COMMONWEALTH OF PENNSYLVANIA

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April 7, 2025

Via Electronic Filing
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

RE: Phase V Tentative Implementation Order of Act 129; Docket No. M-2025-3052826

Dear Secretary Chiavetta:

Enclosed for filing are the Comments of the Office of Consumer Advocate, in the above-referenced proceeding, which have also been served as evidenced in the certificate of service filed and contained herein.

Should you have any questions, please contact me at the telephone number above.

Respectfully Submitted,

Katie Kennedy
Assistant Consumer Advocate
PA Attorney I.D. # 317237

Enclosure
cc: Joseph Sherrick, Bureau of Technical Utility Services, josherrick@pa.gov
(PDF and Word Versions)
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(PDF and Word Versions)

CERTIFICATE OF SERVICE

Re: Phase V Tentative Implementation Order of Act 129 Energy Efficiency and Conservation	:	Docket No. M-2025-3052826

I hereby certify that I have this day served a true copy of the following document, the Office of Consumer Advocate's Comments to the Tentative Implementation Order, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code §1.54 (relating to service by a participant), in the manner and upon the persons listed below:

Dated this 7th day of April 2025.

SERVICE BY E-MAIL ONLY

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Dated: April 7, 2025

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Act 129 Energy Efficiency and Conservation Program Implementation Phase V	: :	Docket No. M-2025-3052826

COMMENTS OF THE OFFICE OF CONSUMER ADVOCATE

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I. INTRODUCTION

The Office of Consumer Advocate (OCA) appreciates the opportunity to comment on the Public Utility Commission's (PUC or Commission) Tentative Implementation Order (T.O.) for Phase V of the Act 129 Energy Efficiency and Demand Response Programs. The OCA has previously filed Comments in earlier phases and submits these comments with the assistance and guidance of expert Stacy Sherwood.[1] The OCA supports the Commission's thoughtful 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.

II. COMMENTS

A. Support of Act 129 Phase V

In short, Act 129 requires Electric Distribution Companies (EDCs) to operate and maintain Energy Efficiency and Conservation (EE&C) programs, and report to the Commission regarding the same. *See* PUC, *Electric Distribution Company Act 129 Reporting*, https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/electric-distribution-company-act-129-reporting (December 10, 2024). As Phase IV is set to expire in 2031, the Commission's Final Order for TRC testing is seemingly non-committal:

> "If the Commission decides to proceed with Phase V of Act 129, it will be necessary to address the B/C measurements for Phase V. To allow for adequate planning, the Commission put forth a Tentative Order regarding a 2026 TRC Test, building on the five previous Pennsylvania TRC Test Orders and industry documents such as the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects17 (California Manual), for the B/C analysis of EE&C plans for a potential Phase V. The

[1] Ms. Sherwood, a Principal with Energy Futures Group, has over 15 years of experience in energy efficiency (EE) and demand response (DR), along with expertise in automated metering infrastructure, cost recovery, renewable energy, and ratepayer safeguards for large loads such as cryptocurrency and data centers. Ms. Sherwood has reviewed plans proposed by Act 129 EDCs and voluntary utilities since Phase III on behalf of the OCA. For the last three years she has served as the lead technical consultant to the Connecticut Energy Efficiency Board on the review of the state's Conservation and Load Management Plan. She has also reviewed demand side management plans and filed comments or testimony in the following states: Connecticut, Georgia, Iowa, Kansas, Kentucky, Maryland, Missouri, Pennsylvania, South Carolina, and Wisconsin.

Commission also adopted a 2026 Technical Reference Manual (TRM) at Docket No. M-2023-3044491 (Final Order entered September 12, 2024), for use if we decide to proceed with a Phase V.[2]"

However, and as noted by Chairman Stephen M. DeFrank[3], the implementation of Phase V is as imperative to address concerns about rising energy costs for ratepayers and adequate energy supply now as it was when Act 129 was established in 2008. The Electric Power Outlook for Pennsylvania 2023-2028 indicated that the aggregate five-year energy projection had an average annual growth rate of 0.76%.[4] However, since 2023, there has been a significant increase in interconnection requests and projected capacity builds related to data centers and other large loads, which will greatly impact the need for adequate capacity[5]. It is evident that new high usage customers are a concern in Pennsylvania, as the Commission has issued a notice for a hearing in April to "Examine How High-Demand Customers Impact the Grid, and How to Protect Existing Utility Customers."[6] Increasing load growth, coupled with the scheduled retirement of power plants highlights the needs for various methods to maintain adequate supply at rates that are affordable and sustainable for all customers.

