs. KEEA recommends

that the EDCs include AEPS facilitation measures in their EE&C plans, such as technical assistance, standardized documentation, and information sharing. KEEA requests that the Commission clarify that such efforts are permissible uses of administrative funding within Act 129 but allow EDCs the flexibility to design this support in ways that align with their portfolios and customer needs without imposing a rigid mandate on utilities. KEEA also addresses EAP's primary concern and maintains that, while AEPS registration may not produce direct, verifiable energy savings toward Act 129 compliance, it enhances the overall value proposition for customers and can help increase participation. KEEA Reply Comments at 2.

b. Disposition

The Commission is not compelled by the concerns put forth by EAP and FirstEnergy on this matter. Each EDC shall propose in their EE&C plan a process to help facilitate AEPS Act registration for C&I participants of Act 129 programs to register their EE projects and take advantage of the elevated AEC pricing. EDCs can design this support in a way that aligns with the needs of its customers and treat the cost of AEPS Act registration support as a recoverable administrative cost. Given the upside for the EDCs in terms of customer participation, we reject FirstEnergy's suggestion that the EEPDR Potential Study acquisition costs be adjusted upward to accommodate this requirement.

5. IRA-Required Audits

Other conservation programs will invariably have different rules, eligibility criteria, and administration processes than Act 129 EE&C programs administered by the EDCs. One known example is the HER program requirement to complete American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Level 2 audits. ASHRAE Level 2 audits are a significant upfront investment, which may or may not result in the identification of savings opportunities. There is also no guarantee that a

prospective program participant will move forward with some, or all of the savings opportunities identified due to limited access to capital or other considerations. However, the need for this type of technical assistance will likely grow as conservation programs look to move beyond lighting measures and achieve deeper savings in homes and businesses.

The Commission maintains that it is reasonable for the EDCs to co-fund ASHRAE Level 2 audits or other technical scoping studies for sites they believe are likely to provide a return on the upfront investment. These criteria could be based on available electric consumption at the facility, historic propensity of certain customer types to participate in programs, or other characteristics identified by the EDC and its CSPs. In exchange for sharing the cost of the upfront audit, the EDCs should be entitled to provide rebates or direct installation for all eligible electric measures and claim the full associated savings towards Phase V targets.

The external funding sensitivity analysis included in the SWE's EEPDR Potential Study modeled $5 million of statewide Phase V funding as allocated to ASHRAE Level 2 audits and thus returning no direct savings. This resulted in a decrease in savings of 9.9 GWh statewide. However, that same sensitivity analysis showed an estimated increase in savings of 47 GWh statewide due to the presence of HER and HEAR funding. This sensitivity analysis suggests that the incremental savings attributable to the expected availability of external funding would more than offset the loss of program budgets attributable to co-funding audits. Naturally, there is some uncertainty in the availability of program funds from outside of Act 129, but this same uncertainty is present with the audit expenditures. Furthermore, the two are inherently correlated because if IRA-funded programs are unavailable, or underfunded relative to current projections, in Phase V, the request for EDC co-funding would also end or decrease.

a. Comments

DEP strongly supports the proposal that EDCs co-fund ASHRAE Level 2 audits and suggests the Commission specifically earmark the $5M value that the SWE explored in a sensitivity analysis within the EEPDR Potential Study. DEP notes that these funds would help implement deep energy retrofits for low-income multifamily housing through the HER program. DEP Comments at 2. KEEA agrees that EDCs should be permitted to co-fund ASHRAE Level 2 audits to help overcome the persistent gap in funding for comprehensive audits needed to develop projects in multifamily and commercial buildings. KEEA Comments at 5. The Joint Energy Advocates mention ASHRAE Level 2 audits as an example of a common audit designed for interoperability across agencies. Joint Energy Advocates Comments at 8.

The Low Income Advocates agree that it is reasonable for an EDC to co-fund ASHRAE Level 2 audits or other technical scoping studies given the 100% savings attribution policy set in the 2026 TRC Test Final Order. The Low Income Advocates emphasize that audit costs can be a substantial barrier for affordable multifamily housing providers which serve low-income populations and have the least resources for investment in building upgrades. Low Income Advocates Comments at 59. KEEA points to the EEPDR Potential Study sensitivity analysis and maintains that audit co-funding is a low risk, high leverage opportunity to stretch ratepayer dollars further because the incremental energy savings enabled will more than offset any budget reallocation necessary to support the audits. KEEA Reply Comments at 2.

PECO believes it would be unreasonable to co-fund costly upfront audits for other programs in which there is no guarantee of Act 129 savings. PECO Comments at 24. PPL also opposes the Commission's proposal and maintains that the CSPs currently administering PPL's Phase IV EE&C programs do not have the expertise to conduct these audits because they are not required for Act 129 programs. PPL recommends that

IRA program administrators build this capability into their programs and secure the necessary vendors to complete these audits. PPL Comments at 15. EAP opposes a requirement to include the co-funding of ASHRAE Level 2 audits for HER participants in Phase V EE&C plans and posits that the proposal undermines EDC flexibility in plan design by allocating funds to expensive audits with little assurance of acquiring any savings. EAP Comments at 19. Duquesne Light does not take an explicit position on co-funding ASHRAE Level 2 audits but supports a policy whereby upfront customer audits entitle EDC program enrollment and the ability to claim the full associated savings toward the Phase V targets. Duquesne Light Comments at 14.

The Low Income Advocates and CEEH-PA support the Commission's proposal, but object to the list of criteria an EDC might use to target its support. The Low Income Advocates are deeply concerned by the mention of historic propensity to participate in programs and perceive it as a subjective criterion. CEEH-PA recognizes and understands that EDCs will want some certainty that the building owner will follow through with installing energy efficiency measures identified via an audit, but recommends the Commission replace the historic participation criterion with the consumer's likelihood of program participation. CEEH-PA Comments at 30. The Low Income Advocates also request that EDCs be required to provide measure incentives in addition to co-funding audits in order to claim savings. Low Income Advocates Comments at 60.

b. Disposition

For Phase V of Act 129 EDCs should co-fund ASHRAE Level 2 audits or similar technical scoping studies with other program administrators. The list of potential criteria in the Tentative Implementation Order was included for illustration purposes only so the Commission rejects suggestions to modify the list. In response to DEP's comments, we clarify that the $5M investment was a reference to the sensitivity analysis in the EEPDR Potential Study, not a proposal. EDCs shall have the flexibility to propose audit co-funding budgets and criteria in their Phase V EE&C plans. While we reiterate our

prior position on 100% savings attribution, co-funding an audit alone does not entitle an EDC to full electric savings. EDCs must also incentivize or directly install eligible electric measures to claim the full associated savings towards Phase V targets. The Commission agrees with PPL that IRA program administrators should secure the necessary vendors to complete the ASHRAE Level 2 audits. The EDCs shall be required to contribute financially to audit costs, not secure the necessary personnel to perform the audits.

6. Coordinated Marketing Campaigns

The Act 129 EE&C program and other conservation programs in the Commonwealth are inherently focused on a common pool of electric account holders. To lower outreach costs, limit confusion, and maximize the opportunities for complementary services, the Commission maintains that EDCs and other program administrators should consider joint marketing campaigns that highlight the availability of multiple funding sources. This would allow other program administrators to leverage the customer contact information that the EDCs must maintain for billing and other core services.

a. Comments

EAP contends that a coordinated marketing campaign with other conservation providers should not be an Act 129 EE&C plan requirement because it is unclear how those efforts would translate to compliance savings. EAP believes that EDCs must be wary of spending limited funds on efforts that do not have a pathway to verifiable savings. EAP Comments at 20. KEEA maintains that coordinated marketing, while it does not produce direct measure-level savings, is a critical component of the infrastructure that enables successful energy efficiency outcomes. KEEA avers that marketing and outreach are the foundation of program participation and should not be viewed as a cost without return. Rather KEEA encourages the Commission and program administrators to understand it as a strategic investment that improves cost-effectiveness

by maximizing the reach and impact of energy efficiency offerings. KEEA strongly supports the Commission's position and urges that coordinated marketing remains a recommended and encouraged activity in Phase V EE&C plans. KEEA Reply Comments at 4.

PPL disagrees with the Commission's position and maintains that joint marketing campaigns have the potential to increase confusion and obscure the proper point of entry, while also reducing the impact of EDC marketing campaigns related to Act 129. PPL also points out that EDCs have strict branding and communication requirements that may not align with external programs so the approval process for joint marketing campaigns will be long. PPL Comments at 16. PECO comments that it intends to continue providing links on the PECO website to other conservation funding opportunities, but is concerned that jointly developed marketing materials or campaigns would involve additional time, complexity, and potentially new costs as compared to current marketing efforts. PECO also worries that joint marketing materials could easily become outdated or inaccurate if, for example, a government program is suspended due to lack of funding. PECO Comments at 25.

The Low Income Advocates agree with the Commission's suggestion and specifically recommend a centralized website to serve as a landing spot for Act 129, LIURP, and other universal service and energy conservation programs. The Low Income Advocates suggest that other state and federal programs could also join a platform of this type and help bring cohesion to Pennsylvania's confusing patchwork of efficiency, conservation, weatherization, and other energy assistance programs. Low Income Advocates Comments at 61. The Joint Energy Advocates agree that marketing is a key element of coordination and leveraging external funding and recommend a central website to help customers identify what incentives they qualify for based on their income, home type, and energy usage. Joint Energy Advocates Comments at 18. NEEP also

envisions a single statewide platform for customers and contractors that presents all program offerings. NEEP points to Massachusetts and Connecticut as examples of states that have core energy efficiency and electrification programs aligned across utilities and offered on a statewide platform where customers can learn more about their rebates and find local contractors. NEEP Comments at 8. KEEA also supports a centralized resource that provides information on all available energy efficiency, weatherization, and financial assistance programs in Pennsylvania. KEEA Comments at 5.

b. Disposition

The Commission agrees with PPL that corporate branding and communication requirements will pose a challenge to coordinated marketing campaigns. Our intent is not to prescribe jointly developed communications, but to encourage the EDCs to highlight the availability of multiple funding sources and provide prospective Act 129 participants with information where they can learn more about external funding opportunities. A centralized platform with information about the various efficiency, conservation, weatherization, and other energy assistance programs is a useful concept, but outside the scope of this Implementation Order. Unlike Massachusetts and Connecticut, Pennsylvania has four EDCs each responsible for design and execution of its own EE&C plan and there is no requirement that those plans align with respect to program offerings or incentive levels. Pennsylvania is a much larger state in terms of electric consumption and population. We reject suggestions to establish a common statewide platform but reiterate our position that EDCs should explore coordinated marketing efforts where such activities are likely to improve the leverage ratio of Phase V EE&C plans.

D. Plan Approval Process

Act 129 requires the Commission to establish procedures for approving EE&C plans submitted by EDCs (66 Pa. C.S. § 2806.1(a)(1)). For the initial phase of the EE&C program, Act 129 dictated that all EDCs with at least 100,000 customers must develop and file an EE&C plan with the Commission by July 1, 2009, for approval (66 Pa. C.S. § 2806.1(b)(1) and 2806.1(l)). The Commission was to conduct a public hearing on each EE&C plan that allowed for the submission of recommendations by the statutory advocates and the public regarding how to improve the EDC's EE&C plan (66 Pa. C.S. § 2806.1(e)(1)). The Commission was to rule on each EE&C plan within 120 days of submission (66 Pa. C.S. § 2806.1(e)(2)). If the Commission disapproved of some or all of an EDC's EE&C plan, it was to describe in detail its reasons for disapproval, after which the EDC had 60 days to submit a revised EE&C plan (66 Pa. C.S. § 2806.1(e)(2)). The Commission then had 60 days to rule on the revised EE&C plan (*Id*).

1. Phase V EE&C Plan Approval Process

In Phase I of the EE&C program, we established an EE&C plan approval process that balanced the desire to respect feedback from all interested parties with the need to complete the process within the statutory time constraints. We noted that the EE&C plans were evolutionary in nature as Act 129 provides for modification of those plans after approval. Finally, we noted that, while we had established a formal approval process, we specifically directed the EDCs to offer and engage in informal discussions with the statutory advocates and interested stakeholders during the pre-filing development of their EE&C plans.[93]

The approval process established in Phase I of the EE&C program was as follows:

[93] *See Phase I Implementation Order* at page 10.

