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Petition of PECO Energy |
Company for Approval of | Docket No.: M-2025-3057328
its Act 129 Phase V:   |
Energy Efficiency and  |
Conservation Plan,     |
                       |
Call-In Telephonic     |
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Judge's Chambers
 Commonwealth Keystone
 Building - Plaza Level
 400 North Street
 Harrisburg, PA

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Docket No. M-2025-3057328

Hearing Date: February 2, 2026

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**PECO ENERGY COMPANY
STATEMENT NO. 1**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

DOCKET NO. M-2025-3057328

DIRECT TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: URMILA DIGHE

SUBJECT: OVERVIEW OF PECO'S FILING, ACT 129
AND PHASE V OBLIGATIONS, AND
OVERVIEW OF PECO'S PHASE V PLAN

DATED: DECEMBER 1, 2025

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1 **DIRECT TESTIMONY**
2 **OF**
3 **URMILA DIGHE**

4 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

5 **1. Q. Please state your full name, professional position, and business address.**

6 A. My name is Urmila Dighe. I am the Senior Manager of the Energy Efficiency Portfolio
7 for PECO Energy Company ("PECO" or the "Company"). My business address is
8 PECO Energy Company, 2301 Market Street, Philadelphia, Pennsylvania 19103.

9 **2. Q. What are your duties and responsibilities in this position?**

10 A. I have responsibility for the suite of energy efficiency programs offered by PECO to
11 its residential, commercial, and industrial customers. I am responsible for the design,
12 implementation, and promotion of the electric energy efficiency program as related to
13 Act 129. As part of the Company's Phase V offerings, I will manage coordination with
14 external program partners to identify opportunities for stacking rebates and funding
15 streams to make energy-saving programs more affordable to customers. I am also
16 responsible for implementation of the separate gas energy efficiency program offered
17 by PECO to its residential and commercial and industrial ("C&I") customers.
18 Additionally, I am responsible for marketing and customer support for the gas
19 neighborhood pilot program offered by PECO.

20 **3. Q. Please describe your educational background and professional experience.**

21 A. I have a Bachelor of Arts in Economics from Mumbai University. I have a Master's
22 Degree in Finance and Management Information Systems from Drexel University. I

1 joined PECO in 2020 as a Senior Business Analyst in the Government, Regulatory and
2 External Affairs (“GREA”) group. Prior to joining PECO GREA, I worked for 15 years
3 in various wholesale and retail functional groups within Exelon Corporation, including
4 Compliance & Risk Management, Field Meter Services, and Transmission &
5 Substation. In 2022, I assumed the role of Manager, Business Planning with the
6 responsibility for tracking the performance and budget for Energy Efficiency and other
7 programs managed by PECO GREA. In 2025, I was promoted to the role of Senior
8 Manager, Energy Efficiency Portfolio for PECO.

9 **4. Q. What is the purpose of your testimony?**

10 A. The purpose of my testimony is to: (1) describe PECO’s obligations to achieve
11 consumption reductions and peak demand reductions (“PDRs”) under Act 129, prior
12 implementation orders of the Pennsylvania Public Utility Commission (the
13 “Commission”), and the Commission’s Phase V Implementation Order;¹ and (2)
14 provide an overview of PECO’s overall filing and summarize PECO’s Phase V Energy
15 Efficiency and Conservation Plan (the “Phase V Plan” or the “Plan”).

16 **II. BACKGROUND OF PECO’S OBLIGATIONS TO ACHIEVE ENERGY**
17 **CONSUMPTION AND PEAK DEMAND REDUCTIONS UNDER ACT 129**

18 **5. Q. Please describe Act 129’s consumption reduction and PDR requirements.**

19 A. Act 129 directed electric distribution companies (“EDCs”) with greater than 100,000
20 customers to file with the Commission, by July 1, 2009, an energy efficiency and

¹ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 (Order entered June 18, 2025) (“Phase V Implementation Order”).

1 conservation plan (“Phase I EE&C Program”).² The EE&C plans were to reduce retail
2 energy consumption by at least 1.0% by May 31, 2011, and at least 3.0% by May 31,
3 2013. These reductions were to be measured against the EDC’s forecasted customer
4 consumption for the period June 1, 2009 through May 31, 2010. For PECO, this
5 2009/2010 baseline is 39,385,000 megawatt-hours (“MWh”).

6 Act 129 also required that each EDC with at least 100,000 customers reduce the average
7 system peak demand for its retail customers in the 100 hours of highest demand by a
8 minimum of 4.5% no later than May 31, 2013. For the Phase I EE&C Program, this
9 demand reduction was to be measured against the EDC’s average peak demand for the
10 100 hours of highest demand over the period of June 1, 2007 through September 30,
11 2007.³

12 In addition to these overall targets, Act 129 mandated that energy savings be obtained
13 from certain designated customer segments during Phase I. Specifically, a minimum
14 of 10% of an EDC’s consumption reduction target had to be obtained from the
15 governmental, educational, and non-profit sector.⁴ In addition, each EDC’s Phase I
16 plan was to include specific energy efficiency programs for households with incomes
17 at or below 150% of the Federal Poverty Income Guidelines that are proportionate to
18 such households’ share of the total energy usage in the EDC’s service territory.⁵
19 Finally, an EDC’s plan had to pass a “total resource cost” or “TRC” test, which is a test

² See 66 Pa.C.S. § 2806.1(b).

³ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2008-2069887, at 20-21 (Order entered Jan. 16, 2009) (“Phase I Implementation Order”).

⁴ See 66 Pa.C.S. § 2806.1(b)(1)(i)(B).

⁵ See *id.* § 2806.1(b)(1)(i)(G).

1 that establishes whether the avoided cost of supplying electricity is greater than the cost
2 of a plan's energy efficiency and conservation measures.⁶

3 Pursuant to Act 129, EDCs are entitled to full and current cost recovery of prudent and
4 reasonable costs, including administrative costs, but annual plan expenditures were
5 limited to 2.0% of the EDC's total annual revenue as of December 31, 2006.⁷ For
6 PECO, this annual spending amount is approximately \$85.5 million.

7 **6. Q. Did Act 129 contemplate future EE&C programs beyond the Phase I EE&C**
8 **Program?**

9 A. Yes. Act 129 provides that by November 30, 2013, and every five years thereafter, the
10 Commission must assess the cost-effectiveness of the EE&C program and adopt
11 additional incremental consumption reduction targets if the EE&C program's benefits
12 exceed its costs. As for PDR programs, Act 129 directed the Commission to complete
13 a cost benefit analysis by November 30, 2013, and, if the benefits exceed the costs,
14 establish additional incremental requirements for reduction in peak demand.⁸ The
15 Commission has since issued implementation orders for Phase II,⁹ Phase III,¹⁰ Phase

⁶ See *id.* § 2806.1(b)(1)(i)(I); 2016 Total Resource Cost (TRC) Test, Docket No. M-2015-2468992 (Order entered June 22, 2015).

⁷ See 66 Pa.C.S. §§ 2806.1(g), (k).

⁸ See *id.* §§ 2806.1(c)(3), (d)(2).

⁹ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2012-2289411 (Order entered Aug. 3, 2012).

¹⁰ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2014-2424864 (Order entered June 19, 2015).

1 IV,¹¹ and Phase V¹² of the EE&C program. Phase IV of the EE&C program is ongoing
2 and will be complete on May 31, 2026.

3 7. **Q. Has PECO met its compliance obligations for the completed phases of the EE&C**
4 **program?**

5 A. Yes. The Commission approved PECO's Phase I Plan on October 28, 2009,¹³ and the
6 Company met its Phase I consumption reduction target, consumption reduction carve-
7 outs, and PDR target. The Commission thereafter approved PECO's Phase II Plan on
8 February 28, 2013, and the Company's addition of a voluntary demand response
9 program to the Phase II Plan was approved on May 9, 2013.¹⁴ PECO met its Phase II
10 consumption reduction target and carve-outs. The Commission then approved PECO's
11 Phase III Plan on May 19, 2016,¹⁵ and the Company met its targets and carve-outs.
12 Afterward, PECO submitted its Phase IV Plan consistent with the *Phase IV*
13 *Implementation Order*, which the Commission approved on March 25, 2021.¹⁶ PECO

¹¹ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2020-3015228 (Order entered June 18, 2020) ("*Phase IV Implementation Order*").

¹² See *Phase V Implementation Order*.

¹³ See *Petition of PECO Energy Company for Approval of its Act 129 Energy Efficiency and Conservation Plan and Expedited Approval of its Compact Fluorescent Lamp Program*, Docket No. M-2009-2093215 (Order entered Oct. 28, 2009). Further revisions to PECO's Phase I plan were adopted in various subsequent orders on the same docket.

¹⁴ See *Petition of PECO Energy Company for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan*, Docket No. M-2012-2333992.

¹⁵ See *Petition of PECO Energy Company for Approval of its Act 129 Phase III Energy Efficiency and Conservation Plan*, Docket No. M-2015-2515691 (Order entered May 19, 2016). Further revisions to PECO's Phase III Plan were adopted in various subsequent orders in the same docket.

¹⁶ See *Petition of PECO Energy Company for Approval of its Act 129 Phase IV Energy Efficiency and Conservation Plan*, Docket No. M-2020-3020830 (Order entered March 25, 2021). Further revisions to PECO's Phase IV Plan were adopted in later orders in the same docket.

1 expects to meet its Phase IV targets and carve-out by the end of Phase IV (May 31,
2 2026).

3 **8. Q. What targets did the Commission set for the reduction of consumption and peak**
4 **demand for Phase V?**

5 A. In its *Phase V Implementation Order*, the Commission established both consumption
6 reduction and PDR targets for the five-year plan period of June 1, 2026 through May
7 31, 2031. PECO's total Phase V MWh savings target is 1,111,685 MWh. The
8 Company's total Phase V PDR target is 194.8 MW. PECO will achieve the PDR target
9 using different program channels, including energy efficiency measures, daily load
10 shifting measures, and behavior measures.

11 The Commission also established a savings carve-out for the low-income sector. Under
12 this carve-out, PECO must obtain 74,456 MWh of savings from programming solely
13 directed at low-income customers or low-income-verified participants in multifamily
14 housing programs.

15 The *Phase V Implementation Order* additionally includes several plan design
16 requirements, including that plans must: (1) be designed to achieve at least 15% of the
17 MWh savings target and PDR target each program year; (2) include at least one
18 comprehensive program for residential customers and one comprehensive program for
19 non-residential customers; (3) allocate at least 50% of all spending to incentives, with
20 less than 50% allocated to non-incentive categories; and (4) include a mix of measures
21 and programs that are designed to acquire at least 75% of the PDR target in each the
22 winter season and summer season.

1 **III. OVERVIEW OF PECO’S FILING AND THE PHASE V PLAN**

2 **9. Q. Please explain how PECO’s filing is organized.**

3 A. PECO’s filing is comprised of the following documents and testimony:

- 4 i. Petition for Approval of its Phase V Energy Efficiency and Conservation Plan;
- 5 ii. my Direct Testimony;
- 6 iii. the Direct Testimony of Marina Geneles, PECO’s Manager of Demand
7 Response & Energy Efficiency Evaluation, describing PECO’s market-based
8 Plan design process, the programs comprising the Plan, and expected research
9 and development efforts during Phase V;
- 10 iv. the Direct Testimony of Mark van Eeghen, Associate Director at Guidehouse,
11 Inc., summarizing PECO’s Phase V projected energy and demand savings,
12 program expenditures, and Total Resource Cost (“TRC”) net benefits;
- 13 v. the Direct Testimony of Megan A. McDevitt, PECO’s Senior Manager of
14 Strategic Initiatives, discussing the Plan’s cost-recovery mechanism and tariff;
15 and
- 16 vi. the Phase V Plan, filed in the template format approved by the Commission.¹⁷

17 **10. Q. Please describe the Company’s approach to developing the Phase V Plan.**

18 A. As discussed in detail by Ms. Geneles, PECO employed a market-based approach to
19 design its Phase V Plan. Instead of internally developing a detailed design for each
20 program, the Company established high-level program design requirements and invited
21 conservation service providers (“CSPs”) to submit program design bids reflecting their
22 expertise and experience. Selected CSPs will be responsible for managing program

¹⁷ See *Implementation of Act 129 of 2008 – Phase V Energy Efficiency and Conservation Plan Template*, Docket No. M-2025-3052826 (Issued Sept. 9, 2025).

1 implementation and achieving the required consumption reductions and PDRs within
2 the program budget.

3 The Company believes that the market-based approach has resulted in programs that
4 are well positioned to meet PECO's Phase V obligations. This approach provides
5 meaningful opportunities for customers to save energy and money while providing
6 PECO with flexibility to adjust program offerings based on market conditions. The
7 winning CSPs demonstrated their ability to engage market participants using
8 innovative marketing strategies and multiple channels. In addition, because CSPs will
9 be responsible for administering an entire program, they will, in collaboration with
10 PECO, have the flexibility to directly adjust program offerings based on performance
11 and market response. For example, PECO and the CSP may agree that it is appropriate
12 to adjust incentive values within approved Plan ranges, modify marketing strategies, or
13 even change subcontractors to ensure that the necessary consumption reductions and
14 PDRs are achieved. Finally, as discussed by Ms. Geneles, the strong emphasis on
15 performance-based compensation in the overall CSP payment structure reinforces CSP
16 accountability to deliver the required consumption reductions and PDRs.

17 **11. Q. Please provide an overview of the Phase V Plan.**

18 A. PECO's Phase V Plan has a five-year term (June 1, 2026 through May 31, 2031) and
19 includes three programs: (1) Residential (including low-income); (2) Residential Home
20 Energy Reports (including low-income); and (3) Non-Residential. The Phase V Plan
21 is based on the same central principles used in PECO's Phase IV Plan, including: (1)
22 providing opportunities to all customer types and classes; (2) offering a comprehensive

1 set of energy solutions that includes the broadest measure mix possible across all
2 electric end-uses; and (3) incorporating processes to make participation easy for both
3 customers and market actors.

4 Ms. Geneles describes each program in her testimony, but I would like to highlight
5 several new or enhanced Plan elements for Phase V:

- 6 • ***Stacked or Braided Funding.*** PECO has adapted its outreach and program
7 funding strategies to support stacked or braided funding opportunities with
8 eligible partner programs in an effort to improve affordability for customers and
9 efficiently utilize Act 129 funds.
- 10 • ***Facilitation of Customer Alternative Energy Portfolio Standards Act (“AEPS***
11 ***Act”) Registration.*** PECO has incorporated strategies to facilitate AEPS Act
12 registration for C&I customers who are undertaking eligible Phase V projects.
13 Such registration could enable the customer to generate and monetize
14 alternative energy credits.
- 15 • ***Daily Load Shifting.*** PECO has incorporated daily load shifting measures into
16 suitable program components in support of meeting the Company’s PDR target.
- 17 • ***Health and Safety.*** After piloting health and safety treatments in Phase IV,
18 PECO has designed the Residential Program to accommodate spending up to
19 \$3 million to address health and safety barriers that prevent low-income
20 customers from installing energy efficiency measures, such as mold, electrical
21 and structural issues. Health and safety funding will be used when an

1 opportunity for installing a specific energy efficiency measure is identified but
2 deemed infeasible due to presence of a health and safety hazard.

3 **12. Q. Has the Company reached out to stakeholders about its Phase V Plan?**

4 A. Yes. Over the past few months, PECO actively engaged with potential program
5 partners and stakeholders, including the Pennsylvania Utility Law Project, Community
6 Legal Services, the Philadelphia Energy Authority, the Pennsylvania Department of
7 Environmental Protection, and Rocky Mountain Institute to receive their perspectives
8 on plan design. With the goal of reaching a broader group of stakeholders, PECO
9 recently provided an email update about its plan filing progress. PECO also intends to
10 convene a stakeholder meeting in December 2025, to provide an update on the
11 implementation of the Company's Phase IV Plan and discuss the proposed Phase V
12 Plan.

13 **13. Q. How is PECO preparing for the potential impact of disruptive events, like**
14 **pandemics and federal funding disruptions, on the delivery and implementation of**
15 **the Phase V programs?**

16 A. The Company will work with CSPs to monitor evolving conditions and ensure that
17 programs provide safe and appropriate savings opportunities for customers. PECO has
18 incorporated lessons learned from previous phases, including adaptations to challenges
19 such as pandemic-related restrictions and supply constraints. By providing a broad
20 measure and end-use mix and combining field-based program components with virtual
21 program components, the Phase V Plan offers the flexibility to leverage virtual
22 components, if needed. In addition, PECO will proactively track regulatory and market

1 changes and will work with CSPs to respond appropriately. While PECO is excited to
2 work with eligible external program partners on braiding/co-funding opportunities, we
3 recognize that changes to federal funding policies and federal standards can
4 significantly reduce such opportunities. PECO will mitigate federal funding risks by
5 leveraging partnerships between Phase V programs and other PECO programs such as
6 gas energy efficiency and the Low-Income Usage Reduction Program. Overall,
7 proactive planning and diversification across the end-use measure mix and
8 participation channel mix will help PECO mitigate business disruption risk.

9 IV. CONCLUSION

10 14. Q. Does this conclude your direct testimony?

11 A. Yes.

**PECO ENERGY COMPANY
STATEMENT NO. 2
(Corrected Version)**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

DOCKET NO. M-2025-3057328

DIRECT TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: MARINA GENELES

SUBJECT: PECO'S MARKET-BASED PLAN DESIGN
PROCESS, PECO'S PHASE V PROGRAMS,
RESEARCH AND DEVELOPMENT EFFORTS

DATED: DECEMBER 1, 2025

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1 **DIRECT TESTIMONY**
2 **OF**
3 **MARINA GENELES**

4 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

5 **1. Q. Please state your full name, professional position, and business address.**

6 A. My name is Marina Geneles. I am the Manager of Demand Response & Energy
7 Efficiency Evaluation for PECO Energy Company (“PECO” or the “Company”). My
8 business address is PECO Energy Company, 2301 Market Street, Philadelphia,
9 Pennsylvania 19103.

10 **2. Q. What are your duties and responsibilities in this position?**

11 A. I oversee energy efficiency and demand response evaluation projects, leading teams to
12 deliver high-impact program evaluations and policy-shaping initiatives to ensure both
13 compliance and continuous improvement. I also represent PECO in interactions with
14 the Statewide Evaluator (“SWE”) for the Pennsylvania Public Utility Commission (the
15 “Commission”) working groups and stakeholders concerning the Company’s energy
16 efficiency and conservation (“EE&C”) programming. I additionally manage requests
17 for proposals (“RFPs”), contracts, and the scope of projects, ensuring adherence to
18 budget and timelines. Further, I provide executive oversight for PECO’s energy
19 efficiency and demand response evaluation initiatives, ensuring alignment with
20 corporate objectives and regulatory mandates. My responsibilities extend beyond
21 project management to include leading comprehensive EE&C plan development,
22 shaping long-term strategy, and driving portfolio performance. I engage actively with

1 internal leadership and external stakeholders to foster collaboration and secure
2 consensus on key initiatives. In addition, I oversee portfolio management and data
3 governance, including ensuring robust tracking systems that support transparent
4 reporting and informed decision-making. Through these efforts, I position PECO to
5 deliver innovative, market-responsive programs that advance statewide energy
6 efficiency goals under Act 129.

7 **3. Q. Please describe your educational background and your professional experience.**

8 A. I hold a Master of Business Administration in Marketing with a minor in Finance from
9 LaSalle University and a Bachelor of Science in Computer Information Systems from
10 Drexel University, both with honors. I have over 20 years of experience at
11 PECO/Exelon Corporation (“Exelon”) in roles spanning IT analysis, business planning,
12 and EE&C program management. Since July 2022, I have served as Manager of
13 Demand Response & Energy Efficiency Evaluation, overseeing \$22 million in research
14 projects. My prior roles include Lead Business Analyst and Senior IT Analyst, where
15 I directed performance evaluation, reliability reporting, and vendor management
16 initiatives.

17 **4. Q. What is the purpose of your direct testimony?**

18 A. The purpose of my direct testimony is to: (1) describe the market-based process used
19 to determine the details of the Company’s proposed energy efficiency (“EE”) programs
20 in PECO’s Phase V EE&C Plan (the “Phase V Plan” or the “Plan”); (2) describe the
21 EE programs and how they will meet the requirements of Act 129 and the

Commission’s *Phase V Implementation Order*;¹ and (3) discuss the expected research and development efforts during Phase V.

II. PECO’S MARKET-BASED PLAN DESIGN PROCESS

5. Q. Please describe PECO’s approach to Plan design.

A. Similar to Phase IV, the Company established high-level requirements for each program in the Phase V Plan and then solicited and evaluated bids from experienced Conservation Service Providers (“CSPs”) for program designs that were aligned with those requirements. PECO’s Phase V process is designed to leverage the creativity and expertise of the marketplace to achieve the Company’s mandated EE savings and peak demand reductions (“PDRs”), while supporting programs that provide customers with meaningful opportunities to save energy and money.

6. Q. How did the Company develop its Phase V program requirements?

A. First, the Company used the results of the SWE’s Energy Efficiency and Peak Demand Reduction (“EPPDR”) Potential Study, which served as the basis for the EE and PDR targets in the *Phase V Implementation Order*, to inform the division of EE savings and PDRs between the residential (including low-income) and commercial and industrial (“C&I”) sectors. The SWE performed electric distribution company-specific studies that presented the technical, economic, and achievable potential over 10 years and program potential over five years beginning June 1, 2026, for each of those customer sectors.

¹ Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 (Order entered June 18, 2025) (“*Phase V Implementation Order*”).

1 PECO then determined the appropriate division of the Company's mandated EE
2 savings and PDRs between its three Phase V programs: (1) Residential (including low-
3 income); (2) Residential Home Energy Reports (including low-income); and (3) Non-
4 Residential. As part of that process, PECO determined what portion of the assigned
5 residential and residential low-income EE savings and PDRs could reasonably come
6 from behavioral programs by analyzing Phase IV behavioral program data and
7 reviewing the most recent Technical Reference Manual ("TRM"). To account for
8 program implementation risks, the Company multiplied the EE savings and PDRs
9 assigned to each program by 105%.