Energy efficiency is one of the cheapest energy resources to invest in and provides quantifiable benefits well beyond the cost to deliver the programs[7]. When cost-effectively implemented, energy efficiency programs provide a variety of benefits to ratepayers, the utility,

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[2] 2026 Total Resource Cost (TRC) Test, M-2024-3048998, Final Order dated November 7, 2024, at p. 3.
[3] Act 129 Energy Efficiency & Conservation Phase V Implementation Order, M-2025-3052826, Statement of Chairman Stephen M. DeFrank dated February 20, 2025.
[4] Electric Power Outlook for Pennsylvania 2023-2028, Pennsylvania Public Utility Commission, August 2024, https://www.puc.pa.gov/media/3124/2024-epo-2023-2028-7-2024_final.pdf, page 30.
[5] *Please see PUC Launches Review of Grid Impacts from Data Center Growth*, Press Release dated March 27, 2025 and available at: https://www.puc.pa.gov/press-release/2025/puc-launches-review-of-grid-impacts-from-data-center-growth-03272025
[6] *Please see* En Banc Hearing Concerning Interconnection and Tariffs for Large Load Customers, Public Meeting of March 27, 2025 Agenda No. 3054271-CMR, Statement of Chairman Stephen M. DeFrank, (also available at: https://www.puc.pa.gov/press-release/2025/puc-launches-review-of-grid-impacts-from-data-center-growth-03272025).
[7] *Please see* Mollina, Maggie, *The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs* pp. v-vi, March 2014 (available at: https://www.aceee.org/sites/default/files/pdfs/u1402.pdf)

and the environment. First and foremost, energy efficiency can reduce demand and overall energy usage for the participant, which can translate into deferred investment in new electricity generation and infrastructure, at both the distribution and transmission level. Impacting overall load and energy demand can provide increased reliability, even more so if dispatchable demand response is included in the portfolio, which is realized by participants and non-participants. Improved energy efficiency provides economic benefits, such as lower utility bills for both participants, through direct participation, and for non-participants through the stabilization of electricity prices.

Furthermore, energy efficiency programs can and do promote job creation, and influences trades, such as in heating, ventilation, and air conditioning, to train the workforce. Environmentally, the programs decrease greenhouse gas emissions and other pollutants, as well as decrease the use of other resources, such as water. While there are direct benefits for those who participate in the programs, energy efficiency programs can provide in-direct benefits for all ratepayers. Those benefits translate into bill savings and energy cost reductions that otherwise would not occur absent the Act 129 efforts.

Consistency in program offerings from phase to phase can help to maintain the workforce which supports the Act 129 activities, provides customers with consistency in marketing and understanding of the program offerings, and limits the administrative burden associated with the starting and cessation of program implementation.

B. Proposed Reductions

The Commission's T.O.[8] proposes a statewide consumption reduction goal of 3,481,403 megawatt-hours (MWh), of which 245,980 MWh is allocated as the low-income carve-out for Phase V. T.O. at 24, 27. The Low-Income Target was determined by allocating 13% of each EDC's

[8] Energy Efficiency and Conservation Program Tentative Implementation Order, M-2025-3052826, dated February 20, 2025, and available here: https://www.puc.pa.gov/pcdocs/1866849.pdf (hereafter "T.O.").

Act 129 budget and represents 7.1% of the statewide consumption reduction goal.[9] T.O. at 27. The consumption reduction goal will be achieved through a combination of initiatives, including energy efficiency, combined heat and power (CHP), and solar. The targets are based on the results of the Statewide Evaluator's (SWE's) energy efficiency and peak demand response (EEPDR) Potential Study, which outlined statewide and EDC-level potential reductions based on the budget constraints, customer carve-outs, the 2026 Technical Resource Manual (TRM), and other requirements of Act 129. The consumption reduction goal is equivalent to 2.3% of the 2009-2010 reference load. T.O. at 24.

The Commission's T.O. proposed a statewide demand reduction goal of 607.6 MW, which will be achieved through a combination of coincident demand reductions from the program activities above and a demand response program. These targets are based upon the results of the demand response (DR) Potential Study, and the other documents pertaining to Phase V. Unlike in Phase IV, which did not have a modeled demand response budget, the Commission modeled as 10% of the statewide budget for Phase V. The demand reduction goal is equivalent to 2.29% of the 2007-2008 reference load. T.O. at 47. Table 1 below provides a summary of the Commission's proposal.