> The Commission will publish a notice of each proposed plan in the *Pennsylvania Bulletin* within 20 days of its filing. In addition, the Commission will post each proposed plan on its website. An answer along with comments and recommendations are to be filed within 20 days of the publication of the notice in the *Pennsylvania Bulletin*. Each plan will be referred to an Administrative Law Judge ("ALJ"), who will establish a discovery schedule and hold a public input hearing(s) in the EDC's service territory, as well as an evidentiary hearing(s) on issues related to the EDC's EE&C plan. Such hearings are to be completed on or before the 65th day after a plan is filed, after which, the parties will have 10 days to file briefs. The EDC will then have 10 days to submit a revised plan or reply comments or both. The ALJ will then certify the record to the Commission.
>
> The Commission will approve or reject all or part of a plan at public meeting within 120 days of the EDC's filing. The Commission will provide a detailed rationale for rejecting all or part of a plan. Thereafter, the EDC will have 60 days from the entry date of the order to file a revised plan that addresses the identified deficiencies. This revised plan is to be served on OCA, OSBA [Office of Small Business Advocate], OTS [Office of Trial Staff][94] and all other parties to the EDC's EE&C plan filing, who, along with other interested parties, will have ten days to file comments on the revised plan, with reply comments due ten days thereafter. The Commission will approve or reject a revised plan at a public meeting within 60 days of the EDC's revised plan filing. This process will be repeated until a plan receives Commission approval.[95]

For Phases II, III, and IV, we utilized the same approval process with one revision. Specifically, we eliminated the need for a public input hearing, unless specifically requested, since interested parties have ample opportunity to participate in the proceedings, attend EDC stakeholder meetings, or are already adequately represented. We directed the EDCs to offer and engage in informal discussions with the statutory

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[94] OTS is a reference to the Commission's former Office of Trial Staff. As of August 11, 2011, OTS was eliminated and its functions and staff transferred to the newly created Bureau of Investigation and Enforcement. *See Implementation of Act 129 of 2008; Organization of Bureaus and Offices*, Final Procedural Order, entered August 11, 2011, at Docket No. M-2008-2071852, at pages 4-5. Available online at: https://www.puc.pa.gov/pcdocs/1142505.docx

[95] *See Phase I Implementation Order* at pages 12-13.

advocates and interested stakeholders during the pre-filing development of their EE&C plans.[96]

Act 129 requires EDCs to file a new EE&C plan with the Commission every five years or as otherwise required by the Commission. Such new plans must set forth the manner in which the EDC will meet the required reductions in consumption under subsections (c) and (d) of Act 129 (*See* 66 Pa. C.S. § 2806.1(b)(1)(ii)). Therefore, we proposed that the EDCs file new EE&C plans outlining how they will implement measures/programs necessary to attain the consumption and peak demand reduction targets proposed herein. Additionally, we proposed, for the approval of the EDCs' Phase V EE&C plans, the same process that was utilized in Phases II, III, and IV. We believe this process balances the needs of all stakeholders while recognizing the time constraints and resource allocation required in the litigation of the plans.

a. Comments

NEEP requests additional opportunities for stakeholder engagement during the formal evidentiary hearing process for EE&C plans by requiring each EDC to hold public meetings about their plans. NEEP suggests stakeholder engagement processes in states such as Connecticut or Massachusetts could serve as a model for Pennsylvania. NEEP Comments at 11. The Joint Energy Advocates request that the Commission use the Public Input Hearing process to collect written and verbal comments from the public in parallel with the formal evidentiary process for each EDC's EE&C plan. Joint Energy Advocates Comments at 19. The Low Income Advocates request that the Commission hold a public input hearing in each plan proceeding, as it did in Phase I, while also allowing stakeholders the option to file written comments. The Low Income Advocates further recommend several modifications to the EE&C plan review process: that referral

[96] *See Phase II Implementation Order* at page 61; *Phase III Implementation Order* at pages 89-91.

to the Office of Administrative Law Judge (OALJ) and commencement of the formal review process be co-extensive with the public comment period; that a prehearing conference be held promptly at the conclusion of the formal answer period; that the Answer period be shortened to 15 days; and that an interim process be established for granting petitions to intervene and discovery modifications. Low Income Advocates Comments at 63-64.

PPL disagrees with NEEP and other stakeholders that changes are needed to the Phase V EE&C plan process to facilitate additional opportunities for public comment. PPL comments that interested stakeholders have adequate time and opportunity to respond to EDCs' EE&C plan filings by intervening in the proceedings or by submitting comments on the filings. If the Commission alters the existing process, the Commission could delay EE&C plan development, add administrative burdens to EDCs, or both. PPL notes that the EE&C plan proceedings have very limited time available and adding a public input hearing requirement would further limit the number of available days in the already tight-timeframe litigation schedules. PPL Reply Comments at 9.

Similarly, PECO does not believe that the Commission should create "parallel" tracks for public comments and evidentiary hearings. PECO Reply Comments at 8-9. EAP opposes the suggestion for additional stakeholder engagement. EAP does not believe that new and different methods for stakeholder input in program design are necessary and comments that the Commission's existing process offers various methods for stakeholder input. In support of its position EAP points out the comments and reply comments on this Implementation Order, the EDCs' semi-annual reporting, and stakeholder meetings in which the EDCs and stakeholders can review and comment on the performance, progress, and operation of the programs. EAP maintains that the EDCs have been open to meeting with stakeholders more frequently as needed to discuss ongoing plans and programs. EAP Reply Comments at 4.

b. Disposition

The Commission agrees with PPL, PECO, and EAP that the Phase V EE&C plan approval process should remain as proposed as the approval process already allows stakeholders to intervene or comment on the proceedings. We fear that modification to the plan approval process to establish additional opportunities for stakeholder engagement could jeopardize the timely launch of Phase V EE&C plans and lead to adverse outcomes. We maintain that the approval process for Phase V, following the processes used in Phases II through IV, provides multiple points for stakeholder engagement, while acknowledging timeline and resource constraints that impact all parties involved with the EE&C plan approval process.

2. Phase V Planning Timeline

Table 21 shows the Commission's proposed timeline for the Implementation of Phase V of the EE&C program. The Commission proposed this timeline as it believes it balances the needs of all parties. This timeline allows for input from all interested stakeholders and provides all parties with the appropriate level of due process, as well as giving the EDCs adequate time to implement their EE&C plans in a manner to meet the proposed Phase V consumption and peak demand reduction requirements.

Table 21: Proposed Phase V Planning Timeline

Date	Milestone
February 20, 2025	Tentative Implementation Order on Public Meeting agenda[97]
March 8, 2025	Tentative Implementation Order Notice published in *Pennsylvania Bulletin*[98]
April 7, 2025	Tentative Implementation Order Comment due date
April 22, 2025	Tentative Implementation Order Reply Comment due date
June 18, 2025	Final Implementation Order on Public Meeting agenda
July 7, 2025[99]	Petitions for Evidentiary Hearings filing deadline[100]
October 24, 2025	Evidentiary Hearing records certified to the Commission
November 1, 2025	If necessary, EDCs file EE&C plans
March 2026	If necessary, Commission rules on EE&C plans
June 1, 2026	Phase V EE&C programs begin

a. Comments

EAP requests that the Commission extend the date for filing EE&C plans from November 1, 2025, until November 18, 2025. EAP comments that the Phase V timeline provides approximately 20% less time than the Phase IV timeline between the date the Final Implementation Order is scheduled for inclusion on the PUC Public Meeting agenda (June 18, 2025) and the proposed EE&C plan filing date. EAP Comments at 20.

[97] The timing of Commission approval of a Public Meeting agenda item is tentative and may change at any time at the Commission's discretion, unless a statutorily mandated timeline is associated with that agenda item.

[98] This proposed date reflected the Commission's intent to submit the Tentative Order by the deadline necessary for publishing in the March 8, 2025, issue of the *Pennsylvania Bulletin*. It does not reflect deadlines/timelines binding on the Legislative Reference Bureau.

[99] The proposed filing deadline for Petitions for Evidentiary Hearings is 15 days following the entry date of the Final Implementation Order, which would be July 3, 2025, if the Final Implementation Order is entered on June 18, 2025. Because June 19, 2025, and July 4, 2025, are holidays, we propose July 7, 2025, as the filing deadline.

[100] Such filings are at the EDCs' discretion.

Duquesne Light and FirstEnergy request updating the date EDCs file EE&C plans to November 18, 2025, citing the reduced timeline compared to Phase IV. Duquesne Light Comments at 15, FirstEnergy Comments at 27. PECO supports the revised timeline proposed in the EAP Comments (i.e., November 18, 2025). PECO Comments at 28. PPL requests that the filing date for the EE&C plans be updated to November 30, 2025. PPL Comments at 16.

OCA is not opposed to an extension for the EDCs to file their EE&C plans. However, OCA requests that if a filing extension is granted, the Commission adjust future date requirements accordingly. OCA Reply Comments at 8. The Low Income Advocates disagree with EAP, FirstEnergy, Duquesne Light, and PPL's recommendation to extend the due date for EE&C plan filing from November 1, 2025, to provide stakeholders with sufficient time to conduct litigation. In addition, the Low Income Advocates recommend several modifications to the EE&C plan review process to better coordinate the public comment period with the litigation schedules. Low Income Advocate Reply Comments at 18-20.

b. Disposition

The Commission accepts the recommendation from EAP, FirstEnergy, Duquesne Light, and PPL to extend the due date for Phase V EE&C plan filing. The date for this milestone shall be November 30, 2025. The Commission does not agree with OCA to extend all subsequent dates beyond the EE&C plan submission date by the same amount of time, nor with Low Income Advocates comment to leave the date unchanged for additional stakeholder review time. The revised schedule aligns with the Phase IV planning timeline. As discussed in Section D.1 of this Implementation Order, the Commission does not support modifying the EE&C plan approval process. The Commission adopts the Final Phase V Planning Timeline outlined in Table 22.

Table 22: Final Phase V Planning Timeline

Date	Milestone
February 20, 2025	Tentative Implementation Order on Public Meeting agenda
March 8, 2025	Tentative Implementation Order Notice published in *Pennsylvania Bulletin*
April 7, 2025	Tentative Implementation Order Comment due date
April 22, 2025	Tentative Implementation Order Reply Comment due date
June 18, 2025	Final Implementation Order on Public Meeting agenda
July 7, 2025[101]	Petitions for Evidentiary Hearings filing deadline[102]
October 24, 2025	Evidentiary Hearing records certified to the Commission
November 30, 2025	If necessary, EDCs file EE&C plans
March 2026	If necessary, Commission rules on EE&C plans
June 1, 2026	Phase V EE&C programs begin

3. Standards to Ensure that a Variety of Measures are Applied Equitably to all Customer Classes

Act 129 requires the Commission to establish standards to ensure that each EDC's EE&C plan includes a variety of measures, that each plan will provide the measures equitably to all customer classes, and that the program must include "standards to ensure that each plan includes a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers" (66 Pa. C.S. § 2806.1(a)(5)). Act 129 defines "energy efficiency and conservation measures" at 66 Pa. C.S. § 2806.1(m).

[101] The proposed filing deadline for Petitions for Evidentiary Hearings is 15 days following the entry date of the Final Implementation Order, which would be July 3, 2025, if the Final Implementation Order is entered on June 18, 2025. Because June 19, 2025, and July 4, 2025, are holidays, we propose July 7, 2025, as the filing deadline.

[102] Such filings are at the EDCs' discretion.

In Section A.5 of the Tentative Implementation Order, the Commission proposed a specific carve-out for the low-income sector. Beyond this requirement, we believe that EDCs should develop plans to achieve the most lifetime energy savings per expenditure. The Commission believes the EDCs must offer a well-reasoned and balanced set of measures tailored to usage and savings potential for each customer class. We believe that the overall limitation on cost recovery and the specific limitation tying costs to a benefited class (discussed later in this Implementation Order) will ensure that offerings will not be skewed toward or away from any particular class. There is no single set of measures that will fit all EDCs and the mix of customer classes. It is entirely possible that the most cost-effective programs may not come proportionally from each customer class.

The Commission believes that all classes of customers will benefit from a general approach because it has the best potential to impact future energy prices. For Phase V of Act 129, the Commission proposed not to require a proportionate distribution of measures among customer classes. However, the Commission proposed offering each customer class at least one program. The Commission believes that, as with prior Phases, the EDCs should determine the initial mix and proportion of programs, subject to Commission approval. While we will leave the initial mix and proportion of energy efficiency and demand response programs to the EDCs, the Commission expects the EDCs to provide a reasonable mix of programs for all customers. The EDC bears the burden to explain and justify its distribution of measures among its customer classes if such distribution is challenged.

a. Comments

The Clean Energy Advocates recommend that the EDCs support several specific measures in their programs, including low-income solar PV, residential and commercial solar PV distributed generation, induction cooking appliances, heat pumps and heat pump

water heaters. Clean Energy Advocates Comments at 2, 4. CEEH-PA recommends that the Commission set policies requiring EDCs to focus on delivering building-envelope measures. CEEH-PA Comments at 21.

OSBA agrees with ensuring each customer class gets at least one program. OSBA Comments at 3. Oracle opines that, while deeper, more comprehensive measures are critical, they should not be prioritized over shorter-lived, lower-cost behavioral measures, noting that shorter-lived measures can provide immediate savings benefits and can support participation for more comprehensive measures. Oracle Reply Comments at 2.

b. Disposition

The Commission acknowledges that both longer- and short-duration measures can provide energy and cost savings for a variety of customer classes. The Commission notes that measures identified by the Clean Energy Advocates and CEEH-PA, such as solar PV, heat pumps, heat pump water heaters, induction cooktops and building-envelope measures are all approved measures in the 2026 TRM. However, the Commission disagrees with setting policies requiring the EDCs focus on these or other measures. Instead, the Commission reiterates its belief that, as with prior Phases, the EDCs should determine the initial mix and proportion of programs, subject to Commission approval, that each customer class must be offered at least one program, and that each plan shall include a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers.

4. Process to Make EE&C Plan Changes and Recommendations for Additional Measures

Act 129 requires the Commission to establish procedures through which recommendations can be made as to additional measures to let an EDC improve its plan

(66 Pa. C.S. § 2806.1(a)(6)). Furthermore, Act 129 permits the Commission to direct an EDC to modify or terminate any part of an approved plan if, after an adequate period for implementation, the Commission determines that a measure included in the plan will not achieve the required consumption reductions in a cost-effective manner (66 Pa. C.S. § 2806.1(b)(2)). The Commission proposed the procedure below for recommending additional measures that enable an EDC to improve its plan. We emphasized that interested parties will have an opportunity to make recommendations during the EE&C plan approval process as described earlier in this Phase V Implementation Order.