10 After the EE savings and PDRs were assigned to each program, the Company relied
11 upon the SWE's acquisition cost findings in the EEPDR Potential Study and
12 benchmarking of other utility portfolios to establish the budget for each program.

13 **7. Q. Did the Company utilize additional program design requirements?**

14 A. Yes. Consistent with the Commission's requirement in the *Phase V Implementation*
15 *Order*, each program must be designed to achieve a minimum of 15% of its total EE
16 savings and PDRs each year and together the programs must be designed to acquire at
17 least 75% of the PDR target in each of the winter season and summer season. In
18 addition, the non-behavioral programs must: (1) allow customers to access all
19 applicable measures in the TRM; (2) engage a variety of market players (e.g., trade
20 allies); and (3) allocate at least 50% of the program budget to incentives.

1 **8. Q. How did the Company solicit and assess bids for Phase V programs?**

2 A. The Company issued RFPs for different program groupings in a manner consistent with
3 the Company’s Commission-approved Phase V RFP process.² Bidders were instructed
4 to propose program designs (including measures, rebates, trade ally engagement, etc.)
5 that met each of the Company’s high-level program requirements and to identify any
6 subcontractors that the bidders would employ. Bidders were also asked to propose a
7 blended delivery and “pay-for-performance” contract pricing structure, whereby a
8 portion of the CSP’s compensation would be fixed, and a portion would be based on
9 the achievement of verified EE savings. Program design submissions were made on
10 specialized workbooks developed by Guidehouse, PECO’s third-party consultant, to
11 ensure that each CSP provided an appropriate level of information.

12 The Company carefully reviewed each bid in accordance with its Phase V RFP process
13 and selected the winning bidders. The Company’s Phase V Plan reflects the program
14 designs proposed by the winning CSPs.

15 **9. Q. Why is PECO utilizing a blended delivery and “pay-for-performance” contract**
16 **pricing structure instead of 100% “pay-for-performance”?**

17 A. PECO identified some implementation challenges associated with the 100% “pay-for-
18 performance” approach utilized by the Company in Phase IV. First, CSPs had to
19 undertake certain pre-implementation activities, such as marketing and delivery

² PECO’s Phase V RFP process was approved by Secretarial Letter issued September 11, 2025, at Docket No. M-2025-3052826. The RFP utilized to select the behavioral program CSP was administered at the Exelon level but was consistent with PECO’s approved Phase V RFP process.

1 channel infrastructure, before receiving any funds from PECO. Second, by paying
2 CSPs a single blended rate representing all their costs, PECO had less visibility into
3 how CSPs were managing spending on measure-related and non-measure-related
4 activities. Finally, a singular focus on achieving savings discouraged innovation and
5 creativity by the CSPs and encouraged the use of existing, well-known approaches. By
6 incorporating a limited level of fixed compensation (no more than 40% of the total
7 contract value), PECO can address those challenges and still encourage strong CSP
8 performance.

9 **10. Q. What are the benefits of using the market-based plan design process that you have**
10 **described?**

11 A. There are numerous benefits to the Company's approach:

- 12 • ***Incorporation of diverse market expertise.*** By allowing CSPs to design
13 programs to meet the Company's key requirements, PECO's Phase V Plan
14 reflects the expertise and experience of multiple market actors in the EE space.
- 15 • ***Provision of greater flexibility to respond to market changes.*** By having a
16 single CSP manage an entire program instead of certain portions of a program,
17 the CSP can take a flexible and market-responsive approach to achieving the
18 required EE savings and PDRs. If, for example, a certain component of the
19 program is underperforming, the CSP and PECO can agree to promptly increase
20 incentive levels, employ a new marketing strategy, or even shift emphasis to
21 other program components to stay on track (subject to Commission approval in
22 accordance with Commission guidance).

- 1 • *Incentivization of innovative and cost-effective CSP activity.* Because a
2 portion of CSP compensation is based on a CSP's ability to drive EE savings
3 and PDRs, CSPs are incentivized to design innovative, achievable and cost-
4 effective programs. The flexibility provided to CSPs will further promote
5 creative responses to challenges that occur during program implementation.

- 6 • *Engagement of an array of market actors to drive a positive customer*
7 *experience.* By requiring CSPs to engage a variety of market actors during
8 program implementation, PECO is facilitating customer access to
9 comprehensive savings opportunities. The CSP compensation structure also
10 incentivizes CSPs to carefully monitor subcontractor performance to drive a
11 positive customer experience.

12 **11. Q. Will the Company be engaging CSPs to implement other elements of the Phase V**
13 **Plan that are not specific to a particular program?**

14 A. Yes. Separate from the program-specific process I described above, the Company will
15 be using its Phase V RFP process to engage CSPs for a variety of other Phase V Plan
16 matters, such as evaluation, measurement, and verification ("EM&V") and data
17 tracking.

18 **III. PECO'S EE PROGRAMS**

19 **12. Q. Please provide an overview of the EE programs in PECO's Phase V Plan.**

20 A. The Company proposes three EE programs: (1) Residential (including low-income);
21 (2) Residential Home Energy Reports (including low-income); and (3) Non-

1 Residential. As I previously explained, the Company identified the key requirements
2 for each program, and CSPs were then given the opportunity to compete with one
3 another and propose the design details for each program. Each winning program design
4 is consistent with the requirements I previously described.

5 **13. Q. What programs will be offered to residential customers?**

6 A. The **Residential Program** is designed to offer customers opportunities to save energy
7 across all their electric end uses and to make participation in the program a pleasant
8 experience. The Program objective is to increase energy efficiency in single family
9 homes and individual units and common areas of multifamily buildings. In order to
10 meet that objective, the Program will offer incentives for the purchase of efficient
11 equipment and removal of old appliances through responsible recycling. The Program
12 will also drive construction of energy-efficient homes and deliver no-cost and low- cost
13 energy assessments. The Program further supports daily load shifting and PDR by
14 encouraging adoption of smart devices and participation in time-of-use rates. Program
15 offerings will be available for customer premises as well as the common areas of
16 multifamily buildings (both individually metered and master metered).

17 PECO will also offer a **Residential Home Energy Reports (“HER”) Program** that
18 involves regularly delivering direct mail or digital HERs that motivate customers to act
19 through contextualized energy-usage information, personal and neighborhood
20 comparisons, and energy savings recommendations. The Program is designed to
21 influence participant behaviors and influence energy management in their homes.

1 14. Q. What programs will be offered to low-income customers?

2 A. The Residential Program and Residential HER Program will each include a low-income
3 subprogram that is available to customers with a household income at or below 150%
4 of the Federal Poverty Income Guidelines (“FPIG”). The low-income subprogram of
5 the Residential Program builds upon the Company’s successful Phase IV low-income
6 program. The foundational element of the subprogram is a direct install whole-home
7 component, which provides in-home audits and education as well as the direct
8 installation of EE measures at no charge to the participant. The subprogram also
9 includes new construction, daily load shifting, and appliance recycling services to
10 remove old, inefficient refrigerators, freezers, and window AC units. Subprogram
11 offerings will be available for low-income families living in multifamily buildings,
12 including measures for the customer premises and common areas. Importantly, the
13 low-income subprogram of the Residential Program addresses health and safety
14 barriers in customer homes to enable installation of energy efficiency measures and
15 improve overall comfort and well-being.

16 The low-income subprogram of the Residential HER Program has similar offerings to
17 the overall Residential HER Program but is targeted only to customers in the low-
18 income sector.

19 Taken together, the subprograms offered to low-income customers are designed to
20 exceed the requirement that PECO obtain 74,456 MWh of the Company’s overall
21 energy savings from customers with a household income of 150% or less of the FPIG.

1 15. Q. Please describe the Non-Residential Program.

2 A. PECO Plan's includes a single comprehensive program for both large and small C&I
3 customers. The **Non-Residential Program** objective is to increase energy efficiency
4 for both large and small commercial and industrial customers with rebates for a wide
5 range of energy conservation measures. The Program provides access to technical
6 support, incentives, and concierge-style services to facilitate program participation.
7 The Program includes the following components: strategic energy management,
8 existing buildings, building optimization, distributed energy resources, small business
9 solutions, and new construction. As part of the building optimization component,
10 customers identified as strong candidates will be invited to enroll in a daily load-
11 shifting measure. This measure is designed to strategically manage energy usage by
12 shifting operations away from peak periods to achieve PDRs.

13 16. Q. Does the Company's Plan provide at least one comprehensive program for
14 residential customers and one for non-residential customers as required by the
15 *Phase V Implementation Order*?

16 A. Yes. The Residential and Non-Residential Programs each provide customers with
17 comprehensive opportunities to save energy across all electric end-uses.

1 17. Q. Is the Company's Plan designed to achieve at least 15% of the required EE savings
2 and PDRs each program year as required by the *Phase V Implementation Order*?

3 A. Yes. The Plan is designed to achieve over 15% of the total EE savings and PDR targets
4 in each of the five program years (PY 18-PY 22) as illustrated in Tables 2 and 3 of the
5 Plan.

6 18. Q. Is the Company's Plan designed to allocate at least 50% of all spending to
7 incentives, with less than 50% allocated to non-incentive categories, as required
8 by the *Phase V Implementation Order*?

9 A. Yes. As shown in Table 4 of the Direct Testimony of Mr. van Eeghen, over 50% of all
10 spending has been allocated to incentives in each of the five program years (PY 18-PY
11 22).

12 19. Q. Is the Company's Plan designed to acquire at least 75% of the PDR target in each
13 the winter season and summer season, as required by the *Phase V Implementation*
14 *Order*?

15 A. Yes. Table 4 of the Plan summarizes the seasonal demand savings for each of the five
16 program years.

1 **IV. RESEARCH AND DEVELOPMENT EFFORTS**

2 **20. Q. Is PECO taking any steps to stay current with emerging technologies and**
3 **implementation strategies during Plan implementation?**

4 A. Yes. The Company expects that over the course of the Phase V Plan, new technologies
5 and market engagement strategies will emerge. PECO has therefore dedicated 2.0% of
6 its annual Phase V Plan budget toward research and development to: (1) investigate
7 and possibly pilot new and promising technologies; and (2) perform market research to
8 identify and respond to market transformations over the course of the five-year Plan
9 term. In accordance with Act 129, the Company will not use more than 2.0% of its
10 Plan budget to investigate and/or pilot experimental equipment or devices.³

11 **21. Q. Is PECO proposing any pilots as part of this filing?**

12 A. Yes. As detailed in Section 9.1.4 of the Phase V Plan, the Company plans to pursue a
13 hybrid heat pump load shifting pilot. The pilot will evaluate the feasibility of peak
14 daily load shifting by applying time-based control strategies that transition heating
15 operations from an air-source heat pump to a gas furnace during peak periods for
16 customers with hybrid systems.

17 **V. CONCLUSION**

18 **22. Q. Does this conclude your direct testimony?**

19 A. Yes.

³ See 66 Pa.C.S. § 2806.1(b)(1)(iii).

**PECO ENERGY COMPANY
STATEMENT NO. 2-R**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

DOCKET NO. M-2025-3057328

REBUTTAL TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: MARINA GENELES

SUBJECT: RESPONSE TO OTHER PARTY PROPOSALS
INCLUDING PROPOSALS ON PLAN DESIGN,
COMPREHENSIVENESS AND HEALTH AND
SAFETY

DATED: JANUARY 30, 2026

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**REBUTTAL TESTIMONY
OF
MARINA GENELES**

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1. Q. Please state your full name, professional position, and business address.

A. My name is Marina Geneles. I am the Manager of Demand Response & Energy Efficiency Evaluation for PECO Energy Company (“PECO” or the “Company”). My business address is PECO Energy Company, 2301 Market Street, Philadelphia, Pennsylvania 19103.

2. Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted direct testimony marked as PECO Statement No. 2.¹ My background and qualifications are set forth in that statement.

3. Q. What is the purpose of your rebuttal testimony?

A. The purpose of my direct testimony is to respond to the direct testimony of Mr. Zack Tyler on behalf of the Office of Consumer Advocate (“OCA”), Mr. Jim Grevatt on behalf of the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (“CAUSE-PA”) and the Tenant Union Representative Network (“TURN”), Ms. Jeaneen A. Zappa on behalf of the Keystone Energy Efficiency Alliance (“KEEA”), and Mr. Alon Abramson on behalf of the City of Philadelphia (“City”) and the Philadelphia Energy Authority (“PEA”). In particular, first, I address

¹ A corrected version of my Direct Testimony was served on January 8, 2026.

1 recommendations concerning the overall design and comprehensiveness of PECO's
2 proposed Phase V Energy Efficiency and Conservation Plan (the "Phase V Plan" or the
3 "Plan"). Second, I address recommendations concerning health and safety spending
4 under the Plan. Third, I address recommendations regarding the coordination of Plan
5 activities with external programs and data sharing with external parties. Finally, I
6 address certain additional program or measure-specific recommendations made by
7 each party.

8 **II. PROPOSALS CONCERNING OVERALL PLAN DESIGN AND THE LEVEL OF**
9 **COMPREHENSIVENESS**

10 **4. Q. Please summarize the Company's approach to designing its Phase V Plan.**

11 A. PECO's Phase V design process harnessed the creativity of the marketplace to meet the
12 Company's mandated energy efficiency ("EE") savings and peak demand reductions
13 ("PDRs"), remain within statutory plan spending limitations, and support programs that
14 offer customers meaningful opportunities to save energy and money. As I explain in
15 detail in my direct testimony, PECO first established high-level requirements for each
16 Phase V program based on the statewide evaluator's ("SWE's") Energy Efficiency and
17 Peak Demand Reduction ("EEPDR") Potential Study, the Commission's Technical
18 Reference Manual ("TRM"), and the savings and design requirements of the Phase V
19 Implementation Order.² The Company then solicited and assessed bids from

² Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 (Order entered June 18, 2025) ("*Phase V Implementation Order*").

1 experienced conservation service providers (“CSPs”) for program designs that were
2 consistent with those requirements.

3 **5. Q. Did any parties find that PECO’s overall plan design was consistent with**
4 **statutory requirements and the Phase V Implementation Order?**

5 A. Yes. Although the OCA made some design recommendations, the OCA also found
6 that PECO’s proposed Plan satisfies the Commission’s core compliance requirements.
7 *See* OCA St. 1, p. 4.

8 **6. Q. Has the Commission provided any guidance concerning comprehensiveness and**
9 **comprehensive measures?**

10 A. Yes. The Phase V Implementation Order requires plans to include at least one
11 comprehensive program for residential customers and one comprehensive program
12 for non-residential customers. In addition, for the residential sector, the PUC issued a
13 comprehensive measure list as part of its Phase V plan template tables.³ The list
14 identifies certain measures that are comprehensive on their own (e.g., high efficiency
15 central air conditioners, duct sealing and duct insulation and heat pump water heaters)
16 and others that are comprehensive when installed in combination (e.g., ENERGY
17 STAR refrigerators, freezers, clothes dryers and dishwashers).

³ See: <https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/energy-efficiency-and-conservation-ecp-program/> and specifically Table 8 Addendum of the Plan Template Tables Workbook here: <https://www.puc.pa.gov/pdocs/1894161.xlsx>.

1 **7. Q. Does PECO’s Plan incorporate this Commission guidance concerning**
2 **comprehensiveness and comprehensive measures?**

3 A. Consistent with the Phase V Implementation Order, PECO’s Residential and Non-
4 Residential Programs each provide customers with comprehensive opportunities to
5 save energy across all electric end-uses. In addition, Table 8 and Table 20 in PECO’s
6 Plan were intended to identify residential comprehensive measures in a manner
7 consistent with the PUC’s guidance. However, the Company has discovered some
8 design errors in those tables and will integrate corrected tables into the final Plan. A
9 copy of those corrected tables is provided as Exhibit MG-1.⁴

10 **8. Q. OCA, CAUSE-PA/TURN and the City/PEA each expressed concerns that the**
11 **Plan does not sufficiently invest in comprehensive measures, and those**
12 **intervenors made reallocation proposals such as reducing investment in lighting**
13 **and/or behavioral measures and increasing investment in heat pumps and**
14 **building shell measures. Please respond.**

15 A. PECO’s Phase V Plan already reflects an appropriate balance of investment in
16 comprehensive, lighting and behavioral measures. As explained in more detail in the
17 rebuttal testimony of Mr. van Eeghen, the Company’s Phase V Plan *almost doubles*
18 the level of investment in residential and low-income comprehensive measures as
19 compared to the level of investment under PECO’s Phase IV Plan. The Plan also
20 continues PECO’s multi-Phase trend of reducing investment in lighting measures.
21 Further, as also discussed by Mr. van Eeghen, the proposed level of investment in

⁴ Exhibit MG-1 also includes a corrected Table 32 which was revised to remove extraneous information.

behavioral measures is appropriate given the broad customer reach, customer feedback on the relevance of the content, and demonstrated ability to generate savings. I note that behavioral measures also and provide the flexibility to cross promote relevant additional Act 129 opportunities and supply additional relevant messaging such as universal service program information. Finally, PECO's well-balanced Plan will meet mandatory EE and peak demand reduction ("PDR") requirements in addition to other Phase V Implementation Order requirements within statutory spending limitations.

9. Q. Did OCA, CAUSE-PA/TURN or the City/PEA provide an analysis of how their reallocation proposals would impact Plan performance or compliance with Phase V requirements?

A. No. None of the witnesses performed a formal analysis of the impact of their recommendations on Plan costs, savings or participation. *See* Exh. MG-2

III. PROPOSALS CONCERNING HEALTH AND SAFETY SPENDING

10. Q. Please summarize PECO's proposal regarding health and safety spending in the Phase V Plan.

A. After piloting health and safety treatments in Phase IV, PECO designed the Residential Program to accommodate spending up to \$3 million to address health and safety barriers that prevent low-income customers from installing EE measures, such as mold, electrical and structural issues. Health and safety funding will be used when an opportunity for installing a specific EE measure is identified but deemed infeasible due to presence of a health and safety hazard.

1 11. Q. Did any parties support PECO’s proposal?

2 A. Yes. KEEA witness Zappa supported PECO’s budget allocation as appropriate to
3 address health and safety barrier mitigation and further commended PECO for having
4 the highest percentage budget allocation for health and safety among all electric
5 distribution companies (“EDCs”) that submitted proposed Phase V plans. *See* KEEA
6 St. 1, pp. 11-12; Exh. KEEA-2. Similarly, CAUSE-PA/TURN witness Grevatt found
7 that earmarking funds for health and safety is “critical” and that PECO’s approach in
8 establishing a budget is an important step in addressing health and safety barriers.
9 CAUSE-PA/TURN St. 1, p. 52.

10 12. Q. Did any parties make recommendations related to health and safety?

11 A. Yes. KEEA witness Zappa recommended that PECO require contractors to obtain the
12 Building Performance Institute (“BPI”) Healthy Home Evaluator certification.
13 CAUSE-PA/TURN witness Grevatt urged the Company to remain open to exceeding
14 the \$3 million budget and recommended that PECO track certain metrics related to
15 health and safety remediation. Finally, City/PEA witness Abramson expressed
16 concern about that sufficiency of health and safety funding, including his belief that
17 PECO intends to impose a cap of \$1,000 per household on health and safety
18 spending.

1 13. Q. Does PECO agree that additional BPI certifications are necessary to
2 appropriately identify and remediate health and safety barriers?

3 A. No. PECO's Act 129 auditors already have the BPI Building Analyst Technician
4 certification which is sufficient for their auditing activities.

5 14. Q. Will PECO be collecting information about health and remediation efforts
6 during Phase V?

7 A. Yes. PECO and its implementation contractors will collect and retain information
8 related to health and safety conditions identified during in-home audits, the nature of
9 any health and safety barriers encountered, and whether remedial actions were
10 completed to enable the installation of eligible energy efficiency measures. This
11 information will be used to support program management, quality assurance,
12 invoicing, and overall budget tracking. PECO's existing data collection and reporting
13 framework is designed to ensure appropriate documentation and accountability while
14 minimizing administrative burden. At this time, the Company believes these practices
15 are adequate to manage health and safety spending, assess program performance, and
16 support EM&V activities, and that additional standalone tracking or reporting
17 requirements are not necessary to achieve the objectives of the Phase V Plan.

18 15. Q. Will PECO impose a \$ 1,000 per-household cap on health and safety spending?

19 A. No. As explained in response to TURN-III-5 (*see* CAUSE-PA/TURN St. 1,
20 Appendix B), PECO does not intend to impose a per-household cap on health and
21 safety treatments. The \$1,000-per-house incremental cost (\$/unit) presented in the

1 Plan was an estimate utilized for overall budgeting purposes. Homes will be assessed
2 for health and safety issues on an individualized basis, and, subject to available funds,
3 a CSP will have the flexibility to implement appropriate health and safety remediation
4 measures.

5 **16. Q. Will PECO commit to spending more than \$3 million on health and safety?**

6 A. Not at this time. PECO believes its funding proposal is appropriate and, as noted
7 earlier, the Company is a leader among EDCs in the level of funding dedicated to
8 health and safety. If, during the course of Phase V Implementation, the Company
9 determines there may be a need for additional health and safety spending, PECO will
10 assess whether an additional allocation may be appropriate in light of overall
11 spending limitations, EE and PDR targets, Phase V Implementation Order
12 requirements and other programmatic needs.

13 **IV. PROPOSALS REGARDING DATA SHARING AND PROGRAM**
14 **COORDINATION**

15 **17. Q. CAUSE-PA/TURN, KEEA and City/PEA all highlighted the importance of**
16 **coordinating with external programs, including through data sharing**
17 **agreements, formal referral protocols, well-defined roles and responsibilities,**
18 **regular check in meetings, and reporting on coordinated projects. Please**
19 **respond.**

20 A. PECO agrees that appropriate coordination with external programs is important and
21 ultimately beneficial for customers. The Company has already engaged in several
22 preparatory activities for Phase V, including participation in key stakeholder forums

1 such as the SWE working group, EDC / Energy Association of Pennsylvania (“EAP”)
2 coordination meetings, and low-income program coordination sessions with local
3 service agencies. *See* Exh. MG-3 (A portion of PECO’s response to CAUSE-PA-II-
4 5). PECO also continues to monitor developments in complementary federal, state,
5 and regional initiatives to ensure alignment and support customer access to related
6 programs.