Table 1 PUC Proposed Consumption and Peak Demand Reduction Targets

	Consumption Reduction Target (MWh)	Percentage of Statewide Consumption Reduction Target	Peak Demand Reduction Target (MW)	Percentage of Statewide Peak Demand Reduction Target
DPL	275,318	8%	48.4	8%
FE	1,174,520	34%	202.4	33%
PPL	875,992	25%	157.5	26%
PECO	1,155,573	33%	199.3	33%
Statewide	**3,481,403**	**100%**	**607.6**	**100%**

[9] The EDCs include Duquesne Light Company (DLC), First Energy (FE), PPL Electric Utilities Corporation (PPL), and PECO Energy Company (PECO).

Act 129 limits statewide spending to 2% of 2006 revenues, which equates to $244.5 million per year or $1,222.9 million over the five years that constitute Phase V. While the market potential studies did consider impacts from rising inflation since the beginning of Phase IV to assess the acquisition costs, the Commission stated that the budget should not be adjusted for inflation as Act 129 legislation does not mention adjustments for such impacts. T.O. at 17. Table 2 below provides a breakdown of EDCs proposed Phase V budgets and acquisition costs.

Table 2 PUC Proposed Phase V Total Budget and Acquisition Cost

	Budget Allocation (millions $)	Acquisition Cost ($/MWh)	Acquisition Cost ($/MW)
DPL	$97.7	$354.97	$2,071,158
FE	$390.3	$337.77	$1,958,878
PPL	$307.5	$351.04	$1,952,969
PECO	$427.4	$363.88	$2,111,183
Statewide	**$1,222.9**	**$351.28**	**$2,012,739**

Historically, the budget has been allocated among energy efficiency, demand response, and CHP. In Phase V, the Commission expanded its modeled budget scenario to include customer-sited solar. Additionally, as noted above, the Commission modeled an allocation of the budget to demand response, a component not modeled for Phase IV. Table 3 below summarizes the statewide funding allocation by portfolio component.

Table 3 Phase V Proposed Budget Allocation by Portfolio Component

Portfolio Component	Phase V Budget Allocation (millions $)	Budget Allocation (%)
Market Rate EE	$ 819.3	67%
Low Income EE	$ 158.9	13%
Solar	$ 110.1	9%
CHP	$ 12.2	1%
Demand Response	$ 122.3	10%
Total	$ 1,222.9	100%

C. Phase V Issues

1. Acquisition Costs

As indicated in the T.O., the Commission relied upon the most recent EEPDR and DR potential studies to develop the targets for Phase V. Potential studies have limitations, which have been well-documented. Organizations such as the American Council for an Energy-Efficient Economy (ACEEE), the Regulatory Assistance Project, and Lawrence-Berkeley National Laboratory have studied the correlation between potential study estimates and actual savings achievements.[10] In one such study, ACEEE reviewed 45 publicly available studies published since 2009 and found that the studies tended to rely on inaccurate models and underestimate energy savings.[11] The report concludes, among other things that:

[10] *See, e.g.*, David B. Goldstein, *Extreme Efficiency: How Far Can We Go If We Really Need to?,* ACEEE Summer Study on Energy Efficiency in Buildings, at 10-44 through 10-56 (2008), https://www.aceee.org/files/proceedings/2008/data/papers/10_435.pdf; Philip Mosenthal, *Do Potential Studies Accurately Forecast What is Possible in the Future? Are We Mislabeling and Misusing Them?: Presentation for ACEEE Energy Efficiency as a Resource Conference*, Optimal Energy, Inc. (Sept. 21, 2015), https://www.aceee.org/sites/default/files/pdf/conferences/eer/2015/Philip_Mosenthal_Session2D_EER15_9.21.15.pdf; Chris Kramer & Glenn Reed, *Ten Pitfalls of Potential Studies*, Regulatory Assistance Project (2012),https://www.raponline.org/wp-content/uploads/2023/09/energyfutures-kramerreed-tenpitfallsesdraft2-2012-oct-24.pdf.

[11] Max Neubauer, *Cracking the TEAPOT: Technical, Economic, and Achievable Energy Efficiency Potential Studies,* ACEEE, at 39 (Aug. 2014) ("Neubauer Report") https://www.aceee.org/sites/default/files/pdfs/u1407.pdf.