Regarding approved plans, the Commission will permit EDCs and other interested stakeholders, as well as the statutory advocates, to propose plan changes in conjunction with the EDC's annual report filing required by Act 129 at 66 Pa. C.S. § 2806.1(i)(1). These annual reports are to be served on the OCA, OSBA, and the Commission's Bureau of Investigation and Enforcement. The Commission will also post the annual reports on a web page dedicated to the EE&C program. The Commission and any interested party can make a recommendation for plan improvement or object to an EDC's proposed plan revision within 30 days of the annual report filing. EDCs will have 20 days to file replies, after which the Commission will determine whether to rule on the recommended changes or refer the matter to an Administrative Law Judge (ALJ) for hearings and a recommended decision in accordance with 52 Pa. Code §§ 5.41 (relating to petitions generally) and 5.572 (relating to petitions for relief).

EDCs and stakeholders may petition at any time, for changes to approved plans, wherein an EDC or stakeholder petitions the Commission to rescind and amend its prior order approving the plan in accordance with 52 Pa. Code §§ 5.41 (relating to petitions generally) and 5.572 (relating to petitions for relief). This process does not apply to minor plan changes, as described below, wherein the Commission has delegated to staff the authority to review and approve.

The Commission, in an order adopted on June 9, 2011, at Docket No. M-2008-2069887,[103] expedited the review process for approving minor EE&C plan changes proposed by EDCs. The Minor Plan Change Order defined what a minor change is and delegated authority to staff to approve, modify or reject the proposed minor changes. The Commission continued the EE&C plan approval processes described in the Minor Plan Change Order in Phase II, with one modification. In Phase II, the Commission allowed the following minor EE&C plan changes to be reviewed under the expedited review process:

- The elimination of a measure that is underperforming, no longer viable for reasons of cost-effectiveness, savings or market penetration, or has met its approved budgeted funding, participation level, or amount of savings;
- The transfer of funds from one measure or program to another measure or program within the same customer class;
- Adding a measure or changing the conditions of a measure, such as is eligibility requirements, technical description, rebate structure or amount, projected savings, estimated incremental costs, projected number of participants, or other conditions provided the change does not increase the overall costs to that customer class;
- A change in vendors for existing programs that will continue into Phase II; and
- The elimination of programs that are not viable due to market conditions.[104]

For Phase V, the Commission proposed the continued utilization of this process for the expedited review of minor EE&C plan changes proposed by EDCs.

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[103] *See Energy Efficiency and Conservation Program*, Final Order at Docket No. M-2008-2069887 (entered on June 10, 2011) (Minor Plan Change Order).
[104] *See Phase II Implementation Order* at page 91.

a. Comments

PECO and PPL propose that EDCs be permitted to make plan changes through a notification process when (1) the cumulative value of the budget transfers across programs and/or rate classes resulting from all previously-approved changes and the proposed changes do not exceed ten percent of the EDC's total EE&C plan budget for the phase; and (2) for any program year, the Cumulative Change Value does not exceed five percent of the EDC's total EE&C plan budget for the phase. The notification process would involve filing a document summarizing the change by program or customer sector and serving that document on all parties to the EDC's Phase V EE&C plan proceeding. The EDCs posit that this notification process would permit them to quickly and cost-efficiently implement relatively what they characterize as modest EE&C plan changes to improve the performance of particular programs. PECO Comments at 26 and PPL Comments at 17. EAP, FirstEnergy, and Duquesne Light support the notification process for minor EE&C plan changes described by PECO and PPL. EAP Comments at 22, FirstEnergy Comments at 27, and Duquesne Light Reply Comments at 3. PPL also strongly encourages the Commission to reevaluate the expedited review process for minor EE&C plan changes, commenting that Commission rulings for minor plan changes can take as long as or longer than major plan changes. PPL Comments at 17

The Low Income Advocates oppose the EDC and EAP proposal that they be allowed to make certain EE&C plan changes through a "Notification Process," rather than following the Commission's Minor Plan Change Process, because it would strip the stakeholders of the due process for challenging such proposed changes and does not provide the opportunity for referral to the OALJ. Low Income Advocates Reply Comments at 20-21.

PPL requests the Commission provide clarity regarding the approval process for pilot programs within an EE&C plan. PPL requests that pilots be approved for

implementation after an EDC provides stakeholders with notice and descriptions of the pilot programs, and that an EDC does not need to file implementation details and obtain Commission approval of a Petition to Modify the EE&C plan before launching any such pilot program. PPL Comments at 18.

PECO recommends that an additional petition process should be put into place that allows EDCs to petition the Commission to revise targets when the EDC can demonstrate material impacts from macro-economic factors. PECO Comments at 22. PECO urges the Commission to incorporate both the target revision process and notification process. PECO Reply Comments at 9.

b. Disposition

The Commission rejects the proposal from EAP and the EDCs to allow the EDCs to make plan changes through a notification process and agrees with the Low Income Advocates that such modifications would not provide stakeholders adequate due process to challenge plan changes. For Phase V of Act 129, the Commission adopts the process to make EE&C plan changes and recommendations for additional measures as proposed.

Regarding PECO's recommendation that an additional petition process be developed to revisit compliance targets based on macroeconomic factors, as noted in Section A.1.b.II, the Commission notes that an EDC can petition the Commission pursuant to Sections 50l(a) and 703(g) of the Public Utility Code, 66 Pa. C.S. §§ 703(g) and 52 Pa. Code§ 5.572(d)2 for an amendment to the Final Implementation Order.[105] The Commission notes that there is precedent for petitioning the Commission for

[105] Section 5.572(d) of Chapter 52 of the Pennsylvania Code provides that "[p]etitions for rescission or amendment may be filed at any time according to the requirements of section 703(g) of the act (relating to fixing of hearings)."
52 Pa. Code§ 5.572(d).

modifications to the Implementation Order. During Phase III, the Commission granted the EAP's petition to modify compliance with peak demand reduction targets because of the COVID-19 pandemic.[106]

Regarding PPL's request for clarity on implementing Phase V pilots, the Commission does not agree with the proposal to implement pilot programs after providing stakeholders with notice and descriptions of the pilot programs but without filing to obtain Commission approval. The Commission clarifies if the approved EE&C plan includes detailed information on pilot design, hypotheses being tested, budget, participation estimates, savings estimates (per-unit and total), and timeline, then no additional approval is needed. However, if an approved EE&C plan simply earmarks budget for pilot(s) without the necessary implementation details, the EDC will need to file a plan change prior to pilot initiation so that the Commission can review the pilot details.

E. Plan Effectiveness Evaluation Process

Act 129 requires the Commission to establish an evaluation process that monitors and verifies data collection, quality assurance, and the results of each EDC EE&C plan and the program as a whole. *See* 66 Pa. C.S. § 2806.1(a)(2). While Section 2806.1(b)(1)(i)(C) requires each plan to explain how to measure, verify, and evaluate quality assurance and performance, it is apparent that Section 2806.1(a)(2) requires the Commission to monitor and verify this data. This evaluation process is to be conducted every year, as each EDC must submit an annual report documenting the effectiveness of its EE&C plan, energy savings measurement and verification, an evaluation of the cost-effectiveness of expenditures and any other information the Commission requires.

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[106] See *Petition to Amend the Commission's June 19, 2015, Implementation Order* at Docket No. M-2014-2424864 (Modification Order entered June 3, 2020). Available online at: https://www.puc.pa.gov/pcdocs/1665150.docx

See 66 Pa. C.S. § 2806.1(i)(1).

1. Statewide Evaluator

The Commission believes that, to have credible impact and process evaluations available, a SWE must be selected and used in a similar manner to prior phases. The SWE will provide expertise in evaluations and remain independent from the EDCs and their evaluation contractors. Therefore, in preparation for Phase V, the Commission proposed to competitively solicit services to evaluate the EDC programs and identify whether future EE&C programs can obtain further cost-effective savings. An RFP will be issued requiring that submitted proposals contain provisions for evaluation framework development; annual audits of EDC programs; market potential study or studies on EE and peak demand reduction; and an early 2032 review of the entire Phase V program. To prepare for the year beginning June 1, 2026, the Commission proposed a contract period of March 1, 2026, through February 28, 2032. By starting in March 2026, the Phase V SWE will have an opportunity to develop plans and prepare for its responsibilities that begin June 1, 2026. As in Phase IV, the Commission proposed that the Phase V SWE contract be funded by a proration from the EDCs.

a. Comments

The Commission received no comments on this topic.

b. Disposition

As no comments were received on this topic, the Commission adopts with this Order the SWE selection process, role and responsibilities, and funding mechanism as proposed.

2. Technical Reference Manual

The Commission will continue to utilize the TRM to help fulfill the evaluation process requirements contained in Act 129. The TRM was initially adopted by the Commission in the AEPS Act proceedings at Docket No. M-00051865 (order entered October 3, 2005). However, as the TRM was initially created to fulfill the requirements of the AEPS Act, it had to be updated and expanded to fulfill the requirements of the EE&C provisions of Act 129. As such, the Commission initiated a process to update and expand the TRM to provide for additional energy efficient technologies, under Docket No. M-00051865. The Commission provided updated editions of the TRM in 2009, 2010, 2011, 2012, 2013, 2014, and 2015 to incorporate changes and improvements based on more recent research and data, as well as the needs and experiences of the EDCs. In its 2009 TRM Update Order, the Commission stated that the TRM updating process will occur annually, with a final revised TRM due by December 31 for use effective June 1 of the following year.[107] In Phase II of the EE&C program, the Commission maintained this annual updating process.[108]

For Phase III, the Commission adopted the 2016 TRM for the entirety of Phase III, and for Phase IV, the Commission adopted the 2021 TRM for the entirety of Phase IV. The Commission reserved the right to implement a mid-phase TRM update if an update was deemed necessary, such as in instances in which major market or technology transformations affect the EE&C programs and associated savings values. The Commission proposed in the Tentative Implementation Order that the 2026 TRM be applicable for the entirety of Phase V. We, however, reserve the right to implement a mid-phase TRM update if we deem it necessary.

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[107] *See Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update,* TRM Annual Update Order, at page 17, (2009 TRM Update Order) at Docket No. M-00051865, entered June 1, 2009.

[108] *See Phase II Implementation Order* at pages 72-75.

In addition, in the 2026 TRM Final Order, the Commission continued with the process adopted with the 2021 TRM for incorporating codes, standards, and ENERGY STAR® specifications that change during Phase V without undertaking a full TRM update.[109] Each year of the phase, the SWE will track code updates to federal standards, ENERGY STAR® specifications, and state-adopted building energy codes. Based on the extent of code updates that occur, the SWE will recommend whether to commence with a full TRM update proceeding for the following program year. Code updates that are not finalized and in effect before July 1 of a program year will not be considered for inclusion in the TRM in that update cycle. Changes to the TRM proposed by the SWE through this process will be limited to updating values directly related to codes, standards, and ENERGY STAR® specifications. Any modification to the Phase V TRM would become effective on June 1 of the calendar year following the comment and review process.

a. Comments

FirstEnergy acknowledges the effort to update the TRM mid-phase to align with changes in codes and standards; however, FirstEnergy expresses concerns that those updates may create a disconnect between the assumptions used in the Market Potential Study to define Phase V Act 129 savings targets and what will be used to evaluate savings to achieve those targets. FirstEnergy requests that they be held harmless from mid-phase changes to the TRM or other evaluation guidance that is shown to negatively impact the ability of an EDC from achieving its target. FirstEnergy Comments at 28. PPL recommends the TRM be left unchanged for the entirety of Phase V to allow for savings calculations that align with EDC targets. PPL Comments at 18.

[109] *See 2026 Technical Reference Manual Final Order* at pages 12-14.

b. Disposition

The Commission respectfully disagrees with the suggestion from FirstEnergy and PPL that the 2026 TRM be held static for the entirety of Phase V. The Commission recognizes the value of certainty regarding measure savings assumptions but reserves the right to implement a mid-phase TRM update if necessary. Commenters are reminded that TRM changes could increase or decrease savings, and note that under the current federal administration standard changes which increase savings are more likely than in prior phases. Phase V will maintain the process originally adopted with the 2021 TRM for incorporating codes, standards, and ENERGY STAR® specifications that change during Phase V without undertaking a full TRM update. This is consistent with prior practices, as early phases of Act 129 successfully incorporated multiple updates to the TRM while in Phase III and Phase IV the Commission set the TRM for the entire phase but reserved the right to update the TRM mid-phase based on significant market or technical changes that impact savings estimates. Consistent with Phase IV, we will direct the SWE to consider the expected MWh and MW impacts on approved EE&C plans for any codes and standard update.

3. EDC and SWE Reports

In Phases I and II, the Commission required the EDCs to submit quarterly reports, a preliminary annual report, and a final annual report. In Phase III, the Commission removed the requirement for quarterly reports, opting only for semi-annual, preliminary annual, and final annual reports. The Commission judged that the EDCs and participating stakeholders have maintained a well-functioning system of providing and receiving feedback from each other to aid in the implementation of successful EE&C programs in Phase III. In Phase IV, the Commission removed the requirement for preliminary annual reports, opting only for semi-annual and final annual reports. The Commission proposed continuing the same reporting requirements in Phase V, opting only for semi-annual and annual reports.