7 A foundational element of formalizing coordination, however, is how data will be
8 shared between organizations. PECO is an active participant in the Commission’s
9 EE&C data sharing working group. Along with other EDCs, interested stakeholders
10 like PEA, OCA, the Public Utility Law Project, EAP, and government agencies such
11 as the Pennsylvania Department of Environmental Protection, PECO is actively
12 engaging in ongoing discussions via the data sharing collaborative to come up with a
13 standardized methodology for acceptable data exchange between utilities and third-
14 party agencies. PECO expects to develop formal coordination processes and protocols
15 that will be informed by the outcome of the working group process.

16 **18. Q. The City/PEA expressed concerns about past communications and referral**
17 **activities between PECO’s Act 129 implementation team and the City’s Built to**
18 **Last (“BTL”) Program. Is PECO open to improving the communication**
19 **channels with the BTL Program?**

20 A. Yes. PECO believes that development of formal data sharing processes will improve
21 communication between these programs. I note that PECO’s program
22 implementation CSP already participates in PEA sponsored biweekly coordination
23 meetings about BTL program status. PECO believes continuation of these regular

1 meeting is important and that ensuring that leads or referrals between programs are
2 transmitted via writing, not just orally, can be a process improvement moving
3 forward.

4 V. OCA PROPOSALS

5 19. Q. OCA encouraged PECO to establish a moderate-income pilot program during
6 Phase V, dedicating approximately five percent of the residential program
7 budget to enhanced incentives for customers above the low-income threshold of
8 150% of the Federal Poverty Level (“FPL”). Please respond.

9 A. At this time, PECO does not believe it is appropriate to allocate a specific portion of
10 the residential budget exclusively for moderate-income customers. There is currently
11 no clear, Commission-approved definition of “moderate income,” nor is there an
12 established or validated dataset that would allow PECO to reliably identify, segment,
13 or target this population at scale. PECO’s residential offerings are already designed to
14 be accessible and beneficial across a broad range of customer incomes above the
15 low-income threshold. Introducing a carved-out moderate-income program or budget
16 allocation without a clear definition, verified population size, or data-supported need
17 could create administrative complexity and risk undermining equitable access for all
18 non-low-income residential customers.

1 20. Q. OCA also requested that PECO clarify the allocation of multifamily savings
2 across income segments, explore strategies to increase participation among
3 market-rate multifamily households, and establish explicit non-low-income
4 multi-family savings targets. Please respond.

5 A. The multi-family market in PECO's service territory spans a wide variety of
6 ownership structures, building vintages, metering configurations, and income
7 compositions, and no comprehensive, validated dataset currently exists that would
8 allow PECO to accurately segment this population across income tiers or assign
9 savings targets with precision. For these reasons, establishing specific multifamily
10 savings goals or targeting strategies would not be appropriate or technically sound
11 without first developing a more complete understanding of the building population.

12 21. Q. Finally, OCA encouraged PECO to incorporate Act 129 program engagement
13 into its interconnection and economic development processes for new and
14 expanding C&I customers. Please respond.

15 A. PECO's Act 129 team already engages with new business teams on an informal basis.
16 However, the Company agrees with OCA that a more formalized collaboration
17 process would be beneficial and is considering pathways for more formalized
18 engagement during Phase V.

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A. I disagree with Mr. Grevatt's conclusions about the low-income HER subprogram. As explained in response to CAUSE-PA-I-39 (*see* CAUSE-PA/TURN St. 1, Appendix B), the behavioral data and program content are *tailored specifically* to low-income customers, including providing information about unique program offerings and braiding opportunities with other low-income programs and services to maximize impact and accessibility. For these reasons, savings generated from the low-income HER program should count towards PECO's low-income carveout. Mr. Grevatt is correct, however, that the Phase V Plan does not currently have any differentiated incentives or pathways for low-income appliance recycling as compared to residential appliance recycling. PECO agrees that, to the extent appliance recycling remains undifferentiated for low-income and residential customers, the savings generated should not count towards PECO's low-income carveout.

1 23. Q. CAUSE-PA/TURN presented several recommendations related to CAP
2 customers, including targeting such customers for the installation of heat pumps
3 and other “deep savings” measures, focusing outreach on CAP customers who
4 have or are at risk of exhausting their annual CAP credit maximum, and tracking
5 the participation of CAP customers. Please respond.

6 A. As described in PECO’s Phase V filing, the low-income subprogram delivers
7 whole-home measures based on individualized in-home audit and cost-effectiveness
8 assessments. The Company believes that remains the appropriate approach over
9 targeting particular technologies that may or may not be appropriate for a particular
10 household. PECO will also use a multi-prong approach to educate low-income
11 customers (including CAP customers) about Act 129 opportunities. As explained in
12 PECO’s Plan (p. 13), the Company will engage a Phase V Education and Outreach
13 CSP to deploy a range of strategies, which could include participation in community
14 events, hosting events, and collaborating with community partners. Finally, PECO
15 does capture information about CAP status for participants in low-income programs
16 and information about low-income program participants is already captured and part
17 of formal reporting. The Company does not believe that additional, or separate,
18 tracking in this area is necessary.

1 24. Q. CAUSE-PA/TURN witness Grevatt recommends that when an Act 129 auditor
2 identifies permanently installed electric heating for a residential customer: (1)
3 the auditor should provide the customer with information about the availability
4 PECO's residential heating distribution rate (Rate RH); and (2) PECO should
5 accept the audit information as sufficient basis to switch a customer from Rate R
6 to Rate RH. Please respond.

7 A. The purpose of the Act 129 audit is to identify and, if appropriate, install eligible
8 EE&C measures at a customer's home. If a customer has questions about their bill or
9 billing rate, the Act 129 auditor can provide them with an appropriate customer
10 service number to call. The Company does not believe it is necessary to expand the
11 scope of the audit to include distribution rate options and/or the development of
12 documentation to qualify for particular distribution rates.

13 VII. KEEA PROPOSALS

14 25. Q. KEEA recommends that PECO's Plan include a budgeted workforce
15 development training plan focused on heat pumps and whole home measures
16 and that PECO coordinate with other EDCs and state agencies on training and
17 report on training activities. Please respond.

18 A. PECO appreciates the importance of workforce development; however, the Company
19 does not agree that an additional, standalone workforce training plan is necessary for
20 Phase V. As described in PECO's Phase V filing, the Company's residential and
21 non-residential portfolios already incorporate substantial contractor training and
22 certification requirements. These include mandatory BPI certifications,

1 quality-installation protocols for HVAC contractors, weatherization training, and
2 program-specific guidance for emerging technologies such as heat pumps. These
3 requirements ensure that participating contractors are trained to deliver high-quality,
4 code-compliant installations without the need for a separate budgeted training
5 program.

6 **26. Q. KEEA recommends a single point of entry for all EDC Act 129 EE&C programs**
7 **under a single umbrella label, as well as tracking and reporting on outreach**
8 **efforts. Please respond.**

9 A. As KEEA acknowledges in its testimony (p. 14), the PUC has already considered and
10 rejected suggestions to establish a common statewide marketing platform. *See* Phase
11 V Implementation Order, pp. 188-190. PECO believes that each EDC must retain
12 discretion regarding branding and marketing as each EDC is responsible for the
13 design and execution of its own plan to meet mandatory EE and PDR targets.
14 PECO's existing program identity and communication channels are designed around
15 its customer base, service territory, and specific program portfolio, and changing to a
16 statewide model would introduce unnecessary cost and complexity without improving
17 customer engagement.

18 PECO's Phase V filing already includes robust tracking of marketing and outreach
19 activities through its implementation contractors, trade ally network activities, and
20 process evaluation efforts.⁵ Outreach metrics such as customer impressions, website

⁵ *See, e.g.,* Phase V Plan Section 1.4 – Summary of Program Implementation (p. 12); Section 3.2 - Residential Sector (pp. 25, 36); Section 3.2.1 - Residential Low-Income Sub-Sector (pp. 69, 78); Section 3.5 – GNI Sector (p. 149); Section 6.4 – Market and Process Evaluations (p. 170)

visits, participation inquiries, and event engagement are collected as part of standard program management and are incorporated into evaluation and continuous improvement activities. The Company provides its outreach information to the SWE which the SWE then summarizes when issuing its Act 129 Statewide Evaluator Reports.⁶ Additional formal reporting requirements are not necessary. Moreover, layering new reporting obligations onto existing processes would increase administrative burden without producing meaningful performance improvements.

27. Q. KEEA recommends that PECO's efficient heat pump and heat pump water heater incentives be available to customers regardless of the fuel used for space and water heating prior to the purchase of the new high efficiency equipment. Do you agree with this recommendation?

A. No. The Phase V Implementation Order (pp. 168-175) is clear that beneficial electrification programming runs counter to the objectives of Act 129 and should not be included in EE&C plans. Therefore, PECO will not offer heat pump incentives to customers who are replacing fossil fuel equipment with electric equipment.

28. Q. KEEA recommends that PECO's Plan cover any costs for ASHRAE Level 2 audits not covered by the HER program for participants in both programs. Do you agree?

A. PECO's Plan includes some projected participation and funding for residential and non-residential custom measures related to cost sharing for ASHRAE Level 2 audits.

⁶ <https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/act-129-statewide-evaluator-swe/>

1 The level of funding available under these custom measures will be assessed on a
2 case-by-case basis. PECO's existing approach ensures customers receive reasonable
3 support while maintaining cost-effectiveness and proper budget management.

4 **VIII. CITY/PEA PROPOSALS**

5 **29. Q. City/PEA believes the residential incentive for mini-split heat pumps is too low**
6 **in light of an asserted total project cost that purportedly could exceed \$15,000,**
7 **and may therefore result in minimal participation. What incentives is PECO**
8 **offering for the installation of residential heat pumps?**

9 A. For low-income customers, the customer is eligible to receive an incentive for the full
10 equipment and installation costs without any out-of-pocket costs. For other
11 residential customers, the incentives vary by equipment type (e.g., ductless mini split
12 vs air source heat pump, etc.), size and efficiency. For air source heat pumps,
13 incentives are available up to \$2192.34, and incentives for mini splits are \$378.96.

14 **30. Q. Do you believe the incentive for mini-split heat pumps should be increased, as**
15 **suggested by City/PEA?**

16 A. No. Incentives are usually set at or below the incremental measure cost, or IMC,
17 which is generally understood to be the additional cost burden for a customer to
18 install an efficient measure relative to a baseline measure. Adopting incentives that
19 are above the IMC result in lower total resource cost results for that measure.

As City/PEA acknowledges, the Commission determined the level of incremental costs for heat pumps in the Final Total Resource Cost Order,⁷ subject to adjustments to account for differences in unit assumptions, such as equipment size and efficiency. That is the maximum incentive PECO has adopted for Phase V.

31. Q. The City/PEA states that PECO needs to build out a delivery framework for electric resistance to heat pump conversions and that there are very limited opportunities for low-income customers to participate in daily load shifting. Please respond.

A. PECO's strategies to encourage heat pump adoption are diverse and appropriate. The Plan already includes multiple channels through which an electric resistance to heat pump conversion may occur, including the residential rebates component, low-income subprogram, multifamily program component, and the in-home assessments component. The Plan is designed to encourage adoption of high-efficiency heat pumps where technically and economically feasible. I disagree that additional frameworks are necessary or appropriate for heat pumps.

Finally, PECO has not restricted daily load shifting opportunities for low-income customers as compared to residential customers. PECO's Plan includes both residential and low-income measures related to smart thermostats, electric vehicles ("EVs") and battery storage. PECO believes that the smart thermostat measure has a higher potential for low-income customer uptake as compared to EVs and battery

⁷ 2026 Total Resource Cost (TRC) Test, Docket No. M-2024-3048998 (Order entered Nov. 7, 2024) <https://www.puc.pa.gov/pdocs/1855583.pdf>

1 storage, which is why the Plan shows projected participation in that measure. In fact,
2 PECO plans to target over 1000 low-income customers for load shifting using smart
3 thermostats in the first year of Phase V alone.

4 **IX. CONCLUSION**

5 **32. Q. Does this conclude your rebuttal testimony?**

6 A. Yes.

7

Table 8. Residential Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
ENERGY STAR Refrigerators	per refrigerator	No	Yes, if paired with other	Phase V TRM	\$128.41	14	\$0.00 - \$128.41
ENERGY STAR Clothes Washers	per washer	No	Yes, if paired with other	Phase V TRM	\$35.72	14	\$0.00 - \$35.72
ENERGY STAR Clothes Dryers	per dryer	No	Yes, if paired with other	Phase V TRM	\$206.34	14	\$0.00 - \$206.34
ENERGY STAR Dehumidifiers	per dehumidifier	No	Yes, if paired with other	Phase V TRM	\$0.00	12	\$0.00 - \$25.00
Photovoltaic (PV) Solar Generation	per PV array	No	Yes, if paired with other	Phase V TRM	\$15,232.00	15	\$0.00 - \$15,232.00
ENERGY STAR Freezers	per freezer	No	Yes, if paired with other	Phase V TRM	\$38.93	11	\$0.00 - \$38.93
ENERGY STAR Coolers	per cooler	No	Yes, if paired with other	Phase V TRM	\$281.84	14	\$0.00 - \$281.84
ENERGY STAR Dishwashers	per dishwasher	No	Yes, if paired with other	Phase V TRM	\$79.45	10	\$0.00 - \$79.45
WH > 10% UBC \$0.30/kWh	per home	No	Yes	Phase V TRM	\$2,133.95	15	\$0.00 - \$2,133.95
WH > 10% UBC HPWH \$0.60/kWh	per home	No	Yes	Phase V TRM	\$3,053.95	15	\$0.00 - \$3,053.95
HVAC Systems: PTAC	per PTAC	No	Yes	Phase V TRM	\$1,571.00	15	\$0.00 - \$1,571.00
HVAC Systems: PTHP	per PTHP	No	Yes	Phase V TRM	\$2,094.00	15	\$0.00 - \$2,094.00
High Efficiency Equipment: ASHP	per unit	No	Yes	Phase V TRM	\$2,192.34	15	\$0.00 - \$2,192.34
High Efficiency Equipment: CAC	per unit	No	Yes	Phase V TRM	\$2,192.34	15	\$0.00 - \$2,192.34
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump	per heat pump	No	Yes	Phase V TRM	\$378.96	15	\$0.00 - \$378.96
Duct Sealing & Duct Insulation	per home	No	Yes	Phase V TRM	\$280.65	15	\$0.00 - \$280.65
Heat Pump Water Heaters	per water heater	No	Yes	Phase V TRM	\$1,684.76	10	\$0.00 - \$1,684.76
Residential Air Sealing	per home	No	Yes	Phase V TRM	\$449.64	15	\$0.00 - \$449.64
Ceiling/Attic, Wall, Floor and Rim Joist Insulation:	per home	No	Yes	Phase V TRM	\$857.72	15	\$0.00 - \$857.72
Ceiling/Attic, Wall, Floor and Rim Joist Insulation:	per home	No	Yes	Phase V TRM	\$300.00	15	\$0.00 - \$300.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation:	per home	No	Yes	Phase V TRM	\$203.21	15	\$0.00 - \$203.21
Ceiling/Attic, Wall, Floor and Rim Joist Insulation:	per home	No	Yes	Phase V TRM	\$500.00	15	\$0.00 - \$500.00
Basement or Crawl Space Wall Insulation	per home	No	Yes	Phase V TRM	\$155.63	15	\$0.00 - \$155.63
ENERGY STAR Windows	per window area	No	Yes	Phase V TRM	\$952.20	15	\$0.00 - \$952.20
Room Air Conditioners	per room A/C	No	Yes	Phase V TRM	\$95.08	9	\$0.00 - \$95.08
Window Heat Pump	per window heat pump	No	Yes	Phase V TRM	\$2,574.50	9	\$0.00 - \$2,574.50
High Efficiency Equipment for Midstream Delivery:	per unit	No	Yes	Phase V TRM	\$2,192.37	15	\$0.00 - \$2,192.37
Solar Water Heaters	per water heater	No	Yes	Phase V TRM	\$1,111.33	15	\$0.00 - \$1,111.33
Dehumidifier Retirement	per dehumidifier	No	No	Phase V TRM	\$10.00	4	\$0.00 - \$10.00
Low-Capacity Refrigerator / Freezer Recycling	per refrigerator/freezer	No	No	Phase V TRM	\$50.00	5	\$0.00 - \$50.00
Refrigerator / Freezer Recycling with and without	per refrigerator	No	No	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Room AC (RAC) Retirement	per room A/C	No	No	Phase V TRM	\$10.00	3	\$0.00 - \$10.00
Low-Flow Faucet Aerators: Kit	per aerator	No	No	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Kit	per showerhead	No	No	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
ENERGY STAR Certified Connected Thermostats	per thermostat	No	No	Phase V TRM	\$168.42	9	\$0.00 - \$168.42
Residential LED Lighting: ENERGY STAR Screw-in	per fixture	No	No	Phase V TRM	\$4.40	2	\$0.00 - \$4.40
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g.,	per fixture	No	No	Phase V TRM	\$6.41	2	\$0.00 - \$6.41
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)	per fixture	No	No	Phase V TRM	\$7.08	2	\$0.00 - \$7.08
LED and Electroluminescent Nightlights	per nightlight	No	No	Phase V TRM	\$1.63	8	\$0.00 - \$3.25
Low-Flow Faucet Aerators: Direct install	per aerator	No	No	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Direct install	per showerhead	No	No	Phase V TRM	\$65.37	10	\$0.00 - \$65.37

Thermostatic Shower Restriction Valves	per water heater	No	No	Phase V TRM	\$41.75	15	\$0.00 - \$42.00
Water Heater Tank Wrap	per tank	No	No	Phase V TRM	\$89.14	7	\$0.00 - \$89.14
Water Heater Temperature Setback	per water heater	No	No	Phase V TRM	\$22.47	2	\$0.00 - \$22.47
Advanced Power Strips	per advanced power strip	No	No	Phase V TRM	\$40.07	5	\$0.00 - \$60.00
ENERGY STAR Air Purifiers - Direct Install LI & MF	per air purifier	No	No	Phase V TRM	\$200.00	9	\$0.00 - \$300.00
LED Exit Signs	per sign	No	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
Lighting Retrofits - Other Interior Fixtures	per fixture	No	No	Phase V TRM	\$27.00	15	\$0.00 - \$80.00
Lighting Retrofits - Outdoor floods	per fixture	No	No	Phase V TRM	\$123.81	15	\$0.00 - \$123.81
Lighting Retrofits - Parking Garage	per fixture	No	No	Phase V TRM	\$97.00	15	\$0.00 - \$120.00
Lighting Retrofits - Parking Lot	per fixture	No	No	Phase V TRM	\$129.00	15	\$0.00 - \$129.00
Lighting: Permanent Fixture Removal	per fixture	No	No	Phase V TRM	\$25.00	11	\$0.00 - \$60.00
Linear LED: Lamp Replacement	per lamp	No	No	Phase V TRM	\$15.00	15	\$0.00 - \$15.00
Linear LED: Retrofit Fixture, surface mount	per fixture	No	No	Phase V TRM	\$52.00	15	\$0.00 - \$150.00
Linear LED: Retrofit Fixture, troffer	per fixture	No	No	Phase V TRM	\$76.00	15	\$0.00 - \$250.00
Occupancy Sensor	per sensor	No	No	Phase V TRM	\$55.00	8	\$0.00 - \$55.00
Customer Education: Adjust Thermostat	per home	No	No	Phase V TRM	\$20.00	1	\$0.00 - \$20.00
Customer Education: Shorter Showers	per home	No	No	Phase V TRM	\$15.00	1	\$0.00 - \$15.00
Customer Education: Wash Laundry in Cold	per home	No	No	Phase V TRM	\$15.00	1	\$0.00 - \$15.00
Advanced Power Strips: Kit	per advanced power strip	No	No	Phase V TRM	\$40.07	5	\$0.00 - \$40.07
Connected Smart Thermostat	per unit	No	No	Phase V TRM	\$17.30	1	\$0.00 - \$23.06
Electric Vehicle Managed Charging (Actively	per unit	No	No	Phase V TRM	\$108.00	1	\$0.00 - \$144.00
Behind the Meter Battery Storage (Bring Your	per unit	No	No	Phase V TRM	\$643.50	1	\$0.00 - \$858.00
Water Heater Pipe Insulation	per water heater	No	No	Phase V TRM	\$59.80	11	\$0.00 - \$59.80
Smart Water Heater Controls	per water heater controller	No	No	Phase V TRM	\$155.99	11	\$0.00 - \$155.99
Weather Stripping, Caulking, and Outlet Gaskets:	per gasket	No	No	Phase V TRM	\$35.84	15	\$0.00 - \$35.84
Advanced Power Strips: Tier 1	per advanced power strip	No	No	Phase V TRM	\$30.00	5	\$0.00 - \$30.00
Advanced Power Strips: Tier 2	per advanced power strip	No	No	Phase V TRM	\$75.00	5	\$0.00 - \$75.00
ENERGY STAR Certified Connected Thermostats:	per thermostat	No	No	Phase V TRM	\$168.42	9	\$0.00 - \$190.00
ENERGY STAR Certified Connected Thermostats:	per thermostat	No	No	Phase V TRM	\$168.42	9	\$0.00 - \$190.00
ENERGY STAR Air Purifiers	per air purifier	No	No	Phase V TRM	\$66.03	9	\$0.00 - \$168.75
ECM Circulation Fans	per fan	No	No	Phase V TRM	\$352.79	5	\$0.00 - \$352.79
Air Conditioner & Heat Pump Maintenance	per unit	No	No	Phase V TRM	\$141.40	3	\$0.00 - \$141.40
Furnace Maintenance	per furnace	No	No	Phase V TRM	\$141.40	3	\$0.00 - \$141.40
ENERGY STAR Bathroom Exhaust Fan	per exhaust fan unit	No	No	Phase V TRM	\$208.00	15	\$0.00 - \$208.00
Water Heater Pipe Insulation: Kit	per water heater	No	No	Phase V TRM	\$3.00	11	\$0.00 - \$3.00
Water Heater Pipe Insulation - Instant Markdown	per water heater	No	No	Phase V TRM	\$6.00	11	\$0.00 - \$6.00
Residential Occupancy Sensors	per sensor	No	No	Phase V TRM	\$65.90	8	\$0.00 - \$65.90
Holiday Lights	per one strand of holiday	No	No	Phase V TRM	\$0.67	10	\$0.00 - \$0.67
GSHP Desuperheaters	per desuperheater	No	No	Phase V TRM	\$2,260.05	15	\$0.00 - \$2,260.05
Air Handler Filter Whistles	per filter whistle	No	No	Phase V TRM	\$5.19	5	\$0.00 - \$5.19
Drain Water Heat Recovery Units	per unit	No	No	Phase V TRM	\$734.58	15	\$0.00 - \$734.58
Cooler Recycling with and without Replacement	per cooler	No	No	Phase V TRM	\$281.84	9	\$0.00 - \$281.84
Residential Induction Cooktop	per induction cooktop	No	No	Phase V TRM	\$1,087.38	15	\$0.00 - \$1,087.38
ENERGY STAR Ceiling Fans	per ceiling fan	No	No	Phase V TRM	\$252.74	10	\$0.00 - \$252.74
ENERGY STAR Pool Pumps	per pool pump	No	No	Phase V TRM	\$145.38	10	\$0.00 - \$145.38
Single Speed Pool Pump Replacement	per VFD pool pump	No	No	Phase V TRM	\$986.77	3.3	\$0.00 - \$986.77