> "[G]iven the inaccuracy of models and the generally conservative approach of these studies, there is likely a great deal of additional cost-effective potential available beyond what is identified…. Moreover, given the fact that most studies base their customer-participation models on economics, even short-term forecasts of market dynamics are murky. This is because studies tend to downplay the impact of program design elements such as marketing and education, as well as the non-energy justifications for investing in energy efficiency."[12]

One area of concern related to the potential studies used to inform the Phase V targets are the proposed acquisition costs. Compared to actual acquisition costs in Phase IV, the proposed Phase V acquisition costs are significantly higher. Depending on the EDC, as shown in Table 4, the proposed Phase V acquisition costs are 40-87% higher than FY 15 actual acquisition costs. The FY15 actual acquisition costs are lower than the Planned Phase IV Final Implementation Order by a magnitude of 13% to 17%, except for First Energy, which is 5% higher than projected.

Table 4 Comparison of FY15 and Proposed Phase V Acquisition Costs by EDC[13]

	Planned Phase IV ($/MWh)	FY15 Actual ($/MWh)	Proposed Phase V ($/MWh)	Variance from FY 15 Actual (%)
PECO	$309.51	$ 260	$ 381	141%
PPL	$245.97	$ 210	$ 393	187%
Duquesne Light	$281.57	$ 250	$ 395	146%
First Energy*	$255.63	$ 268	$ 363	140%

*First Energy costs for the Planned Phase IV and for FY15 are an average

While it is understandable for the acquisition costs to change from one phase to the next, depending on the measure mix, codes and standard changes, and other assumptions, PPL's acquisition costs are projected to increase the most, while the other EDCs have consistency between their projected acquisition cost increases. It is unclear how and to what extent the EEDR

[12] Neubauer Report at 39.
[13] FY15 Actual Acquisition Costs are from SWE Final Annual Report: Act 129 Program Year 15, Version 1.1 December 4, 2024, NMR Group, Inc., Demand Side Analytics, Brightline Group, and Optimal Energy. https://www.puc.pa.gov/media/3262/swe_py15_final_annual_report120424.pdf. Page 16.

Potential Study considered the lower actual acquisition costs experienced by PPL. The OCA avers that there is potential for PPL to continue to experience lower acquisition costs than its EDC counterparts, as this was also the case for the Phase IV proposed acquisition costs, which could translate to higher targets for PPL. Without further justification for PPL's variance from actual acquisition costs, the PPL goal should be adjusted to a similar increase of 40% higher than actual and have the goal readjusted.

The EEPDR Potential Study indicates that the reason for the increased acquisition costs is attributable to loss of lighting savings from both the residential and non-residential sectors compared to Phase IV and based on the level the SWE team "believed would allow the EDCs to develop balanced plans that address all markets equitably." EEDRPS at 36. The OCA has concerns about the assumptions that are influencing the proposed acquisition costs. First, the residential lighting savings have been fading from the residential portion of the portfolio throughout Phase IV and in FY15 only accounted for 5% of the verified gross savings. SWE FY15 at 13.

Second, in FY15, 54% of the verified gross energy savings came from non-residential lighting. SWE FY15 at 13. Comparatively, the EEDR Potential Study projects that approximately 62% of the savings will come from lighting from small business and large C&I customers. EEDR Potential Study at 27, 31. Given the level of savings associated with FY15 compared to the EEDR Potential Study, it seems that the impacts from reduced residential lighting savings and a saturation of the C&I market should be impacting the acquisition in a smaller ratio than that being proposed for Phase V.

Third, the EEPDR Potential Study indicates that the study assumed "a comprehensive portfolio of measures with appropriate investments in some of the longer-lived, but more expensive, efficiency sources." EEPDR Potential Study at 36. Therefore, the acquisition costs are

based upon the measure mix assumed by those conducting the potential study. However, it is unlikely that any of the EDCs will put forward the exact measure mix proposed by the EEPDR Potential Study. As such, the acquisition costs should not be considered as absolute, nor should they be the sole basis for the energy savings targets.

Fourth, while the SWE states that the EEPDR considers historical spending, the planned versus actual acquisition costs have varied in the past. In reviewing the Phase III planned versus actual acquisition costs for energy efficiency, the variance ranges from 5% above planned for one EDC, up to 44% below forecasted for two EDCs. The Figure below is borrowed from the Act 129 SWE Phase III Final Annual Report.[14]

Figure 1 SWE Final Phase III Report Comparison of Planned and Actual Acquisition Costs