In addition, in the Phase IV Implementation Order the Commission noted that it has an interest in providing reports to the public in a much timelier fashion.[110] This was accomplished in Phase IV by the EDCs submitting their final annual reports closer to the end of each program year. We directed the EDCs to file final annual reports on September 30 of each year, 122 days after the end of the program year. We also directed the SWE to submit final annual reports on November 30 of each year. We found this timeline strikes a balance that gives EDCs sufficient time to complete gross savings verification and provides reports to the public in a timely fashion.

For Phase V, we proposed the same schedule and proposed that the EDCs submit their final annual reports by September 30 of each year, 122 days after the end of the program year. Similarly, for Phase V, we proposed that the EDCs submit their semi-annual reports by January 15 of each year. The final annual report will include reported and verified savings for the program year, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders. An example of the proposed EDC and SWE reporting schedule is outlined in Table 23 for PY18 (June 1, 2026, through May 31, 2027) and PY19 (June 1, 2027, through May 31, 2028).

[110] *See Phase IV Implementation Order* at page 102.

Table 23: Proposed EDC and SWE Reporting Schedule

Date	Milestone
June 1, 2026	Beginning of program year 18 (PY18)
January 15, 2027	PY18 EDC Semi-annual Report – report regarding the first six months of PY18
February 28, 2027	PY18 SWE Semi-annual report – report summarizing and auditing EDC PY18 Semi-annual Reports
June 1, 2027	Beginning of program year 19 (PY19)
September 30, 2027	PY18 EDC Final Annual Report - reported savings for PY18, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders
November 30, 2027	PY18 SWE Final Annual Report – report summarizing and auditing EDC PY18 Final Annual Reports
January 15, 2028	PY19 EDC Semi-annual Report – report regarding the first six months of PY19
February 28, 2028	PY19 SWE Semi-annual report – report summarizing and auditing EDC PY19 Semi-annual Reports
June 1, 2028	Beginning of program year 20 (PY20)
September 30, 2028	PY19 EDC Final Annual Report - reported savings for PY19, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders
November 30, 2028	PY19 SWE Final Annual Report – report summarizing and auditing EDC PY19 Final Annual Reports

The Commission further proposed that FirstEnergy report savings and expenditures by the four legacy EDCs (Met-Ed, Penelec, Penn Power, and West Penn Power) that are now rate districts within the consolidated FirstEnergy EDC.

a. Comments

CEEH-PA recommends that the Commission require EDCs to separately report on

the number of dwellings/units served and the savings achieved from single-family dwellings, individually metered multifamily dwelling units, and master metered multifamily dwelling units, suggesting that this will result in more accurate accounting of potential energy savings from the low-income multifamily sector. CEEH-PA Comments at 23.

The Low Income Advocates recommend that the Commission enact reporting requirements for non-low-income programs that they recommend for low-income programs and are detailed in Section A.5.a.III of this Implementation Order. Specifically, they recommend that the Commission require EDCs to track and report the number of comprehensive, whole-house treatments performed, the kinds of measures installed at each household through such programs, and the energy usage reductions achieved through them. Low Income Advocate Comments at 65-69.

The Joint Energy Advocates, KEEA, and NEEP provide several recommendations to the Commission to update EDC and SWE annual reporting. Those recommendations include requiring EDCs to report number of households served and percentage of total customer base that participated in the program within each rate class, participation rates by customer class and total dollars spent in SWE annual reports, and publishing quarterly reports that compare EDC progress. Joint Energy Advocates Comments at 11, KEEA Comments at 6, and NEEP Comments at 11.

PPL agrees with the proposed semi-annual and annual report process and schedule laid out in the Tentative Implementation Order. PPL Comments at 18. FirstEnergy disagrees with NEEP, the Low Income Advocates, OCA and CEEH-PA, KEEA, and the Joint Energy Advocates on the recommendation for increased tracking and reporting requirements of various program metrics that are incremental to what the Commission has required in previous phases. FirstEnergy Reply Comments at 17-18.

FirstEnergy requests the Commission allow reporting at the EDC level rather than the rate-district level. FirstEnergy Comments at 28.

b. Disposition

There were no comments in opposition of the proposed EDC and SWE annual reporting timeline proposed in Table 23. Therefore, the Commission adopts the reporting timeline as proposed. However, the Commission rejects FirstEnergy's request to report exclusively at the EDC-level rather than the rate-district level, but the Commission also clarifies that reporting at the rate-district level will be limited to key, high-level metrics. The Commission directs TUS to work with the Phase V SWE to develop reporting requirements for FirstEnergy in the Phase V EDC Annual Report Template. Phase V will be the first phase for which the four legacy FirstEnergy EDCs will implement programs as the consolidated FirstEnergy EDC. The Commission adopts the requirement that FirstEnergy report, at minimum, total savings and expenditures at the rate-district level as this will help ensure that programs are effectively serving all of the rate districts, allow for some comparability to prior phases, and allow for greater transparency in terms of funding allocation.

Several stakeholders provided recommendations to facilitate stakeholder engagement and update EDC and SWE annual reporting. The Commission believes that the EDCs and participating stakeholders have developed a well-functioning system of stakeholder engagement that provides and receives feedback from each other to aid in the implementation of successful EE&C programs and rejects the comments for facilitating further stakeholder engagement.

As addressed in Section A.4.c and A.5.b of this Implementation Order, the Commission recognizes the range of stakeholders interested in the installation of comprehensive, longer-lived, deeper-savings measures through EDC programs. We

concur that requiring tracking and reporting on this topic will provide valuable information to better understand how these different measures and program offerings perform in Phase V. Therefore, the Commission directs TUS to work with the Phase V SWE to develop reporting requirements for comprehensive program offerings and whole-home, comprehensive measures for the EDCs in Phase V but declines the requests for other additional reporting requirements.

4. Process to Analyze How the Program and Each Plan will Enable EDCs to Meet Consumption and Peak Demand Reductions Requirements, and How to Ensure Compliance

Act 129 requires the Commission to conduct an analysis of how the program, as a whole, and how the EDC's individual EE&C plans, in particular, will enable an EDC to meet or exceed the required consumption and peak demand reductions. *See* 66 Pa. C.S. § 2806.1(a)(4). Each EDC's EE&C plan must include specific proposals to implement measures to achieve or exceed the required reductions. *See* 66 Pa. C.S. § 2806.1(b)(1)(ii).

Act 129 also requires the Commission to establish procedures to ensure compliance with the consumption and peak demand reduction requirements. 66 Pa. C.S. § 2806.1(a)(9). To facilitate compliance determination, each EDC subject to Act 129 must include in its PY22 Final Annual Report information documenting their gross verified consumption and peak demand reductions acquired from June 1, 2026, through May 31, 2031. This filing must provide total portfolio savings as well as savings results for each category of interest called for in the EDC Annual Report Template prepared by the SWE. To comply with Act 129, an EDC must demonstrate that, during the June 1, 2026, through May 31, 2031, period, its plan produced energy savings and peak demand reductions equal to or greater than the targets established in this Final Implementation

Order. Carryover of excess savings from Phase IV to Phase V shall also be considered in the determination of compliance with Phase V targets.

After-the-fact measurement and verification of energy and peak demand savings remains critical to ensure that an EDC has properly implemented its EE&C plan, the projected savings metrics remain accurate, non-controllable factors such as economic growth or contraction and weather have not skewed results, and the savings are the result of the EE&C plan. The Commission will analyze the program as a whole and individual EDC plan's effectiveness in meeting or exceeding the goals through the review process described previously in this Order.

Finally, as discussed previously, the Commission intends to issue an RFP to retain the services of a SWE to perform the annual and end of phase independent evaluation of each EDC plan, develop standardized evaluation protocols, update the TRM, and consolidate plan performance data across all EDC service territories. The SWE will work with the Commission staff and interested parties in the development of evaluation methods, protocols, data collection formats, and databases. The costs for the SWE contracts with the Commission will be recovered from the EDCs consistent with Section 2806.1(h) of the Act, 66 Pa. C.S. § 2806.1(h).

a. Comments

The Commission received no comments on this topic.

b. Disposition

As no comments were received on this topic, the Commission adopts the procedures to ensure compliance with the consumption and peak demand requirements as proposed.

F. Benefit - Cost Analysis Approval Process

Act 129 requires an analysis of the costs and benefits of each EE&C plan, in accordance with a TRC Test approved by the Commission. *See* 66 Pa. C.S. § 2806.1(a)(3). Act 129 also requires each EDC to demonstrate that its plan is cost-effective using the TRC Test and that the plan provides a diverse cross-section of alternatives for customers of all rate classes. *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(I). Act 129 defines "total resource cost test" as "a standard test that is met if, over the effective life of each plan not to exceed 15 years, the net present value of the avoided monetary cost of supplying electricity is greater than the net present value of the monetary cost of [EE]conservation measures." 66 Pa. C.S. § 2806.1(m).[111] The purpose of using the TRC Test to evaluate the EDCs' specific programs is to track the relationship between the benefits to the Commonwealth and the costs incurred to obtain those benefits. The 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), direct use of the TRC Test 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' EE&C plans.

1. 2026 TRC Test Order

The 2026 TRC Test Final Order[112] was adopted at the November 7, 2024, Public Meeting at Docket No. M-2024-3048998. The 2026 TRC Test Final Order provides comprehensive guidance on all aspects of Act 129 benefit-cost calculations for Phase V of Act 129. The Phase V Potential Studies were conducted using the benefit-cost

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[111] After November 30, 2013, and every five years thereafter, we are to evaluate the costs and benefits of the program established under 66 Pa. C.S. § 2806.1(a) and of approved EE&C plans using a TRC test or a cost-benefit analysis of our determination. 66 Pa. C.S. § 2806.1(c)(3).

[112] *See 2026 TRC Test Final Order*.

methodology detailed in the 2026 TRC Test Final Order. EDCs and their evaluation contractors shall follow the directives of the 2026 TRC Test Final Order when developing EE&C plans for Phase V of Act 129 and for reporting TRC Test results in Phase V final annual reports.

The 2026 TRC Test Final Order included a companion 2026 Avoided Cost Calculator (ACC) tool.[113] The ACC implements the calculations called for in the 2026 TRC Test Final Order to develop 20-year forecasts of the avoided cost of electric energy, capacity, and natural gas. The Commission proposed that EDCs use the ACC when developing their Phase V forecasts of avoided costs and submit a complete ACC as an addendum to their Phase V EE&C plans. FirstEnergy should prepare and submit a single avoided cost forecast for the FirstEnergy EDC that combines values for the four legacy EDCs using the retail sales weighting approach described in the 2026 TRC Test Final Order.[114]

The Commission noted that the 2026 TRC Test Final Order has been adopted and is considered final. Comments pertaining to the TRC Test calculation methodologies were not considered as part of this proceeding. However, we invited stakeholders to submit comments regarding the application of the 2026 TRC Test Final Order to determine the proposed consumption and peak demand reduction requirements, Phase V EE&C plan development, and Phase V reporting requirements.

[113] *See Exhibit 1: 2026 Avoided Cost Calculator*. Available online at: https://www.puc.pa.gov/pcdocs/1855612.xlsx.
[114] *See 2026 TRC Test Final Order* at page 100.

a. Comments

PPL agrees with the proposal to utilize the 2026 TRC Test Final Order for the activities as described in the Tentative Implementation Order. PPL Comments at 19. NEEP suggests the Commission consider modifying benefit-cost ratio requirements for low-income programs. NEEP Comments at 4.

b. Disposition

The Commission rejects NEEP's suggestion to modify the benefit-cost ratio requirements for low-income programs because there are no such requirements. While the 2026 TRC Test Final Order directs EDCs to report program-level results, there is no requirement that any program or sector have a TRC ratio greater than 1.0. Only the EE&C plan needs to be cost-effective. As proposed, Phase V TRC Test results shall be calculated and reported according to the directives of the 2026 TRC Test Final Order.

2. Net-to-Gross Adjustment

An often-raised consideration for determining the cost-effectiveness and real impacts of EE programs is whether adjustments to gross energy savings should be made using a net-to-gross (NTG) ratio. An NTG adjustment would adjust the cost-effectiveness results and reported MWh and MW savings so that the results would only reflect the benefits that are attributed to, and are a direct result of, the EE&C program in question. Three common factors addressed through the NTG adjustment are "free ridership," "spillover," and "market effects." The Uniform Methods Project (UMP)[115] provides the following relevant definitions:

[115] Violette, Daniel and Pamela Rathbun, "Chapter 21: Estimating Net Savings: Common Practices," in *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures.* Prepared for the National Renewable Energy Laboratory, October 2017. Available online at: https://www.nrel.gov/docs/fy17osti/68578.pdf

- **Free ridership**: Program savings attributable to free riders (program participants who would have implemented a program measure or practice in the absence of the program).
- **Spillover**: Additional reductions in energy consumption or demand that are due to program influences beyond those directly associated with program participation.
- **Market Effects**: A change in the structure of a market or the behavior of participants in a market that is reflective of an increase in the adoption of EE products, services, or practices and is causally related to market intervention(s).

During the planning for early phases of the Act 129 programs, the primary discussion pertaining to NTG was whether to use NTG adjustments to determine compliance and/or targets or to use NTG solely for program design, program modifications, and planning. At the beginning of Phase I of Act 129, there was an absence of NTG data specific to Act 129 programs and therefore, the Commission did not require NTG adjustments for the first program year.[116] Subsequently, the 2011 TRC Test Order directed EDCs to conduct NTG research; to collect data necessary to determine the NTG ratio for their programs and to apply the ratio when determining the cost-effectiveness of future modifications of existing programs.[117] The EDCs were to report the results of this research to the SWE and utilize them to determine when to remove a measure or program from the EE&C portfolio.