Table 20. Residential Low-Income Subprogram Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range
High Efficiency Equipment: ASHP	per unit	Yes	Yes	Phase V TRM	\$2,685.98	15	\$0.00 - \$16,000.00
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump - IE Direct Install	per heat pump	Yes	Yes	Phase V TRM	\$2,146.33	15	\$0.00 - \$10,000.00
Room Air Conditioners	per room A/C	Yes	Yes	Phase V TRM	\$510.46	9	\$0.00 - \$600.00
Duct Sealing & Duct Insulation	per home	Yes	Yes	Phase V TRM	\$280.65	15	\$0.00 - \$600.00
Residential Air Sealing	per home	Yes	Yes	Phase V TRM	\$449.64	15	\$0.00 - \$449.64
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Ceiling/Attic	per home	Yes	Yes	Phase V TRM	\$857.72	15	\$0.00 - \$1,800.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Floor Insulation	per home	Yes	Yes	Phase V TRM	\$203.21	15	\$0.00 - \$660.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Rim Joist Insulation	per home	Yes	Yes	Phase V TRM	\$700.00	15	\$0.00 - \$700.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Wall Insulation	per home	Yes	Yes	Phase V TRM	\$1,800.00	15	\$0.00 - \$1,800.00
Basement or Crawl Space Wall Insulation	per home	Yes	Yes	Phase V TRM	\$155.63	15	\$0.00 - \$2,133.95
Heat Pump Water Heaters	per water heater	Yes	Yes	Phase V TRM	\$3,364.09	10	\$0.00 - \$3,600.00
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump	per heat pump	Yes	Yes	Phase V TRM	\$378.96	15	\$0.00 - \$378.96
WH LI > 10% UBC \$0.40/kWh	per home	Yes	Yes	Phase V TRM	\$1,100.00	15	\$0.00 - \$1,100.00
HVAC Systems: PTAC	per PTAC	Yes	Yes	Phase V TRM	\$1,571.00	15	\$0.00 - \$1,571.00
HVAC Systems: PTHP	per PTHP	Yes	Yes	Phase V TRM	\$2,094.00	15	\$0.00 - \$2,094.00
Residential New Construction	per home	Yes	Yes	Phase V TRM	\$2,133.95	15	\$0.00 - \$2,133.95
ENERGY STAR Manufactured Homes	per home	Yes	Yes	Phase V TRM	\$1,984.87	15	\$0.00 - \$1,984.87
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Kneewall Insulation	per home	Yes	Yes	Phase V TRM	\$350.00	15	\$0.00 - \$350.00
Dehumidifier Retirement	per dehumidifier	Yes	No	Phase V TRM	\$10.00	4	\$0.00 - \$10.00
Low-Capacity Refrigerator / Freezer Recycling without Replacement	per	Yes	No	Phase V TRM	\$50.00	5	\$0.00 - \$50.00
Refrigerator / Freezer Recycling with and without Replacement	per refrigerator	Yes	No	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Room AC (RAC) Retirement	per room A/C	Yes	No	Phase V TRM	\$10.00	3	\$0.00 - \$10.00
Low-Flow Faucet Aerators: Kit	per aerator	Yes	No	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Kit	per showerhead	Yes	No	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
Refrigerator / Freezer Recycling - LIURP & WRx	per refrigerator	Yes	No	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)	per fixture	Yes	No	Phase V TRM	\$4.40	2	\$0.00 - \$4.40
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g., candelabra))	per fixture	Yes	No	Phase V TRM	\$6.41	2	\$0.00 - \$6.41
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)	per fixture	Yes	No	Phase V TRM	\$7.08	2	\$0.00 - \$7.08
LED and Electroluminescent Nightlights	per nightlight	Yes	No	Phase V TRM	\$2.60	8	\$0.00 - \$3.25
Low-Flow Faucet Aerators: Direct install	per aerator	Yes	No	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Direct install	per showerhead	Yes	No	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
Thermostatic Shower Restriction Valves	per water heater	Yes	No	Phase V TRM	\$41.75	15	\$0.00 - \$42.00
Water Heater Pipe Insulation	per water heater	Yes	No	Phase V TRM	\$59.80	11	\$0.00 - \$59.80
Water Heater Tank Wrap	per tank	Yes	No	Phase V TRM	\$89.14	7	\$0.00 - \$89.14
Water Heater Temperature Setback	per water heater	Yes	No	Phase V TRM	\$22.47	2	\$0.00 - \$22.47
Advanced Power Strips	per advanced power	Yes	No	Phase V TRM	\$56.50	5	\$0.00 - \$60.00
ENERGY STAR Certified Connected Thermostats	per thermostat	Yes	No	Phase V TRM	\$168.42	9	\$0.00 - \$300.00
Air Conditioner & Heat Pump Maintenance	per unit	Yes	No	Phase V TRM	\$141.40	3	\$0.00 - \$350.00
ENERGY STAR Air Purifiers - Direct Install LI & MF	per air purifier	Yes	No	Phase V TRM	\$200.00	9	\$0.00 - \$300.00
Customer Education: Adjust Thermostat	per home	Yes	No	Phase V TRM	\$20.00	1	\$0.00 - \$20.00
Customer Education: Shorter Showers	per home	Yes	No	Phase V TRM	\$15.00	1	\$0.00 - \$15.00
Customer Education: Wash Laundry in Cold Water	per home	Yes	No	Phase V TRM	\$15.00	1	\$0.00 - \$15.00
Health & Safety	per audit	Yes	No	Phase V TRM	\$1,000.00	1	\$0.00 - \$1,000.00
Health & Safety - Devices	per audit	Yes	No	Phase V TRM	\$50.00	1	\$0.00 - \$50.00
Advanced Power Strips: Kit	per advanced power	Yes	No	Phase V TRM	\$40.07	5	\$0.00 - \$40.07
Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket: Kit	per gasket	Yes	No	Phase V TRM	\$3.58	15	\$0.00 - \$3.58
Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep: Kit	per door	Yes	No	Phase V TRM	\$26.00	15	\$0.00 - \$26.00
Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping: Kit	per door	Yes	No	Phase V TRM	\$56.00	15	\$0.00 - \$56.00
Smart Water Heater Controls	per water heater	Yes	No	Phase V TRM	\$155.99	11	\$0.00 - \$155.99
ENERGY STAR Air Purifiers	per air purifier	Yes	No	Phase V TRM	\$66.03	9	\$0.00 - \$66.03
ECM Circulation Fans	per fan	Yes	No	Phase V TRM	\$352.79	5	\$0.00 - \$352.79
Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket	per gasket	Yes	No	Phase V TRM	\$35.84	15	\$0.00 - \$35.84
Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep - LIURP & WRx	per door	Yes	No	Phase V TRM	\$26.00	15	\$0.00 - \$26.00
Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping - LIURP & WRx	per door	Yes	No	Phase V TRM	\$56.00	15	\$0.00 - \$56.00
LED Exit Signs	per sign	Yes	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
Lighting Retrofits - Other Interior Fixtures	per fixture	Yes	No	Phase V TRM	\$27.00	15	\$0.00 - \$80.00
Lighting Retrofits - Outdoor floods	per fixture	Yes	No	Phase V TRM	\$123.81	15	\$0.00 - \$123.81
Lighting Retrofits - Parking Garage	per fixture	Yes	No	Phase V TRM	\$97.00	15	\$0.00 - \$120.00
Lighting Retrofits - Parking Lot	per fixture	Yes	No	Phase V TRM	\$129.00	15	\$0.00 - \$129.00
Lighting: Permanent Fixture Removal	per fixture	Yes	No	Phase V TRM	\$60.00	11	\$0.00 - \$60.00
Linear LED: Lamp Replacement	per lamp	Yes	No	Phase V TRM	\$15.00	15	\$0.00 - \$15.00
Linear LED: Retrofit Fixture, surface mount	per fixture	Yes	No	Phase V TRM	\$52.00	15	\$0.00 - \$150.00
Linear LED: Retrofit Fixture, troffer	per fixture	Yes	No	Phase V TRM	\$76.00	15	\$0.00 - \$250.00
Occupancy Sensor	per sensor	Yes	No	Phase V TRM	\$55.00	8	\$0.00 - \$55.00
Connected Smart Thermostat	per unit	Yes	No	Phase V TRM	\$17.30	1	\$0.00 - \$23.06
Bring Your Own Thermostat (Enrollment Incentive)	per unit	Yes	No	Phase V TRM	\$37.50	1	\$0.00 - \$50.00
Bring Your Own Thermostat	per unit	Yes	No	Phase V TRM	\$26.63	1	\$0.00 - \$35.50
ASHRAE Level 2 Audit	per audit	Yes	No	Phase V TRM	\$4,792.32	1	\$0.00 - \$4,792.32
Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam	per can	Yes	No	Phase V TRM	\$11.20	15	\$0.00 - \$11.20
Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam: Kit	per can	Yes	No	Phase V TRM	\$11.20	15	\$0.00 - \$11.20
Lighting Retrofits - Low Bays	per fixture	Yes	No	Phase V TRM	\$42.88	15	\$0.00 - \$42.88
Lighting Retrofits - High Bays	per fixture	Yes	No	Phase V TRM	\$31.94	15	\$0.00 - \$31.94

Table 32. Non-Residential Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Lighting Retrofits - Street lighting	per lighting equipment	No	Phase V TRM	\$276.15	15	\$0.00 - \$276.15
Lighting Retrofits - Outdoor floods	per lighting equipment	No	Phase V TRM	\$132.70	15	\$0.00 - \$132.70
Lighting Retrofits - High Bays	per lighting equipment	No	Phase V TRM	\$520.03	15	\$0.00 - \$520.03
Lighting Retrofits - Other Interior Fixtures	per lighting equipment	No	Phase V TRM	\$104.01	15	\$0.00 - \$104.01
Lighting Controls	per lighting equipment	No	Phase V TRM	\$52.67	8	\$0.00 - \$52.67
LED Exit Signs	per sign	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
LED Refrigeration Display Case Lighting	per case	No	Phase V TRM	\$61.00	8	\$0.00 - \$61.00
HVAC Systems: Air Conditioner	per unit	No	Phase V TRM	\$6,186.04	15	\$0.00 - \$6,186.04
HVAC Systems: Heat Pump	per unit	No	Phase V TRM	\$5,255.65	15	\$0.00 - \$5,255.65
Electric Chillers	per chiller	No	Phase V TRM	\$209,116.51	15	\$0.00 - \$209,116.51
Groundwater Source and Ground Source Heat Pumps	per heat pump	No	Phase V TRM	\$65,910.57	15	\$0.00 - \$65,910.57
Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons	per heat pump	No	Phase V TRM	\$1,705.32	15	\$0.00 - \$1,705.32
Small C&I HVAC Refrigerant Charge Correction	per HVAC system	No	Phase V TRM	\$374.00	3	\$0.00 - \$374.00
HVAC Tune Up	per HVAC system	No	Phase V TRM	\$612.90	3	\$0.00 - \$612.90
Room Air Conditioner	per AC	No	Phase V TRM	\$408.37	9	\$0.00 - \$408.37
Controls: Guest Room Occupancy Sensor	per sensor	No	Phase V TRM	\$342.24	11	\$0.00 - \$342.24
Controls: Economizer	per economizer	No	Phase V TRM	\$2,027.00	3	\$0.00 - \$2,027.00
Computer Room Air Conditioner	per unit	No	Phase V TRM	\$350.00	15	\$0.00 - \$350.00
Computer Room Air Conditioner/Handler Electronically Commutated Plug Fans	per unit	No	Phase V TRM	\$948.00	15	\$0.00 - \$948.00
Computer Room Air Conditioner/Handler VSD on AC Fan Motors	per HP	No	Phase V TRM	\$1,163.00	15	\$0.00 - \$1,163.00
Circulation Fan: High-Volume Low-Speed	per fan	No	Phase V TRM	\$4,073.80	15	\$0.00 - \$4,073.80
Demand Controlled Ventilation	per HVAC system	No	Phase V TRM	\$1,923.96	15	\$0.00 - \$1,923.96
Advanced Rooftop Controls: Demand Controlled Ventilation (DCV)	per HVAC system	No	Phase V TRM	\$1,923.96	10	\$0.00 - \$1,923.96
Advanced Rooftop Controls: DCV with two speed controls	per HVAC system	No	Phase V TRM	\$3,339.90	10	\$0.00 - \$3,339.90
Advanced Rooftop Controls: DCV with three speed controls or VFD	per HVAC system	No	Phase V TRM	\$3,884.48	10	\$0.00 - \$3,884.48
C&I ENERGY STAR Certified Connected Thermostats	per thermostat	No	Phase V TRM	\$168.42	11	\$0.00 - \$168.42
Duct Sealing and Insulation	per project	No	Phase V TRM	\$280.64	15	\$0.00 - \$280.64
Chilled Water Pipe Insulation	per insulation project	No	Phase V TRM	\$127.76	15	\$0.00 - \$127.76
Premium Efficiency Motors	per motor	No	Phase V TRM	\$1,034.00	15	\$0.00 - \$1,034.00
Variable Frequency Drive (VFD) Improvements	per drive	No	Phase V TRM	\$1,216.00	15	\$0.00 - \$1,216.00
ECM Circulating Fan	per fan	No	Phase V TRM	\$395.48	5	\$0.00 - \$395.48
VSD on Kitchen Exhaust Fan	per unit	No	Phase V TRM	\$533.66	15	\$0.00 - \$533.66
ECM Circulator Pump	per pump	No	Phase V TRM	\$402.69	15	\$0.00 - \$402.69
High Efficiency Pumps	per pump	No	Phase V TRM	\$2,534.53	13.3	\$0.00 - \$2,534.53
Heat Pump Water Heaters	per water heater	No	Phase V TRM	\$1,279.29	10	\$0.00 - \$1,279.29
Low Flow Pre-Rinse Sprayers for Retrofit Programs and Time of Sale Programs	per sprayer	No	Phase V TRM	\$193.00	8	\$0.00 - \$193.00
Domestic Hot Water Pipe Insulation	per insulation project	No	Phase V TRM	\$63.00	15	\$0.00 - \$63.00
ENERGY STAR Refrigeration Cases	per case	No	Phase V TRM	\$549.40	12	\$0.00 - \$549.40
ENERGY STAR Freezer Cases	per case	No	Phase V TRM	\$620.67	12	\$0.00 - \$620.67
High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Cooler	per motor	No	Phase V TRM	\$501.84	15	\$0.00 - \$501.84
High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Freezer	per motor	No	Phase V TRM	\$353.45	15	\$0.00 - \$353.45
Controls: Evaporator Fan Controllers	per controller	No	Phase V TRM	\$766.60	15	\$0.00 - \$766.60
Controls: Floating Head Pressure Controls	per control	No	Phase V TRM	\$42,514.74	15	\$0.00 - \$42,514.74
Controls: Anti-Sweat Heater Controls	per door	No	Phase V TRM	\$1,119.27	12	\$0.00 - \$1,119.27
Controls: Evaporator Coil Defrost Control	per defrost control	No	Phase V TRM	\$1,275.66	10	\$0.00 - \$1,275.66
Variable Speed Refrigeration Compressor	per compressor	No	Phase V TRM	\$5,632.92	15	\$0.00 - \$5,632.92
Strip Curtains for Walk-In Freezers and Coolers	per door	No	Phase V TRM	\$220.33	4	\$0.00 - \$220.33
Night Covers for Display Cases	per case	No	Phase V TRM	\$793.14	5	\$0.00 - \$793.14
Auto Closers	per door	No	Phase V TRM	\$572.76	8	\$0.00 - \$572.76
Special Doors with Low or No Anti-Sweat Heat for Reach-In Freezers and Coolers	per door	No	Phase V TRM	\$2,394.08	12	\$0.00 - \$2,394.08
Suction Pipe Insulation for Walk-In Coolers and Freezers	per insulation project	No	Phase V TRM	\$100.75	11	\$0.00 - \$100.75
Refrigerated Display Cases with Doors Replacing Open Cases	per case	No	Phase V TRM	\$2,288.38	12	\$0.00 - \$2,288.38
Adding Doors to Existing Refrigerated Display Cases	per case	No	Phase V TRM	\$1,816.25	12	\$0.00 - \$1,816.25
Refrigerated Case Light Occupancy Sensors	per controller	No	Phase V TRM	\$35.00	8	\$0.00 - \$35.00
Food Service Equipment Novelty Cooler Shutoff	per controller	No	Phase V TRM	\$303.26	10	\$0.00 - \$303.26
ENERGY STAR Clothes Washer	per washer	No	Phase V TRM	\$676.89	7.1	\$0.00 - \$676.89
ENERGY STAR Bathroom Ventilation Fan in Commercial Applications	per fan	No	Phase V TRM	\$300.13	12	\$0.00 - \$300.13
ENERGY STAR Ice Machines	per machine	No	Phase V TRM	\$469.74	10	\$0.00 - \$469.74
Controls: Beverage and Snack Machine Controls	per control	No	Phase V TRM	\$234.30	5	\$0.00 - \$234.30
ENERGY STAR Electric Steam Cooker	per cooker	No	Phase V TRM	\$441.00	12	\$0.00 - \$441.00
ENERGY STAR Combination Oven	per oven	No	Phase V TRM	\$1,898.69	12	\$0.00 - \$1,898.69
ENERGY STAR Commercial Convection Oven - Full Size	per oven	No	Phase V TRM	\$1,118.48	12	\$0.00 - \$1,118.48
ENERGY STAR Commercial Fryer	per fryer	No	Phase V TRM	\$1,268.80	12	\$0.00 - \$1,268.80
ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size	per cabinet	No	Phase V TRM	\$549.55	12	\$0.00 - \$549.55
ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size	per cabinet	No	Phase V TRM	\$2,479.45	12	\$0.00 - \$2,479.45
ENERGY STAR Commercial Dishwasher	per dishwasher	No	Phase V TRM	\$1,418.00	10	\$0.00 - \$1,418.00
ENERGY STAR Commercial Griddle	per griddle	No	Phase V TRM	\$1,289.28	12	\$0.00 - \$1,289.28
Commercial Induction Cooktops	per cooktop	No	Phase V TRM	\$1,511.88	10	\$0.00 - \$1,511.88
Wall and Ceiling Insulation	per project	No	Phase V TRM	\$9,235.20	20	\$0.00 - \$9,235.20
Advanced Power Strips	per power strip	No	Phase V TRM	\$56.50	5	\$0.00 - \$56.50
ENERGY STAR Servers	per data center	No	Phase V TRM	\$1,259,232.00	4	\$0.00 - \$1,259,232.00
Server Virtualization	per server	No	Phase V TRM	\$895.00	4	\$0.00 - \$895.00
Cycling Refrigerated Thermal Mass Dryer	per dryer	No	Phase V TRM	\$196.56	10	\$0.00 - \$196.56
Air-Entraining Air Nozzle	per nozzle	No	Phase V TRM	\$159.25	15	\$0.00 - \$159.25
No-Loss Condensate Drains	per drain	No	Phase V TRM	\$308.18	10	\$0.00 - \$308.18
Air Tanks for Load/No Load Compressors	per receiver tank	No	Phase V TRM	\$501.22	15	\$0.00 - \$501.22
Variable-Speed Drive Air Compressor	per compressor	No	Phase V TRM	\$12,582.09	14	\$0.00 - \$12,582.09