Table 52: Planned Versus Actual Energy-Efficiency Acquisition Costs, Phase III

EDC	Phase III Verified Savings (MWh/yr)	Forecasted Phase III Acquisition Cost per First-Year kWh Saved	Actual Phase III Acquisition Cost per First-Year kWh Saved	Percent Change from Forecasted Acquisition Cost
PECO	2,068,877	$0.14	$0.15	5%
PPL	1,749,310	$0.19	$0.14	(23%)
Duquesne Light	469,053	$0.19	$0.16	(17%)
FE: Met-Ed	746,655	$0.18	$0.11	(42%)
FE: Penelec	696,193	$0.19	$0.11	(44%)
FE: Penn Power	223,948	$0.19	$0.10	(44%)
FE: West Penn Power	709,466	$0.18	$0.11	(38%)
Statewide	**6,663,502**	**$0.17**	**$0.13**	**(22%)**

Recommendation:

- Adjust PPL's acquisition costs to reflect a projected increase to acquisition costs similar to the other EDCs and subsequently adjust PPL's consumption and peak demand reduction targets.

[14] SWE Annual Report Act 129 Phase III and Program year 12, March 31, 2022, https://www.puc.pa.gov/pcdocs/1746475.pdf, page 51.

2. Low Income Savings Carve-Out

The Commission has modeled a low-income spending carve-out equivalent to 13% of the total budget, assuming as part of the potential study as it is consistent with historical EDC Act 129 spending levels. T.O. at 26. The OCA appreciates the proposal to maintain the low-income carve-out, but notes that due to increased acquisition costs, there may be less savings achieved for low-income customers and fewer low-income households served through the program. While historical carve-out spending is a good benchmark as a minimum investment in the sector, the OCA requests that the Commission consider the number of customers that can be addressed through the program and the level of savings achieved. Maintaining the 13% carveout in Phase V will result in the carve-out savings target being 5% (14,199 MWh) less than the Phase IV low-income carveout, and 27% (90,832) less than the Phase III low-income carveout. To maintain the same level of savings as the Phase IV low-income carve-out, the OCA avers that the budget would need to be at least 14%, rather than the current 13% carve-out. The OCA recommends that Act 129 maintain the same level of savings commitment to the low-income carve-out from phase to phase.

Therefore, the OCA respectfully requests that the Commission adjust the low-income carve-out to maintain savings levels equivalent to Phase IV and increase the budget allocation to at least 14% and subsequently increase the Low-Income target accordingly. With the adjustment to the modeled budget allocation, the approximately $8.2 million budget should be allocated from either energy efficiency or solar allocations.

<u>Recommendation:</u>

- Increase the Low-Income Carve-out to at least 14% of the budget and proportionally adjust the associated savings targets.