An NTG adjustment also excludes the incremental measure costs incurred by free riders, since those costs would have been incurred absent the program. An NTG adjustment gives the EDCs and their evaluation contractors an estimate of savings

[116] *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test* Order, Docket No. M-2009-2108601 (Order entered June 23, 2009) (2009 TRC Test Order), at 27.
[117] *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test – 2011 Revisions* Final Order, Docket No. M-2009-2108601 (Final Order entered August 2, 2011) (2011 TRC Test Order), at 25.

achieved as a direct result of program expenditures by removing benefits and costs that would have occurred absent the EE&C program. The 2026 TRC Test Final Order directive to exclude incremental measure costs incurred by free riders means that the numerator and denominator of the TRC ratio decrease in relatively equal rates in the presence of free ridership. Administrative costs are spread across fewer benefits so net TRC ratios will generally be lower than gross TRC ratios, but the difference is subtle. The impact of free ridership is more apparent in the present value of net benefits (TRC benefits minus TRC costs). In PY15, the statewide gross TRC ratio was 1.44 and the statewide net TRC ratio was 1.38. However, the present value of net benefits was $180 million on a gross basis compared to $121 million on a net basis.[118]

For all prior phases, any completed NTG research was used only for program design, program modifications, and implementation; it was not used to adjust the gross verified energy savings that are used for compliance purposes. In addition, during Phase I, the SWE completed a thorough review of how other states use NTG information for planning, evaluation, and compliance and recommended that NTG research be used to plan and modify Act 129 programs. The SWE also recommended basing MWh and MW savings targets on gross savings.[119]

The Commission's Phase II Implementation Order directed the use of NTG research for program design and implementation, but not for compliance.[120] The Phase II Implementation Order noted that there is no requirement in Act 129 that mandates determining the savings on a net basis.[121] The Commission thereby determined that the

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[118] *See SWE Final Annual Report: Act 129 Program Year 15*, at page 36. Available online at: https://www.puc.pa.gov/media/3262/swe_py15_final_annual_report120424.pdf
[119] *See* Pennsylvania Statewide Evaluation Team, report titled "Net Savings: An Overview," prepared by the Pennsylvania Phase I Statewide Evaluation Team, October 2011.
[120] *See Phase II Implementation Order* at pages 82-83.
[121] *Id.* at 82.

EDCs would continue to use net verified savings in their TRC Test for program planning purposes and that compliance in Phase II be determined using gross verified savings.[122] The Commission's Phase III and Phase IV Implementation Orders maintained the same position on the use of NTG research as in previous phases.[123, 124]

For Phase V of Act 129, the Commission proposed determining compliance using gross verified savings. Additionally, we proposed maintaining the practice from prior phases in which NTG research results inform modifications to existing programs, as well as for planning purposes for future phases. We also proposed that the EDCs include in their EE&C plans net TRC Test results, as well as gross TRC Test results, based on the best available estimates of NTG research for a given program type. The Commission reserved the right to reject EE&C plans that rely heavily on measures with high expected rates of free ridership. We recognized that prospective NTG adjustments are less precise than retrospective adjustments but believe in making adequate primary and secondary data available to the EDCs and their EM&V contractors to produce reasonable projections. The EDCs and their EM&V contractors should consider the vintage of NTG research when developing prospective NTG factors. As markets mature, the free ridership rate for a given technology will often increase. The inclusion of net TRC Test results will provide all stakeholders with additional information regarding the effectiveness of EE&C measures and programs. We encouraged stakeholders to pay careful attention to this issue when commenting on draft EE&C plans.

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[122] *Id.* at 83.
[123] *See Phase III Implementation Order* at page 107.
[124] *See Phase IV Implementation Order* at pages 106-109.

a. Comments

PPL agrees with the Commission's proposal to maintain the same position on net-to-gross as prior phases of Act 129 where compliance with energy and demand savings targets is based on gross savings. PPL Comments at 19.

b. Disposition

For Phase V of Act 129 compliance with targets will be assessed using gross verified savings. NTG research results should inform modifications to existing programs and planning for future phases. EDCs should include in their EE&C plans net TRC Test results, as well as gross TRC Test results, based on the best available estimates of NTG research.

G. Competitive Bidding Requirements and Approval of CSP Contracts

Act 129 requires the Commission to establish procedures to require EDCs to competitively bid on all contracts with CSPs.[125] Act 129 further requires the Commission to establish procedures to review all proposed contracts with CSPs prior to execution of the contract.[126] Act 129 gives the Commission power to order the modification of proposed contracts to ensure that plans meet consumption reduction requirements.[127]

EDCs are reminded that CSPs covered by the competitive bidding and contract approval procedures in this section are those that provide consultation, design, administration, and management or advisory services to the EDC. All entities that provide services directly to customers or the public in general, such as equipment installers or suppliers, are not to be included in the EDC's competitive bidding process

[125] *See* 66 Pa. C.S. § 2806.1(a)(7).
[126] *See* 66 Pa. C.S. § 2806.1(a)(8).
[127] *Id*.

In the Tentative Implementation Order, the Commission proposed maintaining the status quo by requiring EDCs to file CSP RFP competitive bidding procedures and to competitively bid all CSP contracts [without exception] for Phase V.

1. Participation of Conservation Service Providers

Act 129 establishes a requirement for the participation of CSPs in all or part of an EDC EE&C plan.[128] Act 129 requires the Commission to establish, by March 1, 2009, a registry of approved persons qualified to provide conservation services to all classes of customers that meet experience and other qualifying criteria established by the Commission.[129] Act 129 further requires the Commission to develop a CSP application and permits the Commission to charge a reasonable registration fee.[130] The Commission initiated a separate stakeholder process to establish the qualification requirements CSPs must meet to be included in the CSP registry. On February 5, 2009, the Commission adopted an order establishing the CSP registry at Docket Number M-2008-2074154.[131] In the *CSP Registry Order,* we established the minimum qualifications of CSPs, a CSP application, fees, and life of qualification.

By Orders entered July 16, 2013, and May 8, 2015, the Commission adopted a CSP registration process and an application package that reflected the minimum requirements for registration.[132] The Commission also directed that all CSP subcontractors with an annual contract cost that equals or exceeds ten percent of the

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[128] *See* 66 Pa. C.S. § 2806.1(a)(10).
[129] *See* 66 Pa. C.S. § 2806.2(a).
[130] *See* 66 Pa. C.S. § 2806.2(b).
[131] *See Implementation of Act 129 of 2008 Phase 2 – Registry of Conservation Service Providers*, Docket No. M-2008-2074154 (Final Order entered February 5, 2009) (*CSP Registry Order*).
[132] *See Implementation of Act 129 of 2008 – Registry of Conservation Service Providers,* Docket No. M-2008-2074154 (Final Orders entered July 16, 2013 and May 8, 2015) (2013 and 2015 CSP Registry Orders) at,.

CSP's total annual contract cost to perform services pursuant to an EDC EE&C plan, must also be registered as CSPs.[133] We proposed to continue using the conditions and processes of the July 16, 2013, and May 8, 2015 Orders in Phase V.

a. Comments

The Commission received no comments on this topic.

b. Disposition

As no comments were received on this topic, the Commission adopts with this Order the continued use of the conditions and processes of the July 16, 2013 and May 8, 2015 Orders for the participation of CSPs.

2. Competitive Bidding

In Phase III, the Commission required EDCs to file their respective RFP procedures for review and approval. The Commission adopted the following minimum criteria for the CSP competitive bidding review process for Phase III:

- Assurance that EDCs will issue RFPs to all qualified registered CSPs using the current posting of the CSP register on the Commission's website.[134]
- Effort to acquire bids from "disadvantaged businesses" (i.e., minority-owned, women-owned, persons-with-disability-owned, small companies, companies located in Enterprise Zones, and similar entities) consistent with the Commission's Policy Statements at 52 Pa. Code §§ 69.804, 69.807 and 69.808.

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[133] *See 2013 CSP Registry Order* at 8-10.
[134] The CSP registry is available on the Commission's website. Available online at: https://www.puc.pa.gov/media/3219/csp_registry110124.pdf

- Selection criteria and weight assigned to each factor for bid review and selection of overall best bid/proposal (i.e., no requirement to select the lowest qualified bid), that consider:
    - Quality of prior performance;
    - Timeliness of performance;
    - Quality of the proposed work plan or approach;
    - Knowledge, background, and experience of the personnel employed;
    - Proposed plan to coordinate with other program administrators in the Commonwealth and leverage external funding sources; and
    - Other factors as deemed relevant.

The Commission adopted the same minimum criteria in Phase IV and proposed adopting the same minimum criteria for the CSP competitive bidding review process in Phase V. If Commission staff have not commented upon or disapproved of the proposed RFP process within 15 days of its filing, the EDC is permitted to use that process. To expedite contractual arrangements relating to proposed CSP contracts, EDCs are encouraged to file their proposed RFP process by August 30, 2025.

a. Comments

EAP requests that the Commission not require a competitive bid process for CSPs that provide services, such as EM&V, involving the administration of the approved EE&C plans. EAP Comments at 23. PPL recommends that the Commission should not require a competitive bid process for non-implementation CSPs such as third-party evaluators and database vendors citing efficiency gains from vendor continuity across phases as the major reason. PPL suggests that existing evaluation vendors have familiarity and historical perspective regarding EDC staff, programs, CSPs, and approaches that promote smooth transition across phases. PPL Comments at 19.

CEEH-PA recommends that the Commission change the bidding criteria to not only to include a requirement that CSPs should submit a plan for how they will coordinate with other program administrators in the Commonwealth and leverage external funding sources, but also that the plan should be explicit on how that coordination will be implemented. CEEH-PA Comments at 29.

b. Disposition

The Commission agrees that vendor continuity across phases can be valuable to Act 129 programming due to data familiarity and process efficiency gains. The Commission, however, does not agree that all non-implementation CSPs should be able to be contracted without a competitive bid process. While familiarity can lead to efficiency, it can also breed complacency, limit innovation, and compromise objectivity. In the interest of maintaining a robust independent evaluation structure, EDCs should solicit competitive bids for Phase V EM&V contracts. The Commission maintains that all implementation contracts should also be awarded through the proposed competitive bidding process. EDC contracts pertaining to Act 129 activities such as tracking database services which do not cover implementation or EM&V may forgo the competitive bidding process with individual vendors if the cumulative value of contracts for that vendor's work does not amount to more than one percent of the EDC's Phase V budget.

The Commission disagrees with comments by CEEH-PA that program coordination implementation plans should be considered as part of the bidding process. The Commission recognizes that more information on the implementation of the proposed plan may be useful. However, a general proposed plan to coordinate with other program administrators in the Commonwealth and to leverage external funding sources should provide enough information for the EDCs to make an informed CSP selection in the bidding process without adding extra administrative burden on bidders.

The Commission adopts the proposed competitive bidding requirements with the modification that EDC contracts pertaining to Act 129 activities, which do not cover implementation or EM&V, may forgo the competitive bidding process with individual vendors. This exception applies provided the cumulative value of contracts for that vendor's work does not amount to more than one percent of the EDC's Phase V budget.

3. Approval of Contracts

Act 129 requires each EDC to include in its plan a contract with one or more CSPs selected by competitive bid to implement all or part of the plan as approved by the Commission.[135] This section of the Act establishes that CSPs can perform some or all functions of an EE&C plan, including management of the entire plan. Similar to Phases II, III, and IV, the Phase V Tentative Implementation Order proposed requiring the EDCs to provide detailed justifications for why it did or did not use a CSP to perform EE&C plan functions.[136]

It is imperative that EDCs timely file all proposed CSP contracts and contract amendments with the Commission for review prior to the pre-established effective date. The minimum criteria the Commission proposed to utilize for reviewing and approving EDC proposed CSP contracts in Phase V is the same as established in the Phase IV Implementation Order.[137] Following is the proposed minimum criteria for the EDC proposed CSP contract review process for Phase V:

- Consistent use of standard format contract agreement with legible font size, comprising cover sheet, signatory page, table of contents, headers and sub-titles,

[135] *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(E).
[136] *See Phase II Final Implementation Order* at pages 93-94, *Phase III Final Implementation Order* at page 125, and *Phase IV Final Implementation Order* at page 114.
[137] *See Phase IV Implementation Order* at pages 114-116.

page numbers, paragraph numbering, and conventional identification of tables and charts. EDC filing of purchase orders in lieu of the CSP proposed contract agreement will be rejected.

- Separate cover sheet to provide a summary of the following information:
    - Full company name of contractor and CSP registration Docket Number;
    - Brief description of statement of work (SOW);
    - Name of EE&C plan program(s) associated with proposed contract and explanation if SOW addresses the program in its entirety or in part;
    - Estimated total contract cost and statement regarding incentives and rebates, their amount, and explanation if total cost includes incentives and rebates;
    - Estimated targeted energy savings and peak demand reduction associated with contract;
    - Timeframe and duration of contract from start date to completion; and
    - Statement relating to the number of bids that were received, justification for selection of CSP contractor/subcontractor if based on receipt of less than three bids for any particular program, and identification and explanation for non-selection of low-bid CSP, if applicable.
- Assurance that the CSP's work product in the EDC's plan will meet the requirement for reduction in demand and consumption.
- Legal issues, enforceability, protection of data privacy and ratepayer funds for poor performance or non-compliance, and similar issues.
- Maintenance of CSP registration and liability insurance throughout contract duration.
- Maintenance of CSP registration for all CSP subcontractors with an annual contract cost that equals or exceeds ten percent of the CSP's total annual contract cost to perform services pursuant to an EDC EE&C plan.