Compressed Air Controller	per controller	No	Phase V TRM	\$177.49	13	\$0.00 - \$177.49
Compressed Air Low Pressure Drop Filters	per filter	No	Phase V TRM	\$1,040.00	10	\$0.00 - \$1,040.00
Compressed Air Mist Eliminators	per air mist eliminator	No	Phase V TRM	\$37.89	5	\$0.00 - \$37.89
Engine Block Heater Timer	per heater timer	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
High Frequency Battery Chargers	per charger	No	Phase V TRM	\$402.48	15	\$0.00 - \$402.48
Uninterruptible Power Supply (UPS)	per UPS	No	Phase V TRM	\$46.80	7	\$0.00 - \$46.80
Automatic Milker Takeoffs	per milker takeoff	No	Phase V TRM	\$20,000.00	10	\$0.00 - \$20,000.00
Dairy Scroll Compressors	per compressor	No	Phase V TRM	\$1,182.00	15	\$0.00 - \$1,182.00
High-Efficiency Ventilation Fans with and without Thermostats	per fan	No	Phase V TRM	\$226.20	13	\$0.00 - \$226.20
Heat Reclaimers	per heat reclaim	No	Phase V TRM	\$5,839.98	15	\$0.00 - \$5,839.98
High Volume Low Speed Fans	per fan	No	Phase V TRM	\$5,607.89	15	\$0.00 - \$5,607.89
Livestock Waterer	per livestock waterer	No	Phase V TRM	\$552.98	10	\$0.00 - \$552.98
Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps	per dairy vacuum pump	No	Phase V TRM	\$6,716.86	15	\$0.00 - \$6,716.86
Low Pressure Irrigation System	per irrigation system	No	Phase V TRM	\$3,000.00	5	\$0.00 - \$3,000.00
New Construction Lighting	Per Project	No	Phase V TRM	\$188,000.00	15	\$0.00 - \$188,000.00
Indoor Horticultural Lighting	per lighting equipment	No	Phase V TRM	\$164.00	7	\$0.00 - \$164.00
High Efficiency Transformer	per transformer	No	Phase V TRM	\$468.00	15	\$0.00 - \$468.00
Midstream lighting incentives - Street lighting	per lighting equipment	No	Phase V TRM	\$85.86	15	\$0.00 - \$85.86
Midstream lighting incentives: Outdoor floods	per lighting equipment	No	Phase V TRM	\$42.75	15	\$0.00 - \$42.75
Midstream lighting incentives: High Bays	per lighting equipment	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
Midstream lighting incentives: Other Interior Fixtures	per lighting equipment	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
HVAC Systems for Midstream Delivery: Air Conditioner	per unit	No	Phase V TRM	\$912.78	15	\$0.00 - \$912.78
HVAC Systems for Midstream Delivery: Heat Pump	per unit	No	Phase V TRM	\$4,824.01	15	\$0.00 - \$4,824.01
Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons for Midstream Delivery	per heat pump	No	Phase V TRM	\$2,273.76	15	\$0.00 - \$2,273.76
Midstream Indoor Horticultural Lighting	per lighting equipment	No	Phase V TRM	\$300.00	7	\$0.00 - \$300.00
Midstream Premium Efficiency Motors	per motor	No	Phase V TRM	\$1,000.00	15	\$0.00 - \$1,000.00
Midstream Variable Frequency Drive (VFD) Improvements	per drive	No	Phase V TRM	\$2,027.14	15	\$0.00 - \$2,027.14
Midstream ENERGY STAR Refrigeration Cases	per case	No	Phase V TRM	\$549.40	12	\$0.00 - \$549.40
Midstream ENERGY STAR Freezer Cases	per case	No	Phase V TRM	\$620.67	12	\$0.00 - \$620.67
Midstream Controls: Evaporator Fan Controllers	per controller	No	Phase V TRM	\$766.60	15	\$0.00 - \$766.60
Midstream Controls: Anti-Sweat Heater Controls	per door	No	Phase V TRM	\$1,119.27	12	\$0.00 - \$1,119.27
Midstream Controls: Evaporator Coil Defrost Control	per defrost control	No	Phase V TRM	\$1,275.66	10	\$0.00 - \$1,275.66
Midstream ENERGY STAR Ice Machines	per machine	No	Phase V TRM	\$469.74	10	\$0.00 - \$469.74
Midstream ENERGY STAR Electric Steam Cooker	per cooker	No	Phase V TRM	\$1,500.00	12	\$0.00 - \$1,500.00
Midstream ENERGY STAR Combination Oven	per oven	No	Phase V TRM	\$1,898.69	12	\$0.00 - \$1,898.69
Midstream ENERGY STAR Commercial Convection Oven - Full Size	per oven	No	Phase V TRM	\$1,118.48	12	\$0.00 - \$1,118.48
Midstream ENERGY STAR Commercial Fryer	per fryer	No	Phase V TRM	\$1,268.80	12	\$0.00 - \$1,268.80
Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size	per cabinet	No	Phase V TRM	\$549.55	12	\$0.00 - \$549.55
Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size	per cabinet	No	Phase V TRM	\$2,479.45	12	\$0.00 - \$2,479.45
Midstream ENERGY STAR Commercial Dishwasher	per dishwasher	No	Phase V TRM	\$1,093.46	10	\$0.00 - \$1,093.46
Midstream ENERGY STAR Commercial Griddle	per griddle	No	Phase V TRM	\$1,289.28	12	\$0.00 - \$1,289.28
Midstream Air Tanks for Load/No Load Compressors	per receiver tank	No	Phase V TRM	\$1,750.00	15	\$0.00 - \$1,750.00
Midstream Variable-Speed Drive Air Compressor	per compressor	No	Phase V TRM	\$12,582.09	14	\$0.00 - \$12,582.09
Midstream High-Efficiency Ventilation Fans with and without Thermostats	per fan	No	Phase V TRM	\$226.20	13	\$0.00 - \$226.20
Midstream Heat Reclaimers	per heat reclaim	No	Phase V TRM	\$5,839.98	15	\$0.00 - \$5,839.98
Midstream High Volume Low Speed Fans	per fan	No	Phase V TRM	\$5,607.89	15	\$0.00 - \$5,607.89
Midstream Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps	per dairy vacuum pump VSD	No	Phase V TRM	\$6,716.86	15	\$0.00 - \$6,716.86
Building Operator Certification Training	per building tune up	No	Phase V TRM	\$4,298.77	13	\$0.00 - \$4,298.77
Custom:Other - SEM	Per Participant	No	Phase V TRM	\$50,000.00	15	\$0.00 - \$50,000.00
Custom:Other - VCx	Per Participant	No	Phase V TRM	\$31,282.01	15	\$0.00 - \$31,282.01
Custom:Other - vSEM	Per Participant	No	Phase V TRM	\$10,000.00	15	\$0.00 - \$10,000.00
Solar	per project	No	Phase V TRM	\$297,602.20	15	\$0.00 - \$297,602.20
Custom:Other - Compressed Air	Per Participant	No	Phase V TRM	\$151,015.93	15	\$0.00 - \$151,015.93
Custom: Data Center	Per Participant	No	Phase V TRM	\$100,000.00	15	\$0.00 - \$100,000.00
Cusom:HVAC	Per Participant	No	Phase V TRM	\$113,365.00	15	\$0.00 - \$113,365.00
Custom: Motors & Drives	Per Participant	No	Phase V TRM	\$151,015.93	15	\$0.00 - \$151,015.93
Custom: Other	Per Participant	No	Phase V TRM	\$124,715.00	15	\$0.00 - \$124,715.00
Custom: Process	Per Participant	No	Phase V TRM	\$200,000.00	15	\$0.00 - \$200,000.00
Custom: Refrigeration	Per Participant	No	Phase V TRM	\$60,585.00	15	\$0.00 - \$60,585.00
Custom: EMS	Per Participant	No	Phase V TRM	\$25,000.00	15	\$0.00 - \$25,000.00
Custom: Retrocommissioning	Per Participant	No	Phase V TRM	\$173,280.00	15	\$0.00 - \$173,280.00
Custom: CHP	Per Participant	No	Phase V TRM	\$5,710,026.00	15	\$0.00 - \$5,710,026.00
ASHRAE Audits/Feasibility Studies	Per Participant	No	Phase V TRM	\$18,000.00	5	\$0.00 - \$18,000.00
Incentive Buy Down	Per Participant	No	Phase V TRM	\$15,000.00	5	\$0.00 - \$15,000.00
C&I Load Shifting	per unit	No	Phase V TRM	\$200,000.00	1	\$0.00 - \$200,000.00

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company	:	
For Approval of its Act 129 Phase V	:	
Energy Efficiency and Conservation Plan	:	Docket No. M-2025-3057328
	:	
	:	

**RESPONSES OF THE COALITION FOR AFFORDABLE UTILITY SERVICES AND
ENERGY EFFICIENCY IN PENNSYLVANIA AND THE TENANT UNION
REPRESENTATIVE NETWORK TO INTERROGATORIES AND REQUESTS FOR
PRODUCTION OF DOCUMENTS OF PECO ENERGY COMPANY – SET 2**

**Petition of PECO Energy Company For Approval of its Act 129 Phase V Energy Efficiency
and Conservation Plan, Docket No. M-2025-3057328
CAUSE-PA/TURN Responses to PECO Set 2**

- PECO-CAUSE-PA / TURN-II-1** Reference CAUSE-PA/TURN St. 1, p. 60, line 17 to p. 61, line 8, where Mr. Grevatt recommends that PECO: (1) revise its Plan to rebalance its proposed measure mix in the RLI program such that a combination of building insulation and air sealing measures and efficient heat pumps and heat pump water heaters comprise 25% of the low-income portfolio savings for Phase V, roughly doubling what the Company has currently proposed; and (2) for the 25% of low income program savings that comes from heat pumps, heat pump water heaters, and building insulation and air sealing, set a goal in the Phase V Plan to annually target, at a minimum, 250 CAP customers with inefficient electric resistance heat for the installation of high efficiency heat pumps and/or other deep saving efficiency measures.
- (a) Has Mr. Grevatt performed any analysis of the costs of these proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
 - (b) Has Mr. Grevatt performed any analysis of expected customer participation under these proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
 - (c) Has Mr. Grevatt performed any analysis of expected MWh savings from the proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
 - (d) Has Mr. Grevatt performed any analysis of expected MW savings from the proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
 - (e) If implementation of Mr. Grevatt's recommendations increased the total cost of the Residential program, does Mr. Grevatt have any recommendations as to how costs should be shifted to support a more expensive Residential program?

**Petition of PECO Energy Company For Approval of its Act 129 Phase V Energy Efficiency
and Conservation Plan, Docket No. M-2025-3057328
CAUSE-PA/TURN Responses to PECO Set 2**

- (i) If yes, has Mr. Grevatt performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (f) Does Mr. Grevatt agree that PECO's entire portfolio must be cost-effective with a TRC above 1.0? If not, please state the basis for the disagreement.
- (g) Does Mr. Grevatt agree that that shifting costs between programs could impact a program's level of customer participation, MWh savings, MW savings and TRC? If not, please state the basis for the disagreement

CAUSE-PA/TURN Response:

PECO-CAUSE-PA / TURN-II-1 Reference CAUSE-PA/TURN St. 1, p. 60, line 17 to p. 61, line 8, where Mr. Grevatt recommends that PECO: (1) revise its Plan to rebalance its proposed measure mix in the RLI program such that a combination of building insulation and air sealing measures and efficient heat pumps and heat pump water heaters comprise 25% of the low-income portfolio savings for Phase V, roughly doubling what the Company has currently proposed; and (2) for the 25% of low income program savings that comes from heat pumps, heat pump water heaters, and building insulation and air sealing, set a goal in the Phase V Plan to annually target, at a minimum, 250 CAP customers with inefficient electric resistance heat for the installation of high efficiency heat pumps and/or other deep saving efficiency measures.

- (a) Has Mr. Grevatt performed any analysis of the costs of these proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No.

Petition of PECO Energy Company For Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan, Docket No. M-2025-3057328
CAUSE-PA/TURN Responses to PECO Set 2

- (b) Has Mr. Grevatt performed any analysis of expected customer participation under these proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No.

- (c) Has Mr. Grevatt performed any analysis of expected MWh savings from the proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No.

- (d) Has Mr. Grevatt performed any analysis of expected MW savings from the proposals, individually or in the aggregate? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No.

- (e) If implementation of Mr. Grevatt's recommendations increased the total cost of the Residential program, does Mr. Grevatt have any recommendations as to how costs should be shifted to support a more expensive Residential program?

Response: Mr. Grevatt observes that the Company forecasts it will finish Phase IV with over \$38 million in unspent funds (PECO response to CAUSE PA 1-36) – nearly 9% of PECO's total approved Phase IV budget (PECO Energy Company's Revised Act 129 Phase IV Energy Efficiency and Conservation Plan, Docket No.: M-2020-3020830, June 19, 2024) suggesting there may be similarly available funds in Phase V.

- (i) If yes, has Mr. Grevatt performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No.

- (f) Does Mr. Grevatt agree that PECO's entire portfolio must be cost-effective with a TRC above 1.0? If not, please state the basis for the disagreement.

Response: Yes.

**Petition of PECO Energy Company For Approval of its Act 129 Phase V Energy Efficiency
and Conservation Plan, Docket No. M-2025-3057328
CAUSE-PA/TURN Responses to PECO Set 2**

(g) Does Mr. Grevatt agree that that shifting costs between programs could impact a program's level of customer participation, MWh savings, MW savings and TRC? If not, please state the basis for the disagreement

Response: Yes.

**Response prepared by or under the supervision of Jim Grevatt, CAUSE-PA/TURN
Witness**

Dated: January 26, 2026

**Petition of PECO Energy Company For Approval of its Act 129 Phase V Energy Efficiency
and Conservation Plan, Docket No. M-2025-3057328
CAUSE-PA/TURN Responses to PECO Set 2**

VERIFICATION

I, Jim Grevatt hereby state that the facts set forth in CAUSE-PA and TURN Response to PECO Interrogatories, Set II, are true and correct to the best of my knowledge, information, and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements made herein are subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsifications to authorities.)



January 26, 2026
Date

Jim Grevatt
Witness for CAUSE-PA

PECO Energy Company
Docket No. M-2025-3057328
Responses of the Office of Consumer Advocate to
PECO Interrogatories, Set II

PECO-OCA-II-1.

Reference OCA St. 1, p. 29, lines 16-20, where Mr. Tyler recommends that PECO reduce the share of residential savings attributable to the non-low-income HER program from approximately 30 percent to 10 percent of residential savings and reallocate those resources toward more comprehensive market-rate residential measures that deliver longer-lived savings and greater bill impacts.

- (a) Has Mr. Tyler performed any analysis of the costs of the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (b) Has Mr. Tyler performed any analysis of expected customer participation under the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (c) Has Mr. Tyler performed any analysis of expected MWh savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (d) Has Mr. Tyler performed any analysis of expected MW savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (e) If implementation of Mr. Tyler's recommendation increased the total cost of the Residential program, does Mr. Tyler have any recommendations as to how costs should be shifted to support a more expensive Residential program?
 - (i) If yes, has Mr. Tyler performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (f) Does Mr. Tyler agree that PECO's entire portfolio must be cost-effective with a TRC above 1.0? If not, please state the basis for the disagreement.
- (g) Does Mr. Tyler agree that that shifting costs between programs could impact a program's level of customer participation, MWh savings, MW savings and TRC? If not, please state the basis for the disagreement

OCA RESPONSE:

- (a) No. Mr. Tyler did not perform an independent quantitative analysis of the costs of this proposal. Mr. Tyler's recommendations are informed by his extensive professional experience evaluating and advising energy efficiency and demand response portfolios across multiple jurisdictions, as well as his working expertise in energy efficiency and conservation programs. His testimony reflects a portfolio-level review of PECO's (or "the Company") Phase V Plan, consistent with the scope of his engagement. Mr. Tyler was not retained to redesign the Company's portfolio or to conduct program-level analyses, including cost-effectiveness modeling, participation forecasting, savings modeling, budget reallocation modeling, or TRC testing of alternative portfolios. PECO, as the program administrator, maintains access to the detailed data and operational information necessary to evaluate and quantify the impacts of alternative program designs, including staffing and administrative considerations, customer participation assumptions, measure mix, and resulting cost-effectiveness outcomes.
- (b) No. Mr. Tyler did not perform an independent quantitative analysis of expected customer participation under this proposal. Please also see (a), above.
- (c) No. Mr. Tyler did not perform an independent quantitative analysis of expected MWh savings under this proposal. Please also see (a), above.
- (d) No. Mr. Tyler did not perform an independent quantitative analysis of expected MW savings under this proposal. Please also see (a), above.
- (e) Mr. Tyler did not develop a detailed cost redistribution plan. Please all see (a), above. By way of further answer, Mr. Tyler's recommendation is a portfolio-level recommendation intended to rebalance the residential portfolio toward more durable measures within the existing Phase V framework. PECO has access to the program-level budget, cost, participation, savings, staffing, and administrative information required to evaluate how such a reallocation could be implemented while maintaining compliance and cost-effectiveness.
- (i) Not applicable. Mr. Tyler did not perform the referenced analysis. Mr. Tyler's testimony reflects his general professional experience and understanding of customer engagement strategies in energy efficiency portfolios. Home Energy Reports are commonly used as a customer engagement tool; however, they are typically designed as limited, periodic touchpoints and, in many cases, are associated with relatively modest per-customer energy savings. Based on this general understanding, a portfolio emphasis on deeper, more comprehensive measures is expected to produce more substantial and longer-lived energy savings for a more limited subset of customers, with the potential to reduce energy burden impacts. Evaluation of the magnitude of such impacts, including comparative savings, participation levels, or cost-effectiveness outcomes, would require program-level analysis that Mr. Tyler did not conduct.

- (f) Yes. Mr. Tyler understands that PECO's Phase V portfolio must meet applicable Act 129 requirements, including portfolio-level cost-effectiveness using the Total Resource Cost (TRC) test.
- (g) Yes. Mr. Tyler agrees that shifting costs between programs could impact participation, MWh savings, MW savings, and TRC, depending on program design, incentive levels, delivery channels, and market conditions.

Responding Witness: Zack Tyler
Response Date: January 26, 2026

PECO-OCA-II-2. Reference OCA St. 1, p. 29, line 21 through p. 30, line 2, where Mr. Tyler recommends that PECO remove residential lighting measures from the Phase V portfolio and redirect associated funding toward residential measures with greater durability and long-term value, such as building envelope improvements and residential heat pump technologies.

- (a) Has Mr. Tyler performed any analysis of the costs of the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (b) Has Mr. Tyler performed any analysis of expected customer participation under the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (c) Has Mr. Tyler performed any analysis of expected MWh savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (d) Has Mr. Tyler performed any analysis of expected MW savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (e) If implementation of Mr. Tyler's recommendation increased the total cost of the Residential program, does Mr. Tyler have any recommendations as to how costs should be shifted to support a more expensive Residential program?
 - (i) If yes, has Mr. Tyler performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

OCA RESPONSE:

- (a) No. Mr. Tyler did not perform an independent quantitative analysis of the costs of this proposal. Mr. Tyler's recommendations are informed by his extensive professional experience evaluating and advising energy efficiency and demand response portfolios across multiple jurisdictions, as well as his working expertise in energy efficiency and conservation programs. His testimony reflects a portfolio-level review of PECO's (or "the Company") Phase V Plan, consistent with the scope of his engagement. Mr. Tyler was not retained to redesign the Company's portfolio or to conduct program-level analyses, including cost-effectiveness modeling, participation forecasting, savings modeling, budget reallocation modeling, or TRC testing of alternative portfolios. PECO, as the program administrator, maintains access to the detailed data and operational information necessary to evaluate and quantify the impacts of alternative program

designs, including staffing and administrative considerations, customer participation assumptions, measure mix, and resulting cost-effectiveness outcomes.

- (b) No. Mr. Tyler did not perform an independent quantitative analysis of expected customer participation under this proposal. Please also see (a), above.
- (c) No. Mr. Tyler did not perform an independent quantitative analysis of expected MWh savings under this proposal. Please also see (a), above.
- (d) No. Mr. Tyler did not perform an independent quantitative analysis of expected MW savings under this proposal. Please also see (a), above.
- (e) Mr. Tyler did not prepare a program-by-program cost-shift analysis. As stated on page 9 of the MPS, the study assumes there is virtually no remaining potential for residential lighting and therefore excludes that measure from the proposed portfolio. The MPS further indicates that a cost-effective residential portfolio can be achieved without residential lighting and that the exclusion is supported by a portfolio-level assessment finding the residential lighting market to be mature. Based on that assessment, the MPS recommends redirecting Phase V resources to measures expected to provide greater long-term value. The Company possesses sufficient information to evaluate and manage any resulting cost impacts within the Residential program budget and applicable Phase V compliance requirements.
- (i) Not applicable. Mr. Tyler did not perform such analysis. As described in the MPS, the recommendations are based on a portfolio-level assessment of measure potential, cost-effectiveness, and long-term value. To the extent impacts are evaluated, they are addressed within the overall portfolio modeling and Phase V compliance framework, rather than through discrete program-specific cost-shift analyses. Accordingly, there are no separate analyses or spreadsheets responsive to this request.

Responding Witness: Zack Tyler
 Response Date: January 26, 2026

PECO-OCA-II-4. Reference OCA St. 1, p. 30, lines 10-13, where Mr. Tyler recommends that PECO reduce the share of non-residential savings attributed to lighting measures from approximately 44 percent to 35 percent of non-residential savings and reallocate a portion of those resources toward non-lighting strategies.

- (a) Has Mr. Tyler performed any analysis of the costs of the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (b) Has Mr. Tyler performed any analysis of expected customer participation under the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (c) Has Mr. Tyler performed any analysis of expected MWh savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (d) Has Mr. Tyler performed any analysis of expected MW savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- (e) If implementation of Mr. Tyler's recommendation increased the total cost of the Non-Residential program, does Mr. Tyler have any recommendations as to how costs should be shifted to support a more expensive Non-Residential program?
 - (i) If yes, has Mr. Tyler performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

OCA RESPONSE:

- (a) No. Mr. Tyler did not perform an independent quantitative analysis of the costs of this proposal. Mr. Tyler's recommendations are informed by his extensive professional experience evaluating and advising energy efficiency and demand response portfolios across multiple jurisdictions, as well as his working expertise in energy efficiency and conservation programs. His testimony reflects a portfolio-level review of PECO's (or "the Company") Phase V Plan, consistent with the scope of his engagement. Mr. Tyler was not retained to redesign the Company's portfolio or to conduct program-level analyses, including cost-effectiveness modeling, participation forecasting, savings modeling, budget reallocation modeling, or TRC testing of alternative portfolios. PECO, as the program administrator, maintains access to the detailed data and operational information necessary to evaluate and quantify the impacts of

alternative program designs, including staffing and administrative considerations, customer participation assumptions, measure mix, and resulting cost-effectiveness outcomes.

- (b) No. Mr. Tyler did not perform an independent quantitative analysis of expected customer participation under this proposal. Please also see (a), above.
- (c) No. Mr. Tyler did not perform an independent quantitative analysis of expected MWh savings under this proposal. Please also see (a), above.
- (d) No. Mr. Tyler did not perform an independent quantitative analysis of expected MW savings under this proposal. Please also see (a), above.
- (e) Mr. Tyler did not prepare a program-by-program cost redistribution analysis. His recommendation reflects a portfolio-level approach intended to reduce reliance on lighting in a market that is increasingly saturated and to place greater emphasis on comprehensive non-lighting strategies. Based on his experience and knowledge, PECO has access to the budget, participation, savings, and administrative information necessary to evaluate and implement any reallocation while ensuring compliance and maintaining cost-effectiveness.
 - (i) Not applicable. Mr. Tyler did not perform such analysis.