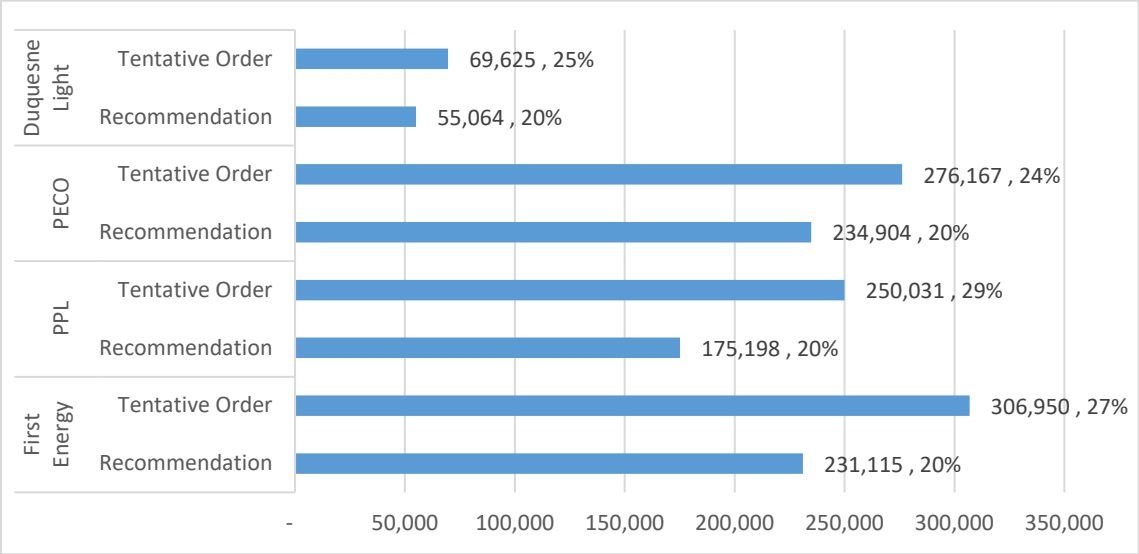
3. Carryover Savings

In Phase V, the Commission proposes to allow the full Phase V budgets for EDCs, regardless of Phase IV spending and target attainment and even if EDCs attain their respective Phase V consumption and peak demand reduction goals before May 31, 2031. T.O. at 93. Additionally, the EDCs will be allowed to count excess consumption and peak demand reductions in excess of Phase IV targets towards Phase V targets. While this is consistent with practice during prior phases, there is one change the Commission is proposing during Phase V. To that end, the Commission proposes to limit the carryover "to a maximum of 20% of their respective portfolio and low-income targets." T.O. at 31. The Commission views this limitation as reasonable as it limits it to one-fifth of the five-year phase target to encourage EDCs to continue full implementation of the programs and prevents an EDC from achieving a sizable portion of its savings via excess savings from a prior phase.

The OCA supports this decision with one proposed modification. As is, the Commission is seeking to limit the carryover to one-fifth of the prior five-year phase target. However, as noted by the Commission, the savings targets are declining each phase for assorted reasons, including budget and measure offerings. To truly limit significant achievement of targets from prior phase investment, the OCA recommends that the 20% carryover be limited to the proposed phase targets i.e., carryover from Phase IV excess savings limited to 20% of the MWh or MW targets established in Phase V. Since the overall budget will not change without legislative amendment, the level of savings achieved from one phase to the next will likely continue to decline. Establishing the excess carryover based on the proposed phase will ensure that significant savings from prior phases are not contributing to more than one-fifth of the savings in the new phase.

Figure 2, below, shows a comparison of the T.O.'s recommended level of carryover, which is based upon 20% of Phase IV's targets, compared to 20% of the proposed targets for Phase V. Due to declining goals in Phase V, the T.O.'s proposed carryover amount ranges from 24% to 29% of the Phase V target, meaning that there is potential for an EDC to carryover in excess of one year of the proposed savings. This is concerning as the Phase V targets are based on acquisition costs rather than any carryover savings increasing the targets, the EDCs will be expected to obtain even lower savings in Phase V than obtained in Phase IV.

Figure 2 Carryover Savings Tentative Order vs OCA Recommendation



Recommendation:

- Carryover limits from the current phase should be limited to 20% of the subsequent phase's target.

4. Demand Response[15]

The OCA applauds the Commission's tentative decision to include formal demand response programs as part of the Phase V portfolios. The OCA is supportive of formal demand response programs as the EDCs have historically invested in these activities (such as direct load control) and have automated metering infrastructure that can support a variety of demand response opportunities (such as conservation voltage reduction and behavioral demand response). Inclusion of demand response programs will likely provide greater overall net benefits than the level that would be achieved through a portfolio of only energy efficiency measures.

Additionally, demand response programs can be paired with energy efficiency through the installation of smart thermostats, which can promote participation in both consumption reduction and peak demand reductions. Furthermore, with projected growth related to large loads such as data centers, increases to electric vehicles charging infrastructure, and electrification there is a need for capacity reduction and load shifting opportunities to offset a portion of new capacity needs and provide reliability.

The OCA would encourage the Commission to provide continuity for demand response opportunities across phases, regardless of the monetization through PJM. While monetization of demand response opportunities is beneficial for ratepayers as it offsets the overall cost, there are benefits of not basing the offering of formal demand response programs to PJM revenue streams, as the capacity market pricing varies, and market rules are subject to change. The net benefits

[15] The OCA also appreciates the guidance and expertise of Barbara Alexander in this review. From 1986-1996 Ms. Alexander was the Director, Consumer Assistance Division, Maine Public Utilities Commission. Barbara opened her own consulting practice in 1996 and represents state and national consumer organizations and state public utility advocates. Her areas of expertise include consumer protections to accompany the move to retail electric, natural gas, and local telephone competition, service quality performance standards for electric, natural gas, and telecommunications providers, low-income program design and implementation, consumer protections for essential energy and telephone services, and consumer bill impacts and policies for rate design and policy mandates. She has testified as an expert witness in over 30 states before state utility regulatory commissions.

associated with the demand response program outside of capacity market revenues is enough to maintain cost-effectiveness for the majority of the EDCs programs.

In light of the this, the OCA respectfully requests that, in the context of considering demand response outside of the PJM framework, the Commission consider any significant capital investments that may be stranded/abandoned, the incremental cost to continue operation, the local reliability offered by demand response, and the desire to limit customer confusion and skepticism that can result from the stop/start of program offerings. When factoring these items into consideration, along with the potential that demand response may have a role in the future, Phase V should consider ways to minimize negative impacts from discontinuation. Limiting those impacts could be a minimization of the size of demand response offering, strategic placement of demand response for local reliability, or a reduction in incentives, by way of example. EDCs should be permitted to implement cost-effective demand response opportunities when available and especially in instances where the investment in the infrastructure has already occurred.