- Adequate provisions and procedures for monitoring quality assurance, auditing and verification that relate to interactions with the customer and interface with the EM&V contractor and the SWE, to include the following at a minimum:
    - CSP contractor/subcontractor agrees to fully cooperate with and make program data available to the Company, Company EM&V CSP, the SWE, and the Commission upon request; and
    - CSP contractor/subcontractor agrees to retain all program data and records for five years.
- Clearly stated language detailing performance-based contractual payments for implementing or otherwise installing measures.
- Assurance that installed measures, customer privacy, and other processes are conducted in accordance with EE&C plan and laws, regulations, and Commission Orders relating to the program's customer interactions and rate of progress.
- Certification that the proposed CSP is not an EDC affiliate.
- Provision that the EDC will immediately terminate the CSP contract agreement and timely notify the Commission if an EDC/CSP merger, acquisition or similar business partnership should occur over the course of the contract agreement.
- CSPs agree that employees and contractors who enter customers' home or have personal contact with a customer will undergo criminal and other pertinent background checks.

If the Commission Staff has not commented upon or disapproved an EDC's proposed contract within 45 days of submission to the Commission for review, then the EDC is permitted to proceed with the contract without modification. EDCs are reminded that a contract stipulation that ultimately re-directs a contract, subcontract, or any provision thereof to the EDC for any reason, requires the EDC to file an amended contract with the Commission for review.

As discussed earlier in this section, Commission approval of any EDC-proposed CSP contract or contract amendment does not constitute a determination that such filing is consistent with the public interest and that the associated costs or expenses are reasonable or prudent for the purposes of cost recovery. The Commission will address these issues in any appropriate plan approval and cost recovery proceedings.

a. Comments

PPL recommends that the Commission remove the requirement that the Commission has up to 45 days after submission to review any proposed contract. PPL indicates that the 45-day period often lapses without comment or approval, while other times approval is received after the 45-day period is over. PPL Comments at 19. FirstEnergy recommends that the Commission allow EDCs the discretion to make small changes to their already approved contracts with CSPs amounting to a maximum of 20% of the total contract value. FirstEnergy Comments at 29.

b. Disposition

The Commission does not find PPL's comment requesting that the 45-day review period for contracts be removed to be persuasive. The contract review process allows the Commission to ensure that all contracts pertaining to Act 129 are consistent with public interest and that the associated costs are reasonable or prudent for the purposes of cost recovery. The Commission also rejects FirstEnergy's request for the discretion to make changes to contracts without going through the formal process. For the same reasons stated above, the Commission maintains that the established contract review process ensures that all contract modifications are consistent with public interest and reasonable for the purposes of cost recovery. The Commission adopts the proposed contract approval process outlined above in full.

H. EDC Cost Recovery

Act 129 directs the Commission to establish a cost recovery mechanism that ensures that the approved measures are financed by the customer class that receives the direct energy and conservation benefit of the measure. 66 Pa. C.S. § 2806.1(a)(11). All EDC plans must include cost estimates for implementation of all measures. 66 Pa. C.S. § 2806.1(b)(1)(i)(F). Each plan must also include a proposed cost recovery tariff mechanism, in accordance with Section 1307 (relating to sliding scale of rates; adjustments), to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. 66 Pa. C.S. § 2806.1(b)(1)(i)(H).

In addition, each plan must include an analysis of administrative costs. 66 Pa. C.S. § 2806.1(b)(1)(i)(K). Act 129 dictates that the total cost of any plan must not exceed two percent of the EDC's total annual revenue as of December 31, 2006, excluding Low-Income Usage Reduction Programs established under 52 Pa. Code § 58 (relating to residential Low-Income Usage Reduction Programs, 66 Pa. C.S. § 2806.1(g)).

Lastly, all EDCs, including those subject to generation or other rate caps, must recover, on a full and current basis from customers, through a reconcilable adjustment clause under Section 1307, all reasonable and prudent costs incurred in the provision or management of their plans. 66 Pa. C.S. § 2806.1(k). The following sections detail the Commission's proposed handling of EDC cost recovery issues for Phase V, based on its interpretation of the relevant provisions of Act 129 and experience obtained during prior Phases.

1. Determination of Phase V Allowable Costs

Act 129 allows EDCs to recover all prudent and reasonable costs related to the provision or management of their EE&C plans but limits such costs to an amount not exceeding two percent of the EDC's total annual revenue as of December 31, 2006, excluding Low-Income Usage Reduction Programs established under 52 Pa. Code §§ 58.1-58.18. The annual and Phase V budget limits, assuming a five-year phase, are presented in Table 24.

Table 24: EDC Annual EE&C Budget Limits Based on 2% of 2006 Revenue

EDC	Annual Budget	Phase IV 5-Year Budget Limit
Duquesne Light	$19,545,952	$97,729,760
PECO	$85,477,166	$427,385,830
PPL	$61,501,376	$307,506,880
FirstEnergy	$78,064,027	$390,320,135

As described in Section A.2, the budget values shown in Table 24 are identical to prior phases of Act 129 without adjustment for inflation. The calculation of dollar amounts from 2006 revenues has been addressed in previous Orders. In particular, the treatment of 2006 revenues an EDC collected for generation service on behalf of an EGS was determined to be part of the 2006 revenue calculation,[138] and we saw no reason to revisit the issue in the Tentative Implementation Order. The budget values shown in Table 24 are a core input to the EEPDR Potential Study and the proposed consumption reduction requirements in Section A.4.

[138] *See Phase III Implementation Order* at pages 133-134.

We also proposed requiring each EDC to provide a careful estimate of the costs relating to all EE&C programs and measures as set forth in its plan. All EE&C program costs can be classified as either incentive or administrative (e.g., non-incentive). Administrative costs may include capital expenditures for any equipment and facilities that may be required to implement the EE&C plan, as well as depreciation, operating and maintenance expenses, a return component based on the EDC's weighted cost of capital, and taxes. Administrative costs would also include, but are not limited to, costs relating to plan and program development, CSP non-incentive program delivery fees, cost-benefit analysis, measurement and verification, and reporting. EDCs must also provide ample support to demonstrate that all such costs are reasonable and prudent in light of their plans and the goals of the Act, keeping in mind that the total level of these costs must not exceed the two percent limitation as previously articulated.

A common critique of EDC EE&C plans is regarding the share of budgets that is distributed to program participants in the form of incentives. The 2026 TRC Test Final Order[139] provided instructions regarding categorization of program costs as incentives versus administration. With these clarifications regarding categorization of costs in mind, we proposed for Phase V that EDCs be required to submit an EE&C plan demonstrating that at least 50% of all spending is allocated to incentives, and less than 50% is allocated to non-incentive cost categories. Like Phase IV, we proposed that this be limited to the Commission's review and approval of the EE&C plans and not as a target subject to the penalty provisions at subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f).

As in prior Phases, we proposed permitting EDCs to recover both the ongoing costs of their plans under Phase V, as well as incremental costs incurred to design, create,

[139] *See 2026 TRC Test Final Order* at pages 72-74 and 78-79.

and obtain Commission approval of the plan. However, all costs submitted for recovery would be subject to review by the Commission to determine whether the costs are prudent, reasonable, and are directly related to the development and implementation of the plan. Furthermore, EE&C measures and associated costs approved by the Commission would again be subject to after-the-fact scrutiny. In this regard, we note that Act 129 provides that:

> The Commission shall direct an [EDC] to modify or terminate any part of a plan approved under this section if, after an adequate period for implementation, the Commission determines that an [EE] or conservation measure included in the plan will not achieve the required reductions in consumption in a cost-effective manner under [66 Pa. C.S. §§ 2806.1(c) & (d)]. 66 Pa. C.S. § 2806.1(b)(2).

Thus, tentatively approved measures and their associated costs under the EE&C plan will, in fact, be subject to ongoing review and possible modification or termination if such measures are determined not to be, or not to have been, cost-effective.

Regarding the two percent limitation provision of Act 129, we proposed for Phase V to continue to interpret "total cost of any plan" as an annual amount, rather than an amount for the full, proposed five-year period. Since the statutory limitation in this subsection is computed based on annual revenues as of December 31, 2006, we concluded that it is reasonable to also require applying the resulting allowable cost figure on an annual basis. In addition, we noted that the plans are subject to annual review and annual cost recovery under the Act, 66 Pa. C.S. §§ 2806.1(h) and (k). The SWE market potential studies that inform the proposed Phase V reduction requirements were conducted with this modeling assumption. The EDCs could not meet proposed reduction requirements if the two percent funding limitation were spread across the entirety of Phase V since EDCs would only have 20% of the EE&C funding assumed in the market potential studies. While the proposed allowable cost recovery amount is annual, the plan

would allow EDCs to exceed the annual spending limit for a given year of Phase V, provided the total Phase V cost recovery does not exceed the five-year limit.

While the cost of an individual EDC's plan is limited by Act 129 to two percent of the EDC's total annual revenue as of December 31, 2006, 66 Pa. C.S. § 2806.1(g), the SWE expense is not a cost component of the EDCs' individual plans, but a cost the Commission incurs in implementing the program. The Commission is to recover costs related to implementing the program from the EDCs. In prior phases, the Commission recovered the SWE expense, which was not subject to the two percent cap on the cost of each plan, through a proration from the EDCs. The EDCs were then permitted to recover the expenses on a full and current basis. The Commission proposed to fund the SWE contract in the same manner for Phase V.

Finally, with respect to the recovery of revenues lost due to reduced energy consumption or changes in demand, we noted that Act 129 clearly states that such revenue losses shall not be a recoverable cost under a reconcilable automatic adjustment clause. 66 Pa. C.S. § 2806.1(k)(2). Act 129 does, however, provide that "[d]ecreased revenue and reduced energy consumption may be reflected in revenue and sales data used to calculate rates in a distribution-base rate proceeding filed by an electric distribution company under [66 Pa. C.S. § 1308] (relating to voluntary changes in rates)." 66 Pa. C.S. § 2806.1(k)(3).

We noted that Act 58 was signed into law June 2018, amending Chapter 13 of the Code, 66 Pa. C.S. §§ 1301 *et seq*. (relating to rates and distribution systems). Specifically, Act 58 added Section 1330, 66 Pa. C.S. § 1330 (relating to alternative ratemaking for utilities), which permits the Commission to approve an application by a utility to establish alternative rates and rate mechanisms. Section 1330(b)(1) states the following:

> Notwithstanding any other provision of law, including, but not limited to, sections 2806.1(k)(2) (relating to energy efficiency and conservation program).., the Commission may approve an application by a utility in a base rate proceeding to establish alternative rates and rate mechanisms, including, but not limited to, the following mechanisms:
>
> (i) decoupling mechanisms;
> (ii) performance-based rates;
> (iii) formula rates;
> (iv) multiyear rate plans; or
> (v) rates based on a combination of more than one of the mechanisms in subparagraphs (i), (ii), (iii) and (iv) or other ratemaking mechanisms as provided under this chapter.

66 Pa. C.S. § 1330(b)(1).

On April 25, 2019, the Commission adopted an Implementation Order at Docket No. M-2018-3003269 in which the Commission stated that Section 1330(b)(1), 66 Pa. C.S. § 1330(b)(1) requires "utilities seeking to obtain Commission approval of an alternative rate or rate mechanism under Section 1330 of the code, to do so initially through a Section 1308(d), 66 Pa. C.S. § 1308(d) (relating to voluntary changes in rates), general rate proceeding."[140] Accordingly, the Commission will not address or consider alternative rates or rate mechanisms permitted by Section 1330 of the Code, such as decoupling mechanisms or performance-based rates, in this proceeding.

a. Comments

Oracle recommends that the cost for behavioral demand response programs be exempt from the 50/50 split of portfolio incentive vs. non-incentive classifications. Oracle Comments at 6. KEEA recommends that the Commission should adopt

[140] *See Implementation of Act 58 of 2018 Alternative Ratemaking for Utilities*, Docket No. M-2018-3003269 (Order entered April 25, 2019) at 9-10.

performance-based budgeting that links a portion of program administration funding to meeting spending and energy savings benchmarks. KEEA Comments at 3.

Duquesne Light objects to KEEA's proposal to link "program administration funding to meeting spending and energy savings benchmarks" as it represents a significant departure from four phases of precedent. Duquesne Light adds that linking program spending levels to the reimbursement of legitimately incurred administration expenses would create a perverse incentive where EDCs could be encouraged to seek less cost-effective savings than might otherwise be available. Duquesne Light argues that energy savings and budgets are already inextricably linked by savings mandates, cost-effectiveness requirements, and the threat of punitive penalties, thus additional requirements are not warranted. Duquesne Light Reply Comments at 7.

b. Disposition

The Commission disagrees with Oracle's proposed classification of behavioral demand response program costs. First, all costs of operating a behavioral demand response program are administrative in nature, being either EDC operating costs or CSP payments. As there are no transfers being made to participants and no equipment costs, none of the program costs should be categorized as incentives. Second, the requirement that at least 50% of costs be allocated to incentives only applies to the overall EE&C plan. Thus, an EDC may still include any program that does not individually meet the spending split criteria, provided the overall plan complies.