Responding Witness: Zack Tyler
Response Date: January 26, 2026

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company for	:	
Approval of its Act 129 Phase V Energy	:	Docket No. M-2025-3057328
Efficiency and Conservation plan	:	
	:	

VERIFICATION

I, Zack Tyler, hereby state that the facts above set forth in my Response to PECO Set 2 Discovery to the OCA, are true and correct to the best of my knowledge, information, belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 26, 2026

Signature: /s/ Zack Tyler
Zack Tyler

Address: 10298 Rte. 116
Suite B
Hinesburg, VT 05461

PECO Energy Company
Docket No. M-2025-3057328

The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II

- PECO-CITY/PEA-II-1.** Reference City/PEA St. 1, page 15, lines 18-21, where Mr. Abramson recommends that PECO rebalance the Residential Low-Income Subprogram by increasing the share of funding, participation, and savings attributable to shell, HVAC, and water heating measures, supported by adequate health and safety remediation.
- (a) Has Mr. Abramson performed any analysis of the costs of the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.
- Response: My recommendation was a budget suggestion and not a proposal for a specific level of service.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(b) Has Mr. Abramson performed any analysis of expected customer participation under the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: No, I am speaking from my experience running the Built to Last program for the last 5 years.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(c) Has Mr. Abramson performed any analysis of expected MWh savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: In our experience, there are greater levels of savings from the recommended measures than from the proposed incremental non-durable measures.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(d) Has Mr. Abramson performed any analysis of expected MW savings from the proposal? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: I did not perform any specific analysis of MW savings from the proposal.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(e) If implementation of Mr. Abramson's recommendation increased the total cost of the Residential program, does Mr. Abramson have any recommendations as to how costs should be shifted to support a more expensive Residential program?

Response: We have made a recommendation to reallocate funds within the Low-Income Subprogram to different measures.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

- (i) If yes, has Mr. Abramson performed any analysis of how the recommended cost shift would impact customer participation, MWh savings, MW savings or TRC for affected programs? If yes, please provide copies of such analysis, including any spreadsheets with formulae intact.

Response: N/A

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(f) Does Mr. Abramson agree that PECO's entire portfolio must be cost-effective with a TRC above 1.0? If not, please state the basis for their disagreement.

Response: Yes, I agree with this statement. I also note that the State-Wide Evaluator's analysis of market potential found that the Residential sector had a TRC benefit-cost ratio of 1.56 and PECO's own analysis found that the Low-Income sector had a TRC of 1.3.

Provided by: Alon Abramson

Dated: 1/26/26

**PECO Energy Company
Docket No. M-2025-3057328**

**The City Of Philadelphia and The Philadelphia Energy Authority
Responses to
PECO Interrogatories
Set II**

(g) Does Mr. Abramson agree that that shifting costs between programs could impact a program's level of customer participation, MWh savings, MW savings and TRC? If not, please state the basis for their disagreement

Response: I have not made a recommendation to shift costs between customer class programs or between Residential and the Low-Income subprogram.

Provided by: Alon Abramson

Dated: 1/26/26

VERIFICATION

I, Alon Abramson, hereby declare that that the facts set forth in the foregoing Responses to PECO Energy Company Interrogatories Set II are true to the best of my knowledge, information and belief, and that I make this verification subject to the penalties of 18 Pa. C.S. §4904 pertaining to false statements to authorities.

Alon Abramson

Alon Abramson

DATE: January 26, 2026

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 2

Response Date: December 19, 2025

CAUSE-PA-2-5

Please identify any stakeholder groups the company engaged with for purposes of developing its proposed Phase V Plan between the issuance of the Commission's June 18, 2025 Implementation Order for Phase V of the EE&C Program and the company's December 01, 2025 filing of its proposed Phase V EE&C Plan. Please also:

- a) Describe any information, data or suggestions received from each stakeholder group and explain how such input was incorporated into the development of the company's proposed Plan; and
- b) Provide an agenda from each meeting and any documents provided to or received from any stakeholder.

RESPONSE:

Since the issuance of the Commission's June 18, 2025 Final Implementation Order for Phase V of the EE&C Program and PECO's December 1, 2025 filing of its proposed Phase V EE&C Plan, PECO met with the following stakeholder groups:

- Energy Association of Pennsylvania (EAP)
- Pennsylvania Utility Law Project (PULP)
- Pennsylvania Department of Environmental Protection (DEP)
- Rocky Mountain Institute (RMI)
- Keystone Energy Efficiency Alliance (KEEA) constituents
- City of Philadelphia Housing Authority Division representatives

a) Information, Data, or Suggestions Received and Incorporation into Plan Development:

- EAP: Provided feedback on statewide coordination and consistency with Act 129 requirements. PECO considered these recommendations when aligning its Phase V Plan with statewide best practices.

Specific Feedback: Emphasized the need for statewide coordination and consistency with Act 129 requirements. Recommended aligning program design with other Pennsylvania utilities to ensure uniformity and compliance.

Incorporation: PECO adopted these recommendations by harmonizing Phase V program structures with statewide best practices and regulatory expectations.

- PULP: Shared input on low-income customer needs and program accessibility. PECO incorporated these suggestions by enhancing outreach strategies for Phase V programs.

Specific Feedback: Highlighted gaps in reaching multifamily (MF) customers and stressed the importance of equitable access for low-income households. Suggested improving outreach to underserved segments.

- Expressed concern that Home Energy Reports (HER) should not target the same customers annually.
- Expressed interest in continued partnership and collaboration with LIURP and other assistance programs
- Identified need for a dedicated channel for multifamily customers

Incorporation: PECO enhanced outreach strategies for low-income and multifamily customers, prioritized more impactful measures over kits/school programs, and explored new delivery channels for MF housing.

PECO will continue to coordinate LIURP and Act 129 benefits to ensure the customer receives seamless experience

- DEP: Offered guidance on energy efficiency measures that align with state environmental goals. PECO integrated these considerations into measure selection and program design.

Specific Feedback: Recommended alignment with state environmental goals and integration of Inflation Reduction Act (IRA) funding opportunities.

- Shared details on IRA programs offering \$129M in rebates for low-income multifamily and residential properties.
- Encouraged leveraging ASHRAE energy audits and high-value rebates (e.g., \$10K for 20% savings, \$16K per unit for 30% savings).
- Suggested collaboration on projects eligible for federal funding and coordination with Penn Energy Savers program.

Incorporation: PECO integrated DEP's guidance by aligning measure selection with state goals and exploring partnerships to leverage IRA and Penn Energy Savers incentives for deeper retrofits.

- RMI: Provided insights into innovative approaches and emerging technologies for energy efficiency. PECO evaluated these ideas for potential inclusion in pilot programs and future initiatives.

Specific Feedback: Proposed innovative approaches and emerging technologies, particularly around electrification and heat pump adoption.

- Advocated for inclusion of energy-efficient appliances, heat pumps, and stoves in program design.
- Recommended strategies to incentivize adoption through streamlined application processes and leveraging federal/state rebates.

Incorporation: PECO evaluated these ideas for inclusion in pilot programs and future initiatives, focusing on electrification and advanced technologies.

- KEEA: represents a broad contingency of energy efficiency vendors and conservation service providers that ultimately partner with utilities to deliver Energy Efficiency (EE) and Demand Response (DR) programs. Engagement occurred through PECO's formal Request for Information (RFI) and Request for Proposals (RFP) processes, as well as stakeholder briefings.

Specific Feedback:

- Market-wide perspectives on contractor capacity, workforce readiness, and supply-chain dynamics affecting EE and DR delivery.
- Recommendations to streamline program participation (e.g., simplified

application pathways, faster incentive processing, enhanced trade ally support).

- Suggestions to strengthen residential and small business offerings, and to align utility program designs with best practices observed across Pennsylvania.

Incorporation:

- PECO reflected KEEA feedback in Phase V program design by refining delivery channels, trade ally engagement, and incentive structures to reduce friction for customers and vendors.
- RFI/RFP takeaways informed the scoping of measures, implementation timelines, and resource allocations, with an emphasis on clarity, consistency, and scalability for market partners.
- Existing Conservation Service Providers (CSPs) and Market Actors: PECO met with incumbent CSPs and other market actors with direct experience in PECO's service territory and familiarity with our customer base to gather current market intelligence.

Specific Feedback:

- Ground-level insights on current market conditions (customer demand trends, measure adoption barriers, installation timelines, and equipment availability).
- Perspectives on achievable potential in PECO's territory, offered as a pragmatic proxy to the statewide Baseline and Market Potential Study (MPS) conducted by the Statewide Evaluator (SWE).
- Feedback on program operations, including verification requirements, data collection workflows, and opportunities to improve customer experience.

Incorporation:

- PECO calibrated measure forecasts, participation assumptions, and program ramp rates to better reflect near-term achievable potential indicated by experienced implementers.
- Operational improvements (e.g., targeted outreach, streamlined QA/QC, and clearer documentation guidance) were prioritized to increase throughput while maintaining compliance and cost-effectiveness.
- PECO aligned measure bundles and delivery strategies with observed

customer preferences and contractor capabilities, helping ensure practical, timely, and equitable implementation in Phase V.

- City of Philadelphia Housing Authority

Specific Feedback: Initial discussions focused on identifying collaboration pathways to integrate PECO's EE programs with housing initiatives targeting low-income and affordable housing segments.

- The City of Philadelphia and partner agencies shared priorities around improving building performance, reducing energy burden, and leveraging federal and local funding streams for deep retrofits.

Incorporation:

- PECO is exploring how to best align HOMES Plan strategies with local housing authority objectives and exploring joint delivery models with programs like Build to Last and PHDC.

These partnerships will inform Phase V outreach and implementation approaches for multifamily and affordable housing customers, ensuring equitable access to EE benefits.

b) Agendas and Documents:

Please see Attachment CAUSE-PA-2-5(b) for copies of any meeting agendas or related documents provided to or received from the stakeholder groups identified above.

Responsible Witness: Marina Geneles

**PECO ENERGY COMPANY
STATEMENT NO. 3**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION
PROGRAM

DOCKET NO. M-2025-3057328

DIRECT TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: MARK VAN EEGHEN

SUBJECT: GUIDEHOUSE'S ROLE IN
 SUPPORTING PLAN
 DEVELOPMENT, PROGRAM
 SAVINGS, EXPENDITURES AND
 COST-EFFECTIVENESS

DATED: DECEMBER 1, 2025

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**DIRECT TESTIMONY
OF
MARK VAN EEGHEN**

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1. Q. Please state your name and business address.

A. My name is Mark van Eeghen. My business address is 1735 Market Street, Suite 2210, Philadelphia, PA 19103.

2. Q. By whom are you employed and in what capacity?

A. I am employed by Guidehouse Inc. ("Guidehouse") as an Associate Director in the Communities, Energy, and Infrastructure Segment.

3. Q. Please state your educational background.

A. I received a Bachelor of Science in Industrial Engineering from the University of Groningen in the Netherlands in 2012 and a Master of Engineering Management from Dartmouth College in 2014.

4. Q. Please describe your current and prior work experience.

A. My resume is set forth in Exhibit MVE-1. In summary, for the past eight years, I have been employed as a consultant to the utility industry on matters related to demand-side management ("DSM") program planning, design, and evaluation. I currently work for Guidehouse's Communities, Energy and Infrastructure Practice. My work covers topics such as energy efficiency, portfolio design planning, portfolio cost-effectiveness, and benchmarking. Recently, I have supported electric and natural gas utilities in the

1 Mid-Atlantic, including Pennsylvania, with planning, program design, and modelling
2 to meet Energy Efficiency (“EE”) resource standards.

3 **5. Q. What is the purpose of your testimony in this case?**

4 A. Guidehouse was retained by PECO Energy Company (“PECO” or the “Company”) to
5 assist in the development of the Company’s Act 129 Phase V Energy Efficiency and
6 Conservation Plan (the “Phase V Plan” or the “Plan”) for the period of June 1, 2026 to
7 May 31, 2031. The purpose of my testimony is to: (1) describe how Guidehouse
8 supported the development of the Phase V Plan; and (2) summarize PECO’s Phase V
9 Plan projected energy and demand savings, program expenditures, and Total Resource
10 Cost (“TRC”) benefits.

11 **II. GUIDEHOUSE’S ROLE IN SUPPORTING THE DEVELOPMENT OF**
12 **THE PHASE V PLAN**

13 **6. Q. Please describe how Guidehouse assisted with development of the Phase V Plan.**

14 A. As detailed in the direct testimony of Ms. Geneles, PECO employed a market-based
15 process to determine the details of its proposed Phase V EE programs. Guidehouse
16 supported PECO’s process by: (1) documenting Phase IV learnings to inform the Phase
17 V Plan design; (2) facilitating workshops with PECO to determine the appropriate
18 division of PECO’s mandated EE savings, peak demand reductions (“PDRs”), and
19 budget between its three Phase V programs; (3) conducting measure characterizations
20 and plan modelling, and (4) drafting requests for proposals (“RFPs”) seeking bids from
21 conservation service providers (“CSPs”) to implement programs consistent with
22 PECO’s high-level program requirements.

1 **III. PROGRAM SAVINGS, EXPENDITURES, AND COST-EFFECTIVENESS**

2 **7. Q. How were the projected energy savings and PDRs for each Phase V program**
3 **determined?**

4 A. The projected energy savings and PDRs for each program were provided by the CSP
5 that successfully bid to design and implement that program. As part of the RFP process,
6 Guidehouse developed a workbook that incorporated 2026 Technical Resource Manual
7 (“TRM”) measure characterizations as well as savings and PDR achievable program
8 targets from the Statewide Evaluator’s (“SWE’s”) energy efficiency and PDR potential
9 study. CSPs were required to input program details into the workbook to calculate the
10 reasonably achievable energy savings and PDRs from the CSPs’ program design. CSPs
11 were also required to adequately support any proposed savings values that differed
12 from what was presented in the workbook.

13 **8. Q. Please summarize the total energy savings and PDRs projected for the Plan.**

14 A. Overall, PECO anticipates saving a total of 1,458,076 MWh and achieving 264.5 MW
15 of PDRs in Phase V, which represent approximately 131% and 136% of PECO’s
16 mandated targets, respectively. Tables 1 and 2 present the forecasted gross annual
17 energy and PDR savings by program for each year of the Phase V Plan. Approximately
18 32% of energy and 36% of PDR savings come from the residential sector, and 68% of
19 energy and 64% of PDR savings from the non-residential sector. PECO anticipates
20 that 95,766 MWh of the overall forecasted savings will come from low-income targeted
21 subprograms, which represents roughly 8.6% of PECO’s Phase V target and exceeds
22 the required 74,456 MWh of savings for the low-income carve-out. Note that Tables

1 and 2 provide totals by subprogram rather than sector, and table totals may not add due to rounding.

Table 1. Annual Gross Energy Savings by Program

Program	Subprogram	Annual Energy Savings (MWh)					5-Year Total
		PY18	PY19	PY20	PY21	PY22	
Residential		48,223	48,521	48,880	49,053	48,853	243,530
	Low-Income	17,756	18,079	18,718	19,356	16,483	90,392
Residential Program Total		65,979	66,600	67,598	68,409	65,336	333,922
Residential Home Energy Reports		24,698	36,636	26,807	28,172	26,236	142,549
	Low-Income Home Energy Reports	1,815	913	969	860	817	5,374
Residential Home Energy Reports Program Total		26,513	37,549	27,776	29,032	27,053	147,923
Non-Residential		145,694	192,786	216,366	251,250	170,135	976,231
Grand Total - All Phase V Programs		238,186	296,934	311,740	348,691	262,524	1,458,076

Table 2. Annual Peak Demand Reduction Savings by Program

Program	Subprogram	Peak Demand Reduction (MW)					5-Year Total
		PY18	PY19	PY20	PY21	PY22	
Residential		9.6	9.8	10.1	10.3	10.5	50.2
	Low-Income	2.8	2.9	3.0	3.1	2.7	14.5
Residential Program Total		12.4	12.7	13.0	13.4	13.2	64.7
Residential Home Energy Reports		4.0	9.4	7.2	6.3	5.3	32.2
	Low-Income Home Energy Reports	0.4	0.2	0.2	0.2	0.2	1.1
Residential Home Energy Reports Program Total		4.4	9.6	7.4	6.5	5.4	33.3
Non-Residential		25.4	32.9	37.0	41.2	30.1	166.5
Grand Total - All Phase V Programs		42.2	55.2	57.4	61.0	48.7	264.5

9. Q. What are the annual and cumulative program expenditures projected for the Plan?

A. PECO expects to spend \$427.4 million over the five-year Plan period to achieve the projected energy savings and PDRs. This represents 100% of PECO's spending cap under Act 129 Phase V. Of that total, PECO expects to spend 34% of the program

delivery budget for residential programs, 50% on non-residential programs, and 16% for cross-cutting common costs. Table 3 lists the anticipated annual and total expenditures by program. Projected costs by program represent all anticipated costs to be incurred by PECO and competitively selected CSPs for program implementation. The Common Costs category includes all PECO delivery costs (e.g., staff and material costs) and third-party contractor costs to be incurred by PECO for overall portfolio and program management, data tracking, education and awareness, various technical support and program design needs, research and development, and third-party evaluation, measurement, and verification.

Table 3. Annual and Total Expenditures by Program

Program	Subprogram	Budget (Million \$)					5-Year Total
		PY18	PY19	PY20	PY21	PY22	
Residential		\$14.74	\$15.02	\$15.32	\$15.58	\$15.84	\$76.50
	Low-Income	\$10.87	\$11.03	\$11.39	\$11.75	\$10.16	\$55.20
Residential Program Total		\$25.61	\$26.05	\$26.71	\$27.33	\$26.00	\$131.70
	Residential Home Energy Reports	\$2.34	\$3.64	\$2.63	\$2.78	\$2.59	\$13.99
	Low-Income Home Energy Reports	\$0.17	\$0.09	\$0.10	\$0.08	\$0.08	\$0.52
Residential Home Energy Reports Program Total		\$2.51	\$3.73	\$2.73	\$2.86	\$2.67	\$14.51
Non-Residential		\$34.18	\$41.90	\$47.19	\$51.00	\$39.61	\$213.90
Common Costs		\$13.46	\$13.46	\$13.46	\$13.46	\$13.46	\$67.28
Grand Total - All Phase V Programs		\$75.76	\$85.14	\$90.09	\$94.65	\$81.74	\$427.38

10. Q. What portion of the projected expenditures are for incentives?

A. PECO's incentive budget is 51% of the total Phase V Plan. The incentive budget includes funds that will be distributed to program participants, including incentives, the cost of kit and direct install measures, health and safety, the cost of labor associated with directly installing measures, and the cost of interest buy down associated with

offering 0% financing. Table 4 presents PECO's incentive budget and portfolio incentive percent.

Table 4. Incentive Budget and Portfolio Incentive Percent

Program	Subprogram	Incentive Budget (Million \$)					5-Year Total	Avg. Annual
		PY18	PY19	PY20	PY21	PY22		
Residential		\$8.09	\$8.37	\$8.67	\$8.93	\$9.19	\$43.25	\$8.65
	Low-Income	\$7.85	\$7.99	\$8.33	\$8.67	\$7.19	\$40.03	\$8.01
Residential Program Total		\$15.94	\$16.36	\$17.00	\$17.60	\$16.38	\$83.28	\$16.66
Residential Home Energy Reports		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Low-Income Home Energy Reports	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Residential Home Energy Reports Program Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Non-Residential		\$21.11	\$26.97	\$29.96	\$33.21	\$24.11	\$135.36	\$27.07
Total Incentives		\$37.05	\$43.33	\$46.96	\$50.81	\$40.49	\$218.64	\$43.73
Total Portfolio Budget (Incentives, Admin, etc.)		\$75.76	\$85.14	\$90.09	\$94.65	\$81.74	\$427.38	\$85.48
Incentive Budget as % of Total		49%	51%	52%	54%	50%	51%	51%

11. Q. How did you determine cost-effectiveness?

A. Guidehouse followed the Commission's guidance in the 2026 TRC Test Final Order¹ to calculate the TRC test as the basis for judging the economic viability of the Phase V Plan. To this end, Guidehouse worked with PECO to complete the SWE Phase V Avoided Cost Calculator yielding avoided costs for energy, capacity, and natural gas reductions. The avoided cost of water as well as other important drivers including system loss factors, discount rates, maximum economic lifetime, and inflation rate were sourced from the 2026 TRC Order and the 2026 TRM.² Plan measure characterizations were largely developed using the 2026 TRM, Phase IV evaluation results, the Phase V SWE Incremental Cost Database, and CSP implementation experience. The TRC test

¹ 2026 Total Resource Cost (TRC) Test, Docket No. M-2024-3048998 (Order entered Nov. 7, 2024).

² 2026 Technical Reference Manual Final Order, Docket No. M-2023-3044491 (Adopted Sept. 12, 2024).

was calculated and reviewed using both gross savings estimates and net savings estimates. Guidehouse incorporated the following specific modifications to the TRC test to comply with Commission guidance:

- a) Measure lifetime was capped at 15 years;
- b) Energy savings were calculated at the meter, without line losses, while PDRs were calculated at the generator, with line losses;
- c) Additional arrearages benefits were applied to the low-income customer segment;
- d) Benefits were awarded for PDRs at both the summer peak and winter peak periods; and
- e) Costs associated with the free provision of efficient equipment and installation labor costs (e.g., low income, multifamily and single-family direct install, small business direct install) are all treated as incentive costs.

12. Q. Is PECO's Phase V Plan cost-effective?

A. Yes. For the Plan, as a whole, over Phase V, the gross TRC benefit-to-cost ratio is 1.3, and the net TRC benefit-to-cost ratio is 1.2, yielding total net benefits based on gross savings of \$279 million. Table 5 shows the TRC results and discounted benefits and costs for the Phase V Plan by program.