The Commission noted that in Phase IV of Act 129 that several EDCs are behind their target peak demand target achievements, which could potentially be due to the limitation on utilizing load shifting programs. T.O. at 50. In Phase V, the Commission is proposing to allow for the peak demand reduction targets to be achieved through both energy efficiency measures and load-shifting programs. T.O. at 50. As the EDCs may be proposing the daily load-shifting programs that were evaluated as part of their portfolios, it is likely worth the Commission outlining a requirement for EDCs to provide cost-effectiveness tests at both the plan and the portfolio levels. In the 2026 Total Resource Cost (TRC) Test Final Order, the Commission indicated that cost-

effectiveness would remain at the plan EE portfolio and DR portfolio separately unless a dispatchable demand reduction goal is established.[16]

While the OCA recognizes that the Commission is not recommending a dispatchable demand reduction (DDR) goal in Phase V, the EDCs may be including daily load-shifting initiatives as part of their portfolios, inclusions of DDR can lead to more integrated energy efficiency/demand response (EE/DR) program designs, potentially impacting peak demand and offering benefits similar to coincident demand reductions from energy efficiency[17]. To allow for full evaluation of an EDC's plan, the OCA recommends that cost-effectiveness be provided at both the plan and the portfolio levels if an EDC includes a daily load-shifting as defined by the examples from the Commission in the 2026 TRC Test Final Order for consideration by the Commission and parties. The OCA is supportive of the EDCs exploring the inclusion of daily load-shifting, such as thermostats, load reduction on hot water heating equipment during peak times, behavioral demand response, and stand-by mode for electric vehicle charging, whether it is considered energy efficiency or demand response. Efforts like behavioral demand response are offered by other utilities, including from neighboring states, such as Maryland which offers Peak Time Rebates.[18]

Recommendation:

- Phase V should require EDCs that propose daily load-shifting opportunities as part of its Phase V Plan to include cost-effectiveness at the plan and portfolio levels.

5. *Solar*

In Phase V, the Commission modeled, for the first time, a portion of the statewide budget to support customer-sited solar. The Commission proposed the allocation to solar to offset the

[16] 2026 Total Resource Cost (TRC) Test Final Order, Docket No. M-2024-3048998, November 7, 2024, https://www.puc.pa.gov/pcdocs/1855583.pdf, page 13.
[17] 2026 Total Resource Cost (TRC) Test Final Order, Docket No. M-2024-3048998, November 7, 2024, https://www.puc.pa.gov/pcdocs/1855583.pdf, page 12.
[18] https://bgesmartenergy.com/residential/earn-incentives/eventscentral/energy-savings-days.

lower consumption reduction resulting from the budget allocation to demand response[19]. The OCA recognizes that Phase IV is attributing significant savings to solar, a measure added in FY15, as this is a measure that eliminates energy usage rather than decreasing it due to gained efficiency. In most demand side management portfolios, solar is not considered an energy efficiency measure. However, when solar is paired with energy efficiency investments and electric vehicle (EV) charging, there could be significant benefits for not only the participants but also the distribution grid. Benefits include accelerating the return on investment in energy efficiency and electric vehicles, reduced carbon impact, and reduced strain on the electric grid during periods of high demand.

Historically, the focus of Act 129 has been on energy efficiency and demand response activities. Given the benefits associated with pairing solar with energy efficiency and the desire to reduce customer bills, the solar incentives should be offered when paired with investment in energy efficiency, demand response, electrification and electric vehicle charging. Offering solar incentives without a connection to electric vehicles and energy efficiency, will not increase the efficiency of the measures in a home or business nor does it help to avoid peak if not co-located with electric vehicle charging. The OCA also cautions against the implementation of solar without education for participants of the benefits to pair solar with batteries. If solar is relied upon for peak load reductions without a battery, there could be an unintended consequence of shifting peak usage to later in the afternoon and evening, when solar generation is limited or not occurring.