The Commission declines to adopt KEEA's recommendation of performance-based budgeting. The Commission agrees with Duquesne Light's reply comments that energy savings and budgets are already sufficiently linked by savings mandates, cost-effectiveness requirements, and the threat of penalties. The Commission adopts the proposed determination of allowable costs for Phase V outlined above in full.

2. Application of Excess Phase IV Budget

In Section A.7 of this Implementation Order, the Commission proposed that savings generated in Phase IV exceeding an EDC's consumption reduction target be applied towards that EDC's Phase V consumption reduction target. Section B.5 of the Tentative Implementation Order made a similar proposal for carryover of Phase IV peak demand savings.

The issue of savings in excess of the targets also raises issues regarding Phase IV and Phase V budgets. Specifically, if an EDC has excess savings that carry into Phase V, the Commission must decide whether that EDC's Phase V budget should be reduced, as fewer savings are needed to meet its consumption reduction targets. Additionally, if an EDC has achieved its Phase IV target with budget left over, the Commission must decide how to handle the surplus (e.g., used in Phase V or paid back to ratepayers).

The Commission proposed in its Tentative Implementation Order to allow the EDCs the full Phase V budget, regardless of Phase IV spending or target attainment. This proposal is consistent with the proposed targets, which are the product of the Phase V acquisition costs ($/MWh) determined by the EEPDR Potential Study and the full two percent spending limit for each EDC. The Commission recognizes that the EDCs are at risk of potential penalties should they fail to meet their targets, and a reduction in budget without a commensurate reduction in targets would significantly increase this risk. Additionally, the Commission recognizes the importance of a smooth transition from Phase IV to Phase V and the importance of the EDCs' specific programs not "going dark." As such, the Commission proposed allowing the EDCs to spend Phase IV budgets to achieve savings beyond compliance targets. These savings would help EDCs meet Phase V compliance without a commensurate budget reduction.

The Commission recognizes that program measures installed and commercially operable on or before May 31, 2026, as well as CSP or administrative fees related to Phase IV are considered Phase IV expenses. As such, the Commission proposed allowing EDCs to utilize their Phase IV budgets past May 31, 2026, to account for program measures installed and commercially operable on or before May 31, 2026, and to finalize CSP, EM&V, and reporting expenditures related to Phase IV.

The Commission proposed that EDCs begin Phase V utilizing solely their Phase V budgets. We do not believe it to be sound policy to continue spending Phase IV budgets in Phase V on Phase V plan implementation when those monies could be refunded back to the appropriate rate classes. To clarify, we propose that on June 1, 2026, the EDCs would only use Phase IV budgets to close out program delivery, EM&V, and reporting obligations for measures installed and commercially operable on or before May 31, 2026. The EDCs would not be allowed to use Phase IV funds for Phase V plans.

Similarly, the Commission proposed allowing an EDC to continue spending Phase V budgets on their EE&C program even if that EDC attains its consumption reduction and peak demand reduction goals before May 31, 2031. Again, we proposed allowing EDCs to utilize their Phase V budgets past May 31, 2031, solely to account for those program measures installed and commercially operable on or before May 31, 2031, and to finalize the CSP and administrative fees related to Phase V. Upon completion of EDC accounting for Phase V, the Commission proposed that its Bureau of Audits reconcile Phase V funds collected by the EDCs with Phase V expenditures and direct the EDCs to refund all over-collections to the appropriate rate classes. To clarify, we propose that on June 1, 2031, the EDCs would only use Phase V budgets to finalize any measures installed and commercially operable on or before May 31, 2031, and to finalize any contracts and other Phase V administrative obligations. The EDCs would not be allowed to use Phase V funds for any potential Phase VI plans.

a. Comments

PPL and Duquesne Light request clarification on the proposed savings carryover percentages applied to excess savings from reductions in electric consumption and reductions in peak demand from Phase IV. PPL and Duquesne Light also both comment that they oppose the proposed limit placed on savings carryover from Phase IV. PPL Comments at 20 and Duquesne Light Comments at 15. PPL comments in support of the proposal to allow the EDCs to continue spending their full Phase V budgets, regardless of their Phase IV spending or goal attainment. PPL Comments at 20.

DEP expresses support of expending Phase IV and Phase V budgets to obtain energy savings in excess of the targets within each performance period and the importance of the EDCs specific programs not "going dark." DEP proposes allowing the EDCs to use excess Phase IV funds to support health and safety improvements that enable installation of additional energy efficiency measures. DEP Comments at 6. The Low Income Advocates recommend that the Commission require EDCs to roll unspent budget into the next phase and that the funds be used to install "long-term measures," such as direct install weatherization and HVAC measures to low-income households. Low Income Advocates Comments at 75-77. The Joint Energy Advocates urge the Commission to direct EDCs to carry over any unspent budget remaining at the end of Phase IV and add it to the funding available for Phase V programs. Joint Energy Advocates Comments at 5.

FirstEnergy disagrees with commenters who suggest requiring EDCs to spend their full Act 129 budgets and to add unspent Phase IV budgets to available funding for Phase V programs. FirstEnergy maintains that unspent Phase IV budgets should not be used to increase the Phase V EE&C budgets beyond the two percent budget caps established in Act 129. FirstEnergy Reply Comments at 18.

IECPA opposes the proposal by the Joint Energy Advocates and Low Income Advocates that EDCs should be required to spend their full budgets within each phase regardless of their goal attainment status, and if they are not required to spend then full amount then any excess budget should be rolled over to the following phase. IECPA replies that these requirements would go beyond the statutory limits of Act 129 and cause undue burden on ratepayers. IECPA Reply Comments at 2.

b. Disposition

The Commission agrees with the comments from PPL and Duquesne Light that language in the Tentative Implementation Order for this section regarding the caps on savings carryover percentages was imprecise and requires clarification. To clarify, the Commission proposed two distinct limiting mechanisms:

- Energy (MWh) is **capped**, meaning that no more than 20% of an EDCs Phase V consumption reduction targets can be achieved by carryover savings from Phase IV.
- Peak demand savings (MW) is **discounted** by a factor of 50%, meaning that EDCs can only carry over half of the peak demand savings they achieve in Phase IV in excess of their Phase IV target towards Phase V peak demand reduction targets.
- Energy carryover is *capped but not discounted*. Peak demand carryover is *uncapped, but discounted*.

The Commission does not agree with the comments from PPL and Duquesne Light requesting that the carryover limiting mechanisms be removed from the Order. The Commission believes that this approach provides the EDCs sufficient incentive to continue the full implementation of programs and not allow programs to "go dark," while

also addressing Act 129 stakeholder concerns regarding a scenario in which target attainment can be significantly achieved via excess carryover savings.

The Commission agrees with PPL's comment in support of allowing the EDCs to spend their full Phase V budget regardless of their Phase IV spending or goal attainment. We reject suggestions by DEP and the Low Income Advocates to roll over unspent Phase IV budgets into Phase V. As FirstEnergy and IECPA point out in their reply comments, rolling over unspent budget from Phase IV would violate the two percent budget limit in Act 129 because EDC budget limits for Phase V funding are already set at exactly two percent.

The Commission adopts the procedures stated above in regard to the application of excess Phase IV and Phase V budgets. The Commission also adopts the above procedures laid out for spending budget resources in both Phase IV and Phase V after the end of the respective phases to close out program delivery, EM&V, and reporting obligations for measures installed and commercially operable on or before the end of the respective Phase.

3. Rebate Application Deadlines

Applications for EE&C measure rebates are typically submitted following the installation of efficient equipment. For administrative efficiency and to limit the use of EE&C program funds on measures not influenced by the EE&C program, it is beneficial to submit and process rebate applications within a finite period following the in-service date of the measure. During the proceedings for many of the EDCs' Phase II EE&C

plans, the Commission recognized the need for such deadlines and directed the EDCs to amend their plans accordingly.[141]

We proposed in the Tentative Implementation Order requiring the EDCs to develop deadlines for their programs within their Phase V EE&C plans. The EDCs should have the flexibility to determine if deadlines should differ by program or measure type, or at the end of the phase, but we proposed outlining all deadlines in the EE&C plans. The Commission will still retain the authority to approve or deny the proposed deadlines as part of the EE&C plan proceedings. We proposed that the EDCs consider a maximum of 180 days to submit an application as we believe any longer may affect reporting and reconciliation timeframes. The Commission proposed that, if an EDC includes a deadline longer than 180 days in their EE&C plan, that EDC has the burden to provide clear and reasonable rationale for the longer timeframe. The timeline for EDC Final Annual Reports proposed in Section E.3 of the Tentative Implementation Order may affect EDC thinking on this topic as the due date for EDC Final Annual Reports, 122 days after the end of the program year, limits the amount of time available to EDC evaluation contractors to conduct EM&V activities on measures installed within given program years.

Lastly, we proposed that EDCs include clear deadlines on all rebate forms and applications to ensure that participating customers are aware of the deadlines associated

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[141] *See Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation Phase II Plan*, Docket No. M-2012-2334399 (Opinion and Order entered March 14, 2013) at 48. *See Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Consolidation of Proceedings and Approval of Act 129 Phase II Energy Efficiency and Conservation Plans*, Docket Nos. M-2012-2334387, et al. (Opinion and Order entered March 14, 2013) at 41-42. *See Petition of PECO Energy Company for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan*, Docket No. M-2012-2333992 (Opinion and Order entered February 28, 2013) at 38-39. *See Petition of PPL Electric Utilities Corporation for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan*, Docket No. M-2012-2334388 (Opinion and Order entered March 14, 2013) at 85.

with the program. We proposed that program delivery CSP contracts clearly delineate responsibilities for maintaining up-to-date forms and website information in the event of rebate deadline changes.

a. Comments

Duquesne Light expresses support for the suggestion that the EDCs allow 180 days maximum for rebate application filing in their EE&C plans. Duquesne Light also appreciates the flexibility to propose rebate application deadlines longer than 180 days on an as needed basis. Duquesne Light Comments at 16.

b. Disposition

The Commission agrees with Duquesne Light's comments in support of the suggestion that EDCs allow 180 days maximum for rebate application filing in their EE&C plans as well as their support for the flexibility to propose longer deadlines on an as needed basis. The Commission directs the EDCs to propose rebate application deadlines within their EE&C plans. The Commission also directs the EDCs to include clear deadlines on all rebate forms and applications.

The Commission adopts the proposed requirements for rebate application deadlines for Phase V outlined above in full.

4. Allocation of Costs to Customer Classes

Act 129 requires that all approved EE&C measures be financed by the customer class that receives the direct energy and conservation benefit of such measures. *See* 66 Pa. C.S. § 2806.1(a)(11). To ensure that all approved EE&C measures are financed by the customer classes that receive the benefit of such measures, EDCs must first assign each measure's costs to those classes that benefit. Therefore, once the EDC has

developed an estimate of its total EE&C costs as directed above, we proposed requiring the EDC allocate those costs to each of its customer classes. Those costs that demonstrably and exclusively relate to measures or programs dedicated to a specific customer class should be assigned solely to that class. Those costs that relate to measures or programs applicable to more than one class, or that can be shown to provide system-wide benefits, should be allocated using reasonable and generally acceptable cost of service principles as are commonly utilized in base rate proceedings.[142] Administrative costs should also be allocated using reasonable and generally acceptable cost-of-service principles.

Regarding the assignment of EE&C costs to low-income customers, Act 129 requires EE&C measures to be financed by the same customer class that will receive the direct energy and conservation benefits from them. 66 Pa. C.S. § 2806.1(a)(11). Act 129 does not allow for the exclusion of low-income customers from EE&C cost recovery; furthermore, it would be difficult to determine a way to exclude such customers from the allocation of EE&C costs within their customer class. Although we have significant concern for the energy burden experienced by low-income customers, we proposed that such customers are not exempted from contributing toward the recovery of fairly allocated EE&C costs. We noted that low-income customers will stand to benefit financially from well-designed EE&C programs implemented by the EDCs. Moreover, such customers can take advantage of the many programs currently available to help low-income and payment-troubled customers pay their energy bills.

[142] As the General Assembly declared in its Act 129 policy statement "[i]t is in the public interest to adopt [EE&C] measures and to implement energy procurement requirements designed to ensure that electricity obtained reduces the possibility of electric price instability, promotes economic growth and ensures affordable and available electric service to all residents."

a. Comments

OSBA agrees that measure costs should be assigned to the customer class benefiting from the measure. OSBA Comments at 3.

CEO and the Task Force believe that cost recovery should preclude low-income ratepayers, but they also propose that if the Commission is going to require that low-income customers share in the Act 129 costs, then the Commission should increase the low-income carve-out in order to decrease the energy burden for low-income ratepayers. CEO and the Task Force Comments at 4.

b. Disposition

The Commission agrees with comments from OSBA that measure costs should be assigned to the customer class benefiting from those measures.

The Commission does not agree with CEO and Task Force comments that low-income customers should be excluded from cost-recovery related to Act 129 costs and that the low-income carve-out should be increased. As stated in the Tentative Implementation Order, while the Commission has great concern for the energy burden experienced by low-income customers, there is no mechanism provided in Act 129 to exclude low-income customers from cost recovery. Given that low-income customers are a part of the general residential customer class, they are not exempted from contributing toward the recovery of fairly allocated EE&C costs of that customer class.