Table 5. Phase Total TRC Results by Program

Program	Subprogram	Phase Total TRC Results				
		Discounted Benefits (Million \$)	Discounted Costs (Million \$)	Net Benefits (Million \$)	B/C Ratio (Gross)	B/C Ratio (Net)
Residential		\$257.41	\$314.35	-\$56.94	0.8	0.8
	Low-Income	\$86.55	\$64.60	\$21.95	1.3	1.5

<i>Residential Program Total</i>	<i>\$343.96</i>	<i>\$378.95</i>	<i>-\$34.99</i>	<i>0.9</i>	<i>1.5</i>
Residential Home Energy Reports	\$57.71	\$12.73	\$44.98	4.5	4.5
Low-Income Home Energy Reports	\$3.42	\$0.48	\$2.94	7.1	7.1
<i>Residential Home Energy Reports Program Total</i>	<i>\$61.13</i>	<i>\$13.21</i>	<i>\$47.92</i>	<i>4.6</i>	<i>4.6</i>
Non-Residential	\$972.36	\$645.05	\$327.31	1.5	1.3
Common Costs		\$61.17			
Grand Total - All Phase V Programs	\$1,377.45	\$1,098.38	\$279.07	1.3	1.2

IV. CONCLUSION

13. Q. Does this conclude your direct testimony?

A. Yes.

**PECO ENERGY COMPANY
STATEMENT NO. 3-R**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION
PROGRAM

DOCKET NO. M-2025-3057328

REBUTTAL TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: MARK VAN EEGHEN

SUBJECT: RESIDENTIAL LIGHTING AND
NON-RESIDENTIAL LIGHTING;
HOME ENERGY REPORTS;
COMPREHENSIVE MEASURES;
DAILY LOAD SHIFTING
PROGRAMS; HYBRID PILOT AND
HEAT PUMP INCENTIVES

DATED: JANUARY 30, 2026

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1 **REBUTTAL TESTIMONY**
2 **OF**
3 **MARK VAN EEGHEN**

4 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

5 **1. Q. Please state your name and business address.**

6 A. My name is Mark van Eeghen. My business address is 1735 Market Street, Suite 2210,
7 Philadelphia, PA 19103.

8 **2. Q. By whom are you employed and in what capacity?**

9 A. I am employed by Guidehouse Inc. (“Guidehouse”) as an Associate Director in the
10 Communities, Energy, and Infrastructure Segment.

11 **3. Q. Have you previously submitted testimony in this proceeding?**

12 A. Yes. I submitted direct testimony marked as PECO Statement No. 2 on November 26,
13 2025. My background and qualifications are set forth in that statement.

14 **4. Q. What is the purpose of your rebuttal testimony in this case?**

15 A. The purpose of my rebuttal testimony is to respond to the direct testimony of Mr. Zack
16 Tyler on behalf of the Office of Consumer Advocate (“OCA”), Mr. Jim Grevatt on
17 behalf of the Coalition for Affordable Utility Services and Energy Efficiency in
18 Pennsylvania (“CAUSE-PA”) and the Tenant Union Representative Network
19 (“TURN”), Ms. Jeaneen A. Zappa on behalf of the Keystone Energy Efficiency
20 Alliance (“KEEA”), and Mr. Alon Abramson on behalf of the City of Philadelphia
21 (“City”) and the Philadelphia Energy Authority (“PEA” and together, “City/PEA”)

1 regarding PECO's proposed Phase V Energy Efficiency and Conservation Plan (the
2 "Phase V Plan" or the "Plan"). I address the following topics: (1) the inclusion of
3 residential lighting and non-residential lighting in PECO's portfolio; (2) PECO's use
4 of home energy reports ("HERs") to achieve residential portfolio savings; (3) PECO's
5 level of investment in comprehensive measures; (4) issues relating to non-residential
6 daily load shifting programs; and (5) PECO's proposed hybrid heat pump pilot; and (6)
7 PECO's incentives for residential heat pump installation.

8 II. RESIDENTIAL AND NON-RESIDENTIAL LIGHTING

9 **5. Q. The OCA recommends eliminating residential lighting entirely from the Phase V**
10 **portfolio on the ground that the market is saturated. Do you agree?**

11 A. No. PECO recognizes that the market for light emitting diode ("LED") lighting has
12 matured and PECO's Act 129 plans have reflected that maturing process, including
13 the United States Department of Energy's codification of the 45 lumen/watt backstop
14 for general service lamps. PECO's Phase IV plan included \$8.9 million of residential
15 lighting incentives which will be reduced to \$4.8 million in Phase V, corresponding
16 to just 1.1% of the projected portfolio expenditures. While the OCA correctly notes
17 that residential LED use has grown significantly, the OCA does not contend that the
18 potential for savings is absent: OCA witness Tyler observes that 99% of Pennsylvania
19 households have at least one LED, but only 59 percent of sockets have LED lights
20 installed,¹ and PECO projects that the Phase V plan will achieve additional energy
21 savings of 36,856 MWh from this measure alone (including savings achieved from

¹ OCA St. No. 1, p. 16.

low-income customers). Furthermore, consistent with Commission requirements in the Technical Reference Manual (“TRM”), PECO requires direct installation of eligible general service lamps where the wattage of the existing bulb is known and the existing bulb was in working condition to avoid like-for-like replacements.²

6. Q. The OCA also suggests that PECO should reduce its use of non-residential lighting. Do you believe this suggestion has merit?

A. No. With respect to non-residential lighting, the OCA acknowledges that the market is not saturated but that PECO has also reduced its share of portfolio savings as this market is also maturing.³ In fact, PECO has reduced incentives for non-residential lighting as a percentage of portfolio spending (from 54% to 29%, corresponding to an incentive reduction of from \$134.2 million to \$51.9 million).

Given the savings that continue to be available to customers through this important measure, as evidenced by lighting end uses contributing over half of the Phase V program energy savings potential for small and large non-residential segments,⁴ PECO believes the level of incentives for non-residential lighting in the Plan is appropriate for the current market. Furthermore, as the OCA acknowledges, PECO has established mechanisms to minimize LED-to-LED replacements that would diminish savings.

² 2026 Technical Reference Manual, Vol. 2., § 2.1.1 (Sept. 2024), available at <https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/technical-reference-manual/>.

³ OCA St. No. 1, pp. 20-21.

⁴ Pennsylvania Energy Efficiency and Peak Demand Reduction Market Potential Study Report, available at <https://www.puc.pa.gov/pcdocs/1867286.pdf>

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A. The Commission has recognized that behavior-oriented measures deliver real savings and benefits for customers. HERs provide savings and related benefits at low incremental cost that can be realized immediately and educate customers on behaviors they can use to continue to achieve savings in the future. HER programs also deliver savings to more PECO customers (including those who pay rent) than almost any other program. For example, in program year 16 of Phase IV, over 500,000 PECO residential customers and over 25,000 low-income customers participate in PECO's Phase IV HER programs, and on average customers who receive HER reports consume less electricity than other customers. Moreover, customers enrolled in HER programs receive communications about other Act 129 measures, and the range of HER participants in other programs during Phase IV has ranged from 5% to 8% each year – corresponding to between 20,829 and 35,838 customers each year who have increased their energy savings through other non-HER measures.

Beyond these clear benefits, specific concerns that PECO is overly reliant on HER programs are misplaced. PECO's residential HER savings make up about 37% of overall residential savings (similar to other energy efficiency portfolios in the United States), but only make up 16% of residential portfolio spending. For low-income

1 customers, the HER program delivers 7% of total low income savings with just 1% of
2 low income portfolio spending. Contrary to the assertions of CAUSE-PA/TURN,⁵
3 PECO's low-income HER program includes specific information about income-
4 qualified programs as well as insights tailored for CAP customers; notably, nearly
5 86% of income eligible low-income HER respondents have found tips from HERs
6 relevant.⁶ And contentions that HER benefits "may not materialize"⁷ as a basis for
7 reducing HER programs is contrary to the history of PECO's success in ensuring that
8 such savings are achieved and the Commission's approval of HER programs
9 generally. As the Statewide Evaluator concluded in reviewing PECO's HER
10 performance:

11 Guidehouse's data management and reporting processes are clear and repeatable.
12 The SWE was able to replicate savings estimates using the modeling procedures
13 laid out in PECO's Phase IV EM&V Plan for both energy and peak-demand
14 savings. First-year incremental savings (net of uplift and persistent impacts) were
15 also verified. Overall, the SWE can verify all PY16 savings reported by
16 Guidehouse for PECO's Residential Market-Rate and Income-Eligible HER
17 programs.⁸

18 For these reasons, I do not believe that the various recommendations to reduce
19 PECO's HER programs are appropriate. Caps on savings, or limiting participation as
20 the OCA proposes only to customers with particularly high level of usages (who are
21 already a focus of HER programs), will reduce overall savings for customers, add

⁵ CAUSE-PA/TURN St. No. 1, p. 9.

⁶ Final Annual Report to the Pennsylvania Public Utility Commission Phase IV of Act 129 Program Year 13, p. 56 available at <https://www.puc.pa.gov/pcdocs/1760104.pdf>.

⁷ City/PEA Statement No. 1, p. 16.

⁸ *SWE Final Annual Report: Act 129 Program Year 16*, p. 139 (available at https://www.puc.pa.gov/media/3736/act129_swe_phaseiv_program_year_16_final_annual_report120125.pdf).

1 additional administrative complexity, and potentially exclude those customers who
2 could be helped the most.

3 IV. COMPREHENSIVE MEASURES

4 **8. Q. In her rebuttal testimony, PECO witness Geneles states that PECO has nearly**
5 **doubled its comprehensive measures in Phase V. Is this correct?**

6 A. Yes, and I believe some additional clarification is important. PECO uses the
7 definition of comprehensive measures provided by the Commission in the Phase V
8 Final Implementation Order,⁹ which primarily includes HVAC and weatherization
9 measures, as well as certain appliance measures if those measures are paired with
10 other comprehensive measures.¹⁰ PECO applied this definition to the residential and
11 low income measures of the Phase V Plan and the Phase IV portfolio.

12 As shown in the table below, PECO is substantially increasing its incentives for
13 residential and low-income comprehensive measures in Phase V. In Phase IV, PECO
14 paid \$21.2 million in residential and low income incentives for comprehensive
15 measures, and PECO is proposing to spend \$37.7 million in incentives for
16 comprehensive measures in Phase V.

⁹ [Implementation Order](#), *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 (Order entered June 18, 2025).

¹⁰ See: <https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/energy-efficiency-and-conservation-eecc-program/> and specifically Table 8 Addendum of the Plan Template Tables Workbook here: <https://www.puc.pa.gov/pcdocs/1894161.xlsx>.

Phase IV compared to Phase V Plan Energy Savings and Incentives by Measure Category

Measure Category	Program	Phase IV (actual through PY17 Q2)		Phase V Plan	
		Energy Savings (MWh)	Total Incentive (millions \$)	Energy Savings (MWh)	Total Incentive (millions \$)
Comprehensive	Residential	41,987	\$10.8	51,756	\$16.1
	Low Income	11,745	\$7.6	13,371	\$15.7
Comprehensive, if paired with other comprehensive	Residential	23,040	\$2.8	85,493	\$5.9
	Low Income	0	\$0	0	\$0.0
Total Comprehensive		76,772	\$21.2	150,620	\$37.7
Non-Comprehensive	Residential	169,511	\$17.4	106,281	\$21.2
	Low Income	70,401	\$11.6	77,021	\$24.3
Total Non-Comprehensive		239,912	\$29.0	183,302	\$45.5
Grand Total		316,684	\$50.2	333,922	\$83.3

V. NON-RESIDENTIAL DAILY LOAD SHIFTING

9. Q. OCA witness Zack Tyler notes that PECO has included only 0.1 MW of daily load shifting (“DLS”) from non-residential commercial and industrial (“C&I”) customers in the Phase V Plan and recommends that PECO increase planned reductions to 10% of the achievable amount of demand reductions of 27.5 summer MW and 28.8 winter MW (OCA St. No. 1, pp. 23-24). Do you agree with this recommendation?

A. No. As OCA acknowledged, PECO included a limited amount of DLS from C&I customers because that is the feedback PECO received from soliciting conservation service providers (“CSPs”) as feasible to achieve. While the Demand Response Market Potential Study did identify higher C&I DLS potential, PECO believes the response it receives from its competitive market solicitation is not surprising. As PECO explained in its comments to the Tentative Implementation Order for Phase V:

1 Daily load shifting programs are a new concept not just in Pennsylvania, but
2 across the country, and there are limited examples of daily load shifting programs
3 for EDCs to build upon. In order to deliver cost-effective savings at scale, EDCs
4 will need to overcome significant barriers to quickly identify the right
5 combinations of measures, customers, incentive levels, device control
6 technologies, event dispatch strategies, marketing strategies, trade ally
7 engagement approaches, and M&V methods. . . .

8 California is one example of a state that has taken steps to encourage daily load
9 shifting. However, rather than immediately enforcing significant daily load
10 shifting requirements upon California utilities, the state has supported a series of
11 activities to establish a foundation for daily load shifting to be viable. This
12 includes the establishment of regulatory proceedings with broad stakeholder
13 input, development of standards to facilitate communications with and control of
14 end devices, as well as standards to facilitate M&V to measure demand savings
15 and facilitate performance-based payments, reformation of markets and EDC
16 tariffs to incentivize customer participation, and implementation of pilot programs
17 to test, demonstrate, learn, and refine programmatic and technical approaches to
18 facilitate daily load shifting. California's efforts have been ongoing for years, and
19 yet the California Energy Commission recommended that formal load shifting
20 goals not be put into effect until 2030. Pennsylvania, however, is asking EDCs to
21 skip these steps and quickly deliver cost-effective savings from daily load shifting
22 at significant scale or face possible large penalties.¹¹

23 Given these identified concerns and the actual low CSP interest in attempting to
24 deliver significant amounts of C&I DLS, PECO believes that the limited amount set
25 forth in the Phase V Plan is appropriate until the market has further developed in
26 Pennsylvania. Lastly, PECO notes that it included 0.5 MW of C&I DLS in the plan
27 instead of 0.1 MW.

¹¹ PECO Energy Company's Comments on the Commission's February 20, 2025 Tentative Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 (filed Apr. 7, 2025), pp. 4-5.

1 **VI. HYBRID HEAT PUMP LOAD SHIFTING PILOT**

2 **10. Q. Please describe PECO’s proposed hybrid heat pump load shifting pilot (the**
3 **“Hybrid Pilot”) and concerns raised by any party.**

4 A. PECO is proposing the Hybrid Pilot to evaluate the feasibility of utilizing both
5 electric and gas heating capabilities to switch between systems to facilitate winter
6 peak daily load shifting. Exploring this feasibility is important for several reasons:
7 (1) PECO is a summer peaking system, (2) the Commission requires that each EDC’s
8 EE&C plan include a mix of measures and programs projected to acquire at least 75%
9 of the proposed target in each season;¹² (3) the winter peak period is one month
10 shorter than the summer peak period and due to the requirement to average winter and
11 summer peak demand reductions, each winter peak hour is more valuable than each
12 summer hour; and (4) fewer measures are available for winter peak reduction, since
13 many PECO customers use gas for heating (in contrast to the use of electricity for air
14 conditioning during the summer peak period). The Hybrid Pilot will allow
15 exploration of those challenges through the limited Act 129 budget expenditures
16 permitted for experimental equipment and devices.¹³

17 Under this pilot, during peak hours of PECO’s electric system in the winter months,
18 the system will switch from heating using a customer’s electric heat pump system to
19 the customer’s gas heating system. Customer override capabilities will be in place to

¹² [Implementation Order](#) at p. 143, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826
(Order entered June 18, 2025).

¹³ Phase V Plan, p. 193.

1 allow customers to override switching the heating system between the heat pump and
2 the gas heating system.

3 City/PEA believes the Hybrid Pilot should instead focus solely on electric heat
4 pumps, not switching between electric and gas systems, and also use smart
5 thermostat-enabled controls. City/PEA also requests PECO clarify how the lessons
6 from the pilot will be translated into future program design, including electric-only
7 heat pump strategies.

8 **11. Q. Do you agree with City/PEA's concern?**

9 A. No. As a threshold matter, I note that this is a pilot program in which the Company
10 envisions just 200 customers may participate. City/PEA's suggestion that the Hybrid
11 Pilot should be focused only on electric heat pumps and not those customers who
12 receive both electric and gas service is essentially a request for a different pilot
13 program to answer different questions. As PECO serves both electric and natural gas
14 customers (but does not serve gas customers within the City of Philadelphia), PECO
15 believes that there is merit in exploring how electric and natural gas systems can work
16 together to reduce winter peak demand. Similarly, a pilot that is focused on
17 temperature-enabled events as City/PEA proposes may lead to switching outside the
18 winter peak period, which would defeat the goal of ascertaining the degree to which
19 PECO's winter system peak may be reduced through the integration of electric and
20 gas systems.

21 While the Hybrid Pilot is not yet fully designed, PECO anticipates that the lessons
22 learned will be available in conjunction with any future Act 129 program design in

which parties would have the opportunity to assess potential lessons for different applications (including electric-only heat pumps of interest to City/PEA).

VII. CONCLUSION

12. Q. Does this complete your rebuttal testimony?

A. Yes, it does.

Mark van Eeghen, CFA

Associate Director

mark.van.eeghen@guidehouse.com
Philadelphia, PA
Direct: 202.973.4526

Professional Summary

Mark van Eeghen is an Associate Director in the Communities, Energy, and Infrastructure Practice at Guidehouse and he has over 10 years of experience in the energy industry. Mr. van Eeghen has extensive experience designing and evaluating utility demand side management programs. He brings a deep understanding of electrification and building decarbonization. Mr. van Eeghen is a CFA Charterholder and he earned a Master of Engineering Management degree from Dartmouth College.

Areas of Expertise

- **Program Design:** Design utility demand side management programs
- **Evaluation of Clean Energy Programs:** Conduct impact and cost effectiveness evaluations
- **Go-to-Market Strategies:** Develop clean energy go-to-market strategies.

Professional Experience

- Conduct utility demand side management program design activities, including strategy support, modelling and stakeholder engagement.
- Lead evaluation, measurement and verification for gas and electric utilities in the mid-Atlantic and Northeast, including impact and cost-effectiveness evaluations.
- Conduct electrification studies for mid-Atlantic utilities to forecast load driven by building electrification and vehicle electrification.
- Conduct clean energy go-to-market strategies for front of the meter and behind the meter distributed energy resources for financial institutions.

Education

- CFA Charterholder
- Master of Engineering Management, Dartmouth College
- BS, Industrial Engineering, University of Groningen (Netherlands)

Work History

- Associate Director, Guidehouse
 - Managing Consultant, Guidehouse
 - Senior Consultant, Navigant
-

**PECO ENERGY COMPANY
STATEMENT NO. 4**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

DOCKET NO. M-2025-3057328

DIRECT TESTIMONY
SUPPORTING PECO'S PETITION FOR APPROVAL
OF ITS PHASE V EE&C PLAN

WITNESS: MEGAN A. MCDEVITT

SUBJECT: COST RECOVERY

DATED: DECEMBER 1, 2025

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1 **DIRECT TESTIMONY**
2 **OF**
3 **MEGAN A. MCDEVITT**

4 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

5 **1. Q. Please state your full name, professional position, and business address.**

6 A. My name is Megan A. McDevitt. I am Senior Manager, Strategic Initiatives at PECO
7 Company ("PECO" or the "Company"). My business address is PECO Energy
8 Company, 2301 Market Street, Philadelphia, Pennsylvania 19103.

9 **2. Q. What are your duties and responsibilities in this position?**

10 A. In this role, I am responsible for guiding high priority initiatives and projects across
11 Governmental, Regulatory, and External Affairs, and across PECO. This includes
12 developing strategies related to economic development, energy security, rate case
13 execution and legislative policy.

14 **3. Q. Please describe your educational background and your professional experience.**

15 A. In 2001, I earned a Bachelor of Science in Accounting from DeSales University. In
16 2006, I became a Certified Public Accountant in Pennsylvania. I have over 20 years of
17 experience working at PECO. In March of 2022, I was promoted to Senior Manager
18 in PECO's Regulatory Policy and Strategy department following roles of increasing
19 responsibility within Accounting, Finance, Energy Acquisition, and Gas Supply and
20 Transportation, since joining PECO in September 2004. In November 2025, I rotated

1 to my current position of Senior Manager,¹ Strategic Initiatives.

2 **4. Q. Ms. McDevitt, have you submitted testimony previously before the Commission?**

3 A. Yes. I submitted testimony on behalf of PECO in the Company's Petition for Approval
4 of its Default Service Program for June 1, 2025 to May 31, 2029, before the
5 Pennsylvania Public Utility Commission (the "Commission") at Docket No. P-2024-
6 3046008. I also provided testimony in the Company's 2024 Electric Rate Case at
7 Docket No. R-2024-3046931, and the 2024 Gas Rate Case at Docket No. R-2024-
8 3046932.

9 **5. Q. What is the purpose of your direct testimony?**

10 A. I am sponsoring a supplement to PECO's Electric Service Tariff bearing a proposed
11 effective date of June 1, 2026, which contains provisions designed to implement
12 PECO's proposed Phase V Energy Efficiency and Conservation ("EE&C") Plan
13 Charge ("Phase V EEPC"). Accordingly, my testimony (1) describes PECO's Phase
14 V EEPC, which is the rate adjustment mechanism the Company proposes to establish
15 under Section 1307 of the Pennsylvania Public Utility Code² to recover the costs
16 associated with the Company's Phase V Energy Efficiency and Conservation Plan
17 ("Phase V Plan" or "Phase V EE&C Plan"); (2) identifies the categories of PECO's
18 Phase V EE&C Plan costs that the Phase V EEPC will recover; and (3) provides the
19 Company's current estimates of its Phase V Plan costs. In addition, I will describe how

¹ I am holding the position of Senior Manager, Retail Rates, in parallel until a replacement is named.

² Hereafter, unless specifically stated otherwise, all section references are to the Pennsylvania Public Utility Code.

PECO's rates will be adjusted annually over the term of its Phase V EE&C Plan to reflect over- or under-recoveries.

Finally, I will describe how the Company will separate costs incurred and EEPC revenues billed with respect to PECO's Phase V EE&C Plan from costs incurred and EEPC revenues billed with respect to its Phase IV EE&C Plan.

6. Q. Have you prepared any exhibits to accompany your testimony?

A. Yes, I have prepared four exhibits, which consist of the following:

Exhibit MAM-1 – Proposed supplement setting forth revisions to PECO's Electric Service Tariff (Clean and Redline).

Exhibit MAM-2 – Program costs by rate class.

Exhibit MAM-3 – Calculations of the cost recovery charges by rate class for the first year of PECO's Phase V EE&C Plan.

Exhibit MAM-4 – Responses to the Commission's filing requirements at 52 Pa. Code § 53.52.

II. PECO'S PROPOSED METHOD OF COST RECOVERY

7. Q. Do the EE&C provisions of Act 129 of 2008 ("Act 129")³ and the Commission's Implementation Orders⁴ grant an electric distribution company ("EDC") the right to recover the costs of its EE&C plan?

A. Yes, they do. Act 129 contains Section 2806.1, which provides that EDCs are entitled to recover all reasonable and prudent EE&C plan costs, on a full and current basis,

³ 66 Pa.C.S. §§ 2806.1, et seq.

⁴ See, e.g., Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2025-3052826 - (Order entered June 18, 2025) ("*Phase V Implementation Order*").

1 through a cost-recovery mechanism established under Section 1307.⁵ The Commission
2 previously directed EDCs to develop separate cost recovery mechanisms for their
3 EE&C Plans and also required that the cost recovery mechanism be non-bypassable
4 and that it does not affect the EDCs' prices-to-compare.⁶

5 **8. Q. Please explain the mechanism that PECO is proposing to recover Phase V Plan**
6 **costs.**

7 A. Consistent with the authority granted by Section 2806.1(k) and the *Phase V*
8 *Implementation Order*, PECO's Phase V EEPC will be a fully reconcilable, non-
9 bypassable charge. The Phase V EEPC is designed to adjust customers' distribution
10 rates by the amount of the charge calculated for each rate class and, as a result, PECO's
11 price-to-compare will not be affected by the recovery of Phase V EE&C Plan costs.
12 The Phase V EEPC follows the same format the Company used for its currently
13 effective, Commission-approved Phase IV EEPC, which, as previously noted, recovers
14 costs associated with PECO's Phase IV EE&C Plan. Exhibit MAM-1 is a pro forma
15 supplement, in both clean and redlined versions, to PECO's Electric Service Tariff,
16 which sets forth the revisions to PECO's currently effective Electric Service Tariff
17 needed to implement PECO's Phase V EEPC and, therefore, reflects changes with
18 respect to the cost recovery method, the formula for calculating the Phase V EEPC
19 charge, and the Phase V EEPC charges specific to each rate class. All the rate schedules
20 setting forth distribution rates that would have to be adjusted to reflect the Phase V

⁵ See 66 Pa.C.S. § 2806.1(k).

⁶ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2012-2289411 (Order entered Aug. 3, 2012) ("*Phase II Implementation Order*").

EEPC are also included in the proposed tariff supplement provided as Exhibit MAM-1. However, PECO will submit the final distribution rates in a compliance filing after the Phase V EE&C Plan and Phase V EEPC are approved.

9. Q. What categories of costs will be recovered under the Phase V EEPC?

A. The Phase V EEPC will recover any of the fixed capital costs (depreciation and pre-tax return) and operating expenses not otherwise recovered in base rates, to design and implement the EE&C programs incorporated in its Phase V EE&C Plan. These costs include, among others, the cost of information technology (“IT”) needed to design and implement the EE&C programs, the costs of customer outreach and program promotion, incremental labor costs incurred to manage and administer the EE&C programs on an ongoing basis, the cost to measure and verify EE&C program results, and the cost of incentives offered to customers to participate in the approved EE&C programs.⁷

10. Q. Will the Phase V EEPC recover any capital expenditures?

A. If the Company incurs capital costs, such as IT costs, to implement the Phase V Plan, these costs would be capitalized for financial accounting purposes and depreciated over the service life of the property, which would correspond to the five-year term of PECO’s Phase V EE&C Plan. Accordingly, PECO would include as recoverable costs in its Phase V EEPC the annual depreciation of this property and a pre-tax return on

⁷ See *Phase V Implementation Order*, p. 233.

1 the depreciated original cost at PECO's weighted cost of capital, as permitted by the
2 *Phase V Implementation Order* (p. 233).⁸

3 **11. Q. What are the Company's budgeted expenditures for its Phase V Plan?**

4 A. As explained in Section 7 of PECO's Phase V EE&C Plan, which is being submitted
5 as PECO Exhibit 1 accompanying the Petition of PECO Energy Company for Approval
6 of its Phase V Energy Efficiency and Conservation Plan, the Company's budgeted
7 Phase V expenditures total \$427.4 million for the five-year term of the Plan. This
8 amount does not exceed the cost limitation imposed by Section 2806.1(g). The
9 Company projects that its budgeted expenditures by rate class will be as follows:

Residential	\$161.7 million
Small Commercial and Industrial ("SC&I")	\$128.4 million
Large Commercial and Industrial ("LC&I")	\$137.3 million
Municipal Lighting ("ML")	\$44,995
Total	<u>\$427.4 million</u>

10
11 Exhibit MAM-2 contains a summary of the projected expenditures by class for all of
12 the programs in the Phase V EE&C Plan.

13 **12. Q. How will Statewide Evaluator ("SWE") costs be handled?**

14 A. Similar to what the Commission ordered in prior Phases, the *Phase V Implementation*
15 *Order* (p. 235) requires PECO to remove the SWE costs from its EE&C Phase V
16 budget. Accordingly, PECO has not included SWE costs in its Phase V Plan budget.
17 PECO will track Phase V SWE costs separately from its Phase V EE&C Plan costs and,

⁸ PECO proposes to calculate its weighted average cost of capital in the same manner specified by the Commission in the Final Implementation Order, *Implementation of Act 11 of 2012*, Docket No. M-2012- 2293611 (Order entered Aug. 2, 2012), pp. 29-35 and App. A, Section 2.B.2.

1 as permitted by the *Phase V Implementation Order*,⁹ recover both categories of costs
2 through its Phase V EEPC. Because the Phase V SWE has not yet been selected, the
3 Company is using estimated SWE costs for the five-year term of the Phase V EE&C
4 Plan (approximately \$2.0 million) as a placeholder for the actual Phase V SWE costs.
5 More up-to-date projected Phase V SWE costs will be included in a compliance filing
6 after the Phase V Plan is approved.

7 **13. Q. What is the cost recovery period and when will it begin?**

8 A. The cost recovery period will begin when bills are sent to customers during July 2026
9 for June 2026 usage and will continue through bills sent to customers in June 2031 for
10 May 2031 usage. There will be a final “true-up” to the actual EE&C Plan costs at the
11 end of the recovery period, and any over- or under-collection will then be refunded or
12 recouped, as applicable, without interest, over a twelve-month period following the
13 completion of Phase V.

14 **14. Q. How will the Company ensure that its Phase V EEPC recovers the cost of**
15 **particular programs from the classes of customers that will receive the benefits**
16 **those programs provide?¹⁰**

17 A. The programs included in PECO’s Phase V EE&C Plan are designed such that the cost
18 of each program is directly assigned to the customer class that will receive the benefits
19 of that program. For programs that provide benefits to more than one class, costs will

⁹ See *Phase V Implementation Order*, p. 235.

¹⁰ See *Phase V Implementation Order*, pp. 244-246.

1 be allocated using reasonable and generally accepted cost-of-service principles.
2 Common costs will be allocated to each rate class in proportion to the energy savings
3 (MWh) that each rate class is projected to deliver in first year of the Phase V EE&C
4 Plan (“Program Year 18” or “PY18”). The total projected costs of each program for
5 the five-year Phase V EE&C Plan term, by rate class, are shown on page 1 of Exhibit
6 MAM-2.

7 **15. Q. Have you developed proposed charges for the Phase V EEPC for each customer**
8 **class?**

9 A. Yes, I have developed charges under the Phase V EEPC based on the total projected
10 program costs to be incurred for each rate class for Program Year 18. To develop the
11 charge for each rate class, the total projected program costs to be incurred for that class
12 for PY 18 (see Exh. MAM-2, p. 2) was divided by the appropriate projected class billing
13 units (e.g., kilowatt hours of energy use or kilowatts of demand) for the period from
14 June 1, 2026 through May 31, 2027. For Municipal Lighting, I have developed charges
15 by allocating streetlighting costs across the SC&I, LC&I and ML classes using the
16 allocation factors previously approved by the Commission.^{11,12} In addition, as
17 described previously, although the Phase V SWE costs will be tracked separately from
18 the Phase V Plan costs, they are included for recovery under the Phase V EEPC. The
19 resulting charges were then grossed up to provide for recovery of the Pennsylvania
20 Gross Receipts Tax. This calculation produces a charge designed to recover the total

¹¹ See *Petition of PECO Energy Company for Approval of Changes to its Act 129 Phase IV Energy Efficiency and Conservation Plan*, Docket No. M-2020-3020830 (Order entered May 23, 2024).

¹² Rate TLCL will be removed from the ML rate recovery after final reconciliation since traffic lighting measures are no longer part of the Commission’s Technical Reference Manual.

1 program costs for PY 18. Exhibit MAM-3 contains the detailed calculations for the
2 development of the charges for each class.

3 **16. Q. Are there any differences between the Phase IV and Phase V EEPCs?**

4 A. Yes. The *Phase V Implementation Order* states that because of FERC approval of
5 recent PJM tariff changes that disallow EE participation in the Forward Capacity
6 Market (“FCM”), peak demand reductions are no longer eligible to participate in the
7 FCM.¹³ Thus, the Phase V EEPC has been revised to remove references to
8 proceeds/deficiencies from resources participating in the FCM.

9 **17. Q. Please explain the annual calculation and adjustment of Phase V EEPC charges.**

10 A. In the *Phase V Implementation Order* (pp. 247-248), the Commission required the
11 charge to be developed using “projected program costs” and not “the authorized budget
12 amount” because “[t]he development of the surcharge using the projected program
13 costs rather than the authorized budget amount would mitigate over- or under-
14 recoveries of costs during the surcharge application period.” Additionally, in that
15 Order (p. 247), the Commission required “each EDC to annually reconcile (i.e., 1307(e)
16 Statement) actual expenses incurred with actual revenues received for the
17 reconciliation period.” Accordingly, for the first year of the Phase V EE&C Plan
18 (PY18), which runs from June 1, 2026 through May 31, 2027, PECO will develop
19 EEPC-adjusted rates based on projected Plan costs that PECO anticipates will be
20 incurred over that year. Thereafter, PECO will reset the EEPC annually to recover the

¹³ See *Phase V Implementation Order*, p. 41.

1 projected Plan costs for the then-upcoming plan year and the appropriate adjustment to
2 reconcile and true-up revenues and the previous program years' actual costs.

3 **18. Q. How does PECO propose to combine the Phase IV and V EEPCs into a single**
4 **charge?**

5 A. Similar to what the Commission ordered in prior Phases, the *Phase V Implementation*
6 *Order* states “that surcharges should be combined into a single surcharge and tariff with
7 the implementation of Phase V” (pp. 248-249). Accordingly, PECO proposes
8 combining its Phase IV EEPC and Phase V EEPC into a single surcharge and a single
9 tariff provision with the implementation of its Phase V EEPC.

10 **19. Q. What does the *Phase V Implementation Order* provide as to the transition from the**
11 **Phase IV EEPC to Phase V EEPC?**

12 A. In the *Phase V Implementation Order* (pp. 248-249), the Commission adopted a plan
13 for the transition from the cost recovery methodology utilized during Phase IV, ending
14 May 31, 2026, to the cost recovery methodology to be utilized during Phase V,
15 beginning on June 1, 2026. The *Phase V Implementation Order* requires that each EDC
16 reconcile its total actual recoverable EE&C Plan expenditures incurred through March
17 31, 2026, with its actual EE&C Plan revenues received through March 31, 2026. In
18 addition, each EDC should include, as part of the calculation of the Phase V rates to
19 become effective June 1, 2026, as clearly identified separate line items, projections of
20 the expenses to finalize any measures installed and commercially operable on or before
21 May 31, 2026, expenses to finalize any contracts, and other Phase IV administrative
22 obligations. The Phase IV rate that became effective June 1, 2025, will remain effective

1 through May 31, 2026. Consistent with the requirements, for PY18 (June 1, 2026,
2 through May 31, 2027), PECO's cost recovery rates will be calculated based on the
3 projected total program expenditures for each rate class for PY18 plus the
4 reconciliation amount for PY17 and any costs remaining from previous periods. As
5 previously explained, for each subsequent plan year, PECO will develop annual Phase
6 V recovery rates based on its projected program expenditures for that plan year plus
7 amounts necessary for the reconciliation of costs and revenues from prior periods.

8 **20. Q. What has the Commission directed regarding the application of interest to any**
9 **Phase IV and Phase V over- and under-recoveries?**

10 A. In the *Phase V Implementation Order* (pp. 247-248), the Commission addressed the
11 application of interest to Phase IV and to Phase V over- and under-recovered amounts.
12 The Commission concluded that interest should not be included on any Phase IV or
13 Phase V net over- or under-recovery amounts. Thus, the Phase V EEPC as described
14 in Exhibit MAM-1 does not include the application of interest. In addition, the EEPC
15 reflects the other provisions that I previously explained (i.e., annual calculation and
16 adjustment, exclusion of SWE costs from the 2.0% spending cap, the application of a
17 single charge and the transition plan) in order to ensure that the EEPC complies with
18 the Commission's directives on cost recovery.

1 **III. SEPARATE ACCOUNTING FOR COSTS INCURRED AND EEPC REVENUES**
2 **BILLED FOR PHASE V AND PREVIOUS PHASES**

3 21. **Q. What has the Commission directed regarding accounting for costs to be incurred**
4 **and EEPC revenues to be billed for Phase V and such costs and revenues associated**
5 **with prior Phases?**

6 A. On September 8, 2025, the Commission issued a Secretarial letter captioned *Re:*
7 *Implementation of Act 129 of 2008 – Phase V Energy Efficiency and Conservation Plan*
8 *Template* at Docket No. M-2025-3052826. In that Secretarial letter, the Commission
9 stated that EDCs must account for Phase V costs and revenues separately from the costs
10 and revenues associated with prior Phases.

11 22. **Q. Please explain how the Company intends to comply with the Commission’s**
12 **accounting requirements.**

13 A. PECO will comply with the Commission’s directive to separately account for Phase V
14 costs and revenues by setting up new general ledger accounts for Phase V costs and
15 revenues. Phase IV costs and revenues are currently tracked through similar, separate
16 accounting measures. Thus, there will be no comingling of Phase V and prior Phase
17 costs or revenues in PECO’s accounting records. Phase IV costs and revenues will also
18 be clearly identified and tracked separately for purposes of the EEPC. This procedure
19 will allow Phase V costs to be reconciled against Phase V revenues billed under the
20 EEPC as explained in the pro forma tariff supplement provided as Exhibit MAM-1.

1

IV. CONCLUSION

2 23. **Q. Does this conclude your direct testimony?**

3 A. Yes.

**Supplement No. xx to
ELECTRIC PA P.U.C NO. 8**

PECO Energy Company

Electric Service Tariff

COMPANY OFFICE LOCATION

2301 Market Street

Philadelphia, Pennsylvania 19103

For List of Communities Served, See Page 4.

Issued December 1, 2025

Effective June 1, 2026

**ISSUED BY: David M. Vahos – President & CEO
PECO Energy Distribution Company
2301 MARKET STREET
PHILADELPHIA, PA. 19103**

NOTICE

LIST OF CHANGES MADE BY THIS SUPPLEMENT

PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS (EEPC) xx Revised Page No. 48

Changes as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE R RESIDENCE SERVICE – xx Revised Page No. 52

Change to the Variable Distribution Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE R-H RESIDENTIAL HEATING SERVICE – xx Revised Page No. 53

Change to the Variable Distribution Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-GS GENERAL SERVICE – xx Revised Page No. 57

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-PD PRIMARY-DISTRIBUTION POWER – xx Revised Page No. 59

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-HT HIGH-TENSION POWER – xx Revised Page No. 60

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE EP ELECTRIC PROPULSION – xx Revised Page No. 61

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program

RATE SL-E STREET LIGHTING CUSTOMER-OWNED FACILITIES – xx Revised Page No. 66

Changes as a result of Phase V of the Energy Efficiency and Conservation Program.

Rate SL-C SMART LIGHTING CONTROL CUSTOMER OWNED FACILITIES - xx Revised Page No. 68

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE TLCL TRAFFIC LIGHTING CONSTANT LOAD SERVICE - xx Revised Page No. 71

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE AL - ALLEY LIGHTING IN CITY OF PHILADELPHIA - xx Revised Page No. 73

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

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PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS (EEPC)

Purpose: The purpose of this surcharge is to provide for full and current cost recovery of expenditures associated with the Company's Phase V Energy Efficiency and Conservation Program Costs (EEPC).

Applicability: The surcharge shall be calculated for billing purposes for all customers. The EEPC shall be charged to each rate schedule using the following units:

Phase V

Rates R, RS, RH:	\$x.xxxxx/kWh
Rates GS:	\$x.xxxxx /kWh
Rate SL-E,	\$x.xx/location
Rate SL-C	\$x.xx/location
Rate AL:	\$x.xx/location
Rate TLCL*	\$x.xxxxx/kWh
Rates HT, PD, EP:	\$x.xx/kW based on PJM Peak Load Contribution (PLC)

*The TLCL surcharge is eliminated; any remaining over/under balances will be applied as needed.

The Variable Distribution Service charges, for the residential rate schedules shall include the above listed EEPC surcharge. For the municipal lighting rate schedules, the applicable variable or fixed distribution service charges shall include the EEPC surcharge.

For Rate GS, the EEPC shall be recovered through a separate variable distribution charge listed on customer's bills. For Rates PD, HT and EP, a PJM PLC shall be determined in accordance with PJM rules and used to calculate the EEPC. Customer's PLC will be computed to the nearest kilowatt. The EEPC shall be recovered through a separate variable distribution charge listed on customer bills.

Calculation of EEPC Surcharge and the Over/Under Recovery:

Billing Provisions: The surcharge and over/under recovery shall be calculated by rate schedule on an annual basis using the following formulas:

$$EEPC(n) = \frac{(C-E)+(SWE)}{(BU)} \times \frac{(1)}{(1-T)}$$

C – The cost of the Energy Efficiency and Conservation Program includes: all expenditures, of the individual programs such as materials, equipment, installation, custom programs, evaluation measurement/verification, educating customers about availability to the extent not included in Consumer Education cost, not recovered through any separate recovery mechanism, and any other cost associated with implementation of the programs. Costs that relate to measures that are applicable to more than one rate class or that are shown to provide system-wide benefits, will be allocated to each class based on the ratio of class-specific projected program costs to the total projected program costs. The program costs are those approved by the PAPUC and audit costs for the Phase V program ending May 31, 2026

E – The over or (under) recovery from the applicable reconciliation period. Interest will not be applied to any over/under collections.

SWE – The cost in dollars of the PaPUC's Statewide Evaluator. These costs will be reconciled separately and added to the EEPC and will not be subject to the 2% spending limit of the EE&C Plan.

BU – The total Billing Units for the applicable recovery period.

T – The current Pennsylvania gross receipts tax rate included in base rates.

n - The rate class for which the EEPC is being calculated: 1 = Residential, 2 = Small C&I, 3 = LC&I, 4 = Street lighting

Residential - Rates R, RH

Small C&I – Rate GS

Large C&I – Rates HT, PD, EP

Street Lighting – Rates SLE, SLC, AL, TLCL

Filings and Reconciliations: The EEPC shall be filed by May 1 each year to be effective June 1 through May 31.

(C)

The EEPC effective June 1 each year will be calculated using a 12 month "C factor" for the period June 1 through May 31 and an "E factor" for the period of April 1 through March 31.

A reconciliation statement filing, in accordance with C.S. Title 66 §1307(e), will be made by April 30 of each year. The EEPC mechanism is subject to annual audit review by the Bureau of Audits.

RATE R RESIDENCE SERVICE

AVAILABILITY.

Single phase service in the entire territory of the Company to the dwelling and appurtenances of a single private family (or to a multiple dwelling unit building consisting of two to five dwelling units, whether occupied or not), for the domestic requirements of its members when such service is supplied through one meter. Service is also available for related farm purposes when such service is supplied through one meter in conjunction with the farmhouse domestic requirements.

Each dwelling unit connected after May 10, 1980 except those dwelling units under construction or under written contract for construction as of that date must be individually metered for their basic service supply. Centrally supplied master metered heating, cooling or water heating service may be provided if such supply will result in energy conservation.

The term "residence service" includes service to: (a) the separate dwelling unit in an apartment house or condominium, but not the halls, basement, or other portions of such building common to more than one such unit; (b) the premises occupied as the living quarters of five persons or less who unite to establish a common dwelling place for their own personal comfort and convenience on a cost sharing basis; (c) the premises owned by a church, and primarily designated or set aside for, and actually occupied and used as, the dwelling place of a priest, rabbi, pastor, rector, nun or other functioning Church Divine, and the resident associates; (d) private dwellings in which a portion of the space is used for the conduct of business by a person residing therein; (e) A detached garage, located on the same premises as the customer's dwelling unit, that is utilized solely for the domestic requirements of the dwelling unit's members and is served through the same meter as the dwelling unit; (g) A detached garage, located on the same premises as the customer's dwelling unit, that is utilized solely for the domestic requirements of the dwelling unit's members and requires separate metering service as a result of wiring restrictions or legal requirements.

The term does NOT include service to: (a) Premises institutional in character including Clubs, Fraternities, Orphanages or Homes; (b) premises defined as a rooming house or boarding house in the Municipal Code for Cities of the First Class enacted by Act of General Assembly; (c) a premises containing a residence unit but primarily devoted to a professional or other office, studio, or other gainful pursuit; (d) electric furnaces or welding apparatus other than a transformer type "limited input" arc welder with an input not to exceed 37 1/2 amperes at 240 volts.

CURRENT CHARACTERISTICS. Standard single phase secondary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$11.30

FIXED DISTRIBUTION SERVICE CHARGE FOR FORMER OFF