Phase V should also consider including a carveout for income eligible customers to participate in the solar offerings, which may require a higher incentive to offset the cost. The T.O. is proposing 13% of the budget be allocated as a Low-Income Carve-Out, while another 9% of the

[19] 2026 Total Resource Cost (TRC) Test Final Order, Docket No. M-2024-3048998, November 7, 2024, https://www.puc.pa.gov/pcdocs/1855583.pdf, page 21.

budget is allocated to solar. Income eligible customers will not likely be able to access solar related offerings under Act 129 as they tend to be cost-prohibitive and typically when there are solar initiatives for income eligible customers, it is limited to community solar opportunities. As the Act 129 solar efforts will be limited to behind-the-meter solar, Phase V should require utilities to achieve a minimum number of income eligible installations or savings as portion of the overall solar that is installed in the homes. While increased incentives to install solar in income-eligible homes will reduce the overall savings achieved by the EDCs, it will result in an equitable distribution of the measure offerings for residential customers.

Recommendation:

- Eligibility for solar incentives through the Act 129 programs should be limited to participants receiving incentives related to efficient equipment offered through Act 129.
- Include an income-eligible solar carve-out provision which requires a percentage of installations or savings to be achieved through the installation of solar at income-eligible properties.

6. *Braiding Funds*

The OCA recognizes the benefits of braiding Act 129 funds with outside funding sources, such as federal funds through the Inflation Reduction Act (IRA) and supports the Commission's proposal for the EDCs to track and report outside funding by source and leverage ratios. The OCA also requests that the EDCs track any administrative costs incurred by the EDCs to support the braiding of funds. The IRA initiative will require significant administrative work, beyond that required currently by the EDCs' programs. Examples of this include the level of project documentation, reporting, and verification of low-to-moderate income participants up to 80% area

median income. Although there are administrative costs provided under the IRA, it is likely that the allocation is not sufficient to fully offset costs the EDCs may incur.

The OCA recommends that the Commission direct the EDCs to track administrative costs associated with opportunities to braid funds and establish a limit to administrative costs that would require review to exceed the amount. To ensure that Act 129 funding is being used efficiently and that the Phase V targets are achieved, the Commission should establish a filing requirement once an EDC has incurred 1.5% of its annual budget in administrative costs associated with supporting braided funds. Table 5, below, indicates what that amount of funding looks like compared to each EDC's annual budget. While allocating these funds will result in additional savings being achieved, each dollar that is supporting the braided funds efforts also reduces the direct investment in Act 129 programs and therefore, should be evaluated and considered.

Table 5 Comparison of Administrative Costs to Support Braiding of Funds

	Annual Budget	1%	1.50%	2%
First Energy	$ 19,545,952	$ 195,460	$ 293,189	$ 390,919
PPL	$ 85,477,166	$ 854,772	$ 1,282,157	$ 1,709,543
PECO	$ 61,501,376	$ 615,014	$ 922,521	$ 1,230,028
Duquesne Light	$ 78,064,027	$ 780,640	$ 1,170,960	$ 1,561,281

Filing and tracking these costs would require the EDC to report the activities associated with the administrative expenditures to support the braiding of funds and the projected level of savings attributable to the braided funds for the Act 129 programs. Other parties to the case should be able to weigh in for the Commission's consideration if this is an appropriate and reasonable investment of the Act 129 programs compared to the return and impact on achieving the Act 129 Phase V targets.

It is unclear at this time what level of savings that may be attributed from the IRA towards an EDC's consumption and peak demand reduction targets. The OCA asks for clarification as to

whether and to what extent the savings from braided funds are recognized to meet the Low-Income Carve-out. There is potential that the IRA funds could contribute a portion of the carve-out savings that could result in the EDCs spending less of their respective budgets on low-income initiatives rather than increasing the investment. Therefore, the OCA recommends that any low-income customer-related saving resulting from braided funds not be counted towards the achievement of the carve-out. Such savings should be considered above and beyond the Low-Income Carve-out but be counted towards the overall achievement of the EDCs consumption and peak demand reduction targets.

Recommendation:

- EDCs should track administrative costs associated with supporting the braiding of outside funds with the Act 129 programs.
- EDCs should file a notice with the Commission if administrative costs associated with supporting the braiding of outside funds exceed 1% of their annual budget. As part of the notice, the EDCs will note the activities related to the administrative expenditures and the attributable savings from the braided funds. The Commission should then decide the level of investment.
- EDCs cannot attribute savings from braided funds towards the Low-Income Carve-out but can be used towards the attainment of the consumption and peak demand reduction targets.

III. CONCLUSION

The Office of Consumer Advocate appreciates the many thoughtful proposals presented through the Commission's Tentative Implementation Order regarding Phase V of the Act 129 Energy Efficiency and Demand Response Programs. The OCA looks forward to continuing to work with all stakeholders in designing effective programs that benefit all consumers.

Respectfully Submitted,

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