The Commission adopts the proposed requirements for allocation of costs to customers' classes for Phase V outlined above in full.

5. Cost Recovery Tariff Mechanism

Act 129 allows all EDCs to recover, on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of their plans. Act 129 also requires that each EDC's plan include a proposed cost-recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307 (relating to sliding scale of rates; adjustments), to fund all measures and to ensure a full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. FirstEnergy should propose a cost recovery tariff mechanism that considers the eventual consolidation of the rate districts.

The Commission proposed the use of a standardized reconciliation to allow the EDCs and ratepayers to compare the cost recovery of program expenditures of all EDCs on an equal basis. We also concluded that it is beneficial to the EDCs and ratepayers, with the implementation of Phase V, to base the annual surcharge on the projected program costs that the EDC anticipates incurring over the surcharge application year to attain the conservation targets.

The development of the surcharge using the projected program costs rather than the authorized budget amount will mitigate over- or under-recoveries of costs during the surcharge application period. Additionally, we believe that the actual expenses incurred should be reconciled to actual revenues received. A reconciliation methodology based upon actual expenditures is pursuant to Section 1307(e) of the Public Utility Code, 66 Pa. C.S. § 1307(e), and allows for the provision of interest on over- or under-recoveries. We concluded that these measures would mitigate the over- or under-recovery of costs during the surcharge application period. As such, consistent with our determination in the Phase

III Final Implementation Order[143] and Phase IV Final Implementation Order,[144] the Commission proposed for Phase V to not require the provision of interest on over- or under-recoveries.

To further standardize the filing process, we proposed that annually, beginning in 2026, the EDCs file by May 1, the annual rate adjustment for the rate to become effective June 1. Concurrent with the annual rate adjustment, the EDCs would submit, in a separate filing, the annual reconciliation statement thirty days following the end of the reconciliation period in accordance with Section 1307(e) of the Public Utility Code, 66 Pa. C.S. § 1307(e).

The Commission agrees with comments filed on this topic in prior proceedings that surcharges should be combined into a single surcharge and tariff with the implementation of Phase V. In order to transition from Phase IV, ending May 31, 2026, to Phase V, beginning on June 1, 2026, we proposed that each EDC reconcile its total actual recoverable EE&C plan expenditures incurred through March 31, 2026, with its actual EE&C plan revenues received through March 31, 2026.[145] In addition, each EDC should include, as part of the calculation of the Phase V rates to become effective June 1, 2026, as clearly identified separate line items for: projected expenses to finalize any measures installed and commercially operable on or before May 31, 2026; expenses to finalize any contracts; and other remaining administrative obligations. The Phase IV rate that becomes effective June 1, 2025, will remain effective through May 31, 2026. The revenues and expenses of the remaining two months of Phase IV (i.e., April 2026 and May 2026); expenses to finalize any measures installed and commercially operable on or

[143] *See Phase III Implementation Order* at page 149.
[144] *See Phase IV Implementation Order* at page 141.
[145] Due to the timing of the filing, the reconciliation statement will contain ten months of revenues and expenses. The remaining two months of Program Year 17 will be reconciled with the Program Year 18 revenues and expenses.

before May 31, 2026; expenses to finalize any contracts; and other Phase IV administrative obligations should be included, as clearly identified separate line items, in the reconciliation for the period April 1, 2025, through March 31, 2026.

We proposed that the standardized reconciliation process and the calculation of the annual surcharge be set forth by each EDC in a supplement or supplements to the EDC's tariff to become effective June 1, 2026, and be accompanied by a full and clear explanation as to their operation and applicability to each customer class. The EE&C rates are subject to continuous Commission review and audit as well as reconciliation reports in accordance with Section 1307(e) of the Public Utility Code, 66 Pa. C.S. § 1307(e). Lastly, we proposed that under no circumstances will an EDC be permitted to recover, through the automatic adjustment clause, any EE&C plan-related costs that have already been claimed and permitted recovery in base rates.

a. Comments

The Commission received no comments on this topic.

b. Disposition

The Commission adopts the proposed requirements for cost recovery for Phase V outlined above in full.

I. Additional Matters

Several parties submitted comments regarding topics that were not directly addressed in the Tentative Implementation Order. Comments on issues that are outside the scope of this proceeding are not summarized or addressed. A common theme among comments that do not fit squarely in the topics outlined in the Tentative Implementation Order, but are nonetheless relevant for implementation of Phase V, is the request for

supplemental working groups and enhanced transparency for stakeholders. A second set of comments requested the Commission establish statewide contractor training and workforce development programs in support of Act 129. Those comments are consolidated and addressed in this section to preserve the focus of prior sections on the intended topics. All parties had an opportunity to address these matters in reply comments if they wished.

1. Working Groups and Enhanced Transparency for Stakeholders

a. Comments

The Joint Energy Advocates, KEEA, and NEEP provide several recommendations to the Commission to facilitate stakeholder engagement. Those recommendations include the following:

- Hosting annual public Act 129 meetings that include EDC presentations to allow for comparative analysis and benchmarking.
- Establishing a central "bulletin board" for all Act 129 registration processes, schedules, and key points of contact.
- Requiring EDCs to report on pilot programs.
- Requiring a standardized definition of a "deferral" and quantify the cost associated with deferrals.

Joint Energy Advocates Comments at 11, KEEA Comments at 6, and NEEP Comments at 11.

NEEP recommends establishing a working group with stakeholders such as utilities, program implementers, contractors, and representatives of state and local agencies that provide efficiency, weatherization, and home repair services. The purpose of this group would be to begin identifying and coordinating different funding sources to address the need for enhanced coordination with other state conservation programs.

NEEP notes that pooling funding can potentially enable more program participants and allow the EDCs to accomplish more with the funding available to them. Several potential areas of coordination include exploration of opportunities for braided funding, advanced data sharing, support for AEPS registrations, coordination of energy audits, and consideration of joint marketing campaigns. NEEP Comments at 3-4.

The Joint Energy Advocates recommend establishing a Coordination Working Group comprised of electric and gas utilities, consumer advocates, contractors and/or CSPs, and representatives from state and local agencies that administer relevant efficiency, weatherization, and home repair programming. These agencies may include the Department of Community and Economic Development (DCED), the Department of Environmental Protection (DEP), the Pennsylvania Housing Finance Agency (PHFA), the Department of Human Services (DHS), and the Department of Health (DH). They recommend that the Working Group be charged with developing practical guidance and recommendations for EDCs to consider incorporating into their Phase V plans. The Working Group should continue to convene on a quarterly basis throughout Phase V to share information, identify barriers, and resolve practical challenges that may arise in cross-program coordination. Additional goals include creating open lines of communication, facilitating the exchange of information and data, and standardizing administrative processes. Joint Energy Advocates Comments at 5. KEEA also supports establishing a Coordination Working Group to formalize cross-program coordination by bringing together electric and gas utilities, consumer advocates, CSPs, and representatives from agencies that administer home energy and health programs. KEEA recommends that the group develop recommendations to integrate Act 129 programs with federal, state, and local energy assistance initiatives. KEEA Comments at 3.

The Joint Energy Advocates also recommend separate working groups with healthy home and weatherization programs within each utility's service territory. Joint Energy Advocates Comments at 8.

OCA recommends that a Phase V Working Group be established to encourage discussion of uncertainties, such as inflation, tariff impacts, the availability of IRA funds, the future of LIHEAP and WAP, the methodology in determining peak demand savings, solar PV costs, and CHP projects identified in comments. A Working Group would facilitate discussions between the EDCs and interested parties, create a forum to discuss topics such as demand response opportunities and pilots, and leverage best practices in general energy efficiency and demand response programs. OCA recommends that the Working Group convene monthly to address the more mature and comprehensive Act 129 plans and report back to the Commission by and through a quarterly filing with recommendations and a summary of the meeting(s) thereafter. OCA Reply Comments at 7.

The Low Income Advocates and CEEH-PA recommend the Commission reconvene the Multifamily Housing Working Group. Low Income Advocates Comments at 51. CEEH-PA Comments at 23, 29.

EAP opposes suggestions made by commentators that a separate working group should be established for the coordination of state and Act 129 programs or that the Multifamily Working Group should reconvene. EAP suggests that the Commission's existing process offers various methods for stakeholder input, including the Tentative Implementation Order and its associated comments and reply comments. In addition, EAP notes that the EDCs' semi-annual reporting and stakeholder meetings provide a venue for the EDCs and stakeholders to review and comment on the performance, progress, and operation of the programs. EAP adds that EDCs have been open to meeting with stakeholders more frequently, to discuss ongoing plans. EAP suggests that

additional stakeholder meeting mandates would add to the administrative costs without a clear benefit. EAP Reply Comments at 4-5.

b. Disposition

The Commission respectfully acknowledges stakeholder recommendations to facilitate enhanced stakeholder engagement and to establish a variety of working groups, but we agree with EAP's reply comments that the existing processes offer various methods for stakeholder input. Additional stakeholder meeting mandates would add to the administrative costs without a clear benefit.

Notwithstanding the data sharing working group we have ordered in Section C.3 of this Implementation Order, the Commission rejects the suggestions to establish additional working groups or stakeholder engagement mechanisms. The Commission believes that the EDCs and participating stakeholders have developed a well-functioning system of stakeholder engagement that allows for mutual feedback to aid in the implementation of successful EE&C programs and does not believe that additional working groups are a prudent investment of limited resources.

2. Statewide Contractor Training and Workforce Development Programs

a. Comments

NEEP and DEP recommend adopting statewide contractor training and workforce development programs. NEEP encourages the Commission to take two actions. First, the Commission should establish statewide minimum qualifications for contractor participation in Act 129 programs, focused on heat pump installation, weatherization, and other measures offered by Act 129 programs. Second, the Commission should establish a statewide online portal for certified contractors. NEEP proposes that these steps will create uniform standards and training expectations across the state and help ensure

program success. NEEP Comments 5. DEP encourages the Commission to adopt training programs such as those recently authorized under LIURP. DEP Comments at 6.

b. Disposition

While the Commission is supportive of contractor training and certification programs, it is outside the scope of this proceeding for the Commission to create statewide training programs, develop on online portal, or prescribe certification and eligibility requirements upon the contractor workforce for the EDCs' Act 129 programs. Each EDC is responsible for retaining CSPs to implement its approved EE&C plan and specific contractor requirements beyond the minimum criteria outlined in Section G.3 of this Implementation Order are the responsibility of the EDC and its selected CSPs. The Commission therefore declines to adopt these recommendations from DEP and NEEP.

CONCLUSION

With this Implementation Order, the Commission establishes the Phase V EE&C program that requires electric distribution companies with at least 100,000 customers to adopt and implement cost-effective plans to reduce energy consumption and peak demand within this Commonwealth. This Implementation Order sets the required consumption and peak demand reductions for each electric distribution company, as well as guidelines for implementing Phase V of the EE&C program. **THEREFORE,**

IT IS ORDERED:

1. That the Commission establishes the Phase V energy efficiency and conservation program as outlined in this Implementation Order.

2. That the Commission tentatively adopts the electric distribution company specific consumption reduction targets set forth in this Implementation Order. These consumption reduction targets will become final for any covered electric distribution company that does not petition the Commission for an evidentiary hearing by July 7, 2025.

3. That the Commission tentatively adopts the electric distribution company specific peak demand reduction targets set forth in this Implementation Order. These peak demand reduction targets will become final for any covered electric distribution company that does not petition the Commission for an evidentiary hearing by July 7, 2025.

4. That if an electric distribution company files a petition for an evidentiary hearing, the matter will be referred to the Office of Administrative Law Judge for hearings with the record being certified to the Commission by October 24, 2025. Any party seeking to intervene in any such proceeding must file a Petition for Intervention with ten days of an electric distribution company's filing a petition for an evidentiary hearing.

5. That electric distribution companies with at least 100,000 customers adhere to the schedule for submission and filing requirements for energy efficiency and conservation plans identified in this Implementation Order.

6. That the Commission staff shall have delegated authority to review and approve electric distribution company proposed conservation service provider bidding processes, as set forth in Section G of this Implementation Order. Such staff

determination shall be the final determination of the Commission unless appealed to the full Commission within 20 days, per 52 Pa. Code § 5.44.

7. That the Commission staff shall have delegated authority to review and approve minor energy efficiency and conservation plan changes in accordance with the procedures set forth in Section D of this Implementation Order and this Commission's June 10, 2011, Final Order at Docket No. M-2008-2069887.

8. That any directive, requirement, disposition or the like contained in the body of this Implementation Order that is not the subject of an individual Ordering Paragraph, shall have the full force and effect as if fully contained in this part.

9. That a copy of this Implementation Order shall be served upon the Office of Consumer Advocate, the Office of Small Business Advocate, the Commission's Bureau of Investigation and Enforcement, and the jurisdictional electric distribution companies subject to the Energy Efficiency and Conservation Program requirements.

10. That the Secretary shall deposit a notice of this Implementation Order with the Legislative Reference Bureau for publication in the *Pennsylvania Bulletin*.

11. That this Implementation Order be published on the Commission's public website at https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/energy-efficiency-and-conservation-eec-program/

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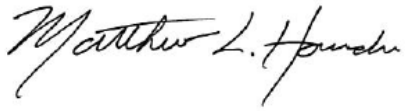
BY THE COMMISSION,



Matthew L. Homsher
Secretary

(SEAL)

ORDER ADOPTED: June 18, 2025

ORDER ENTERED: June 18, 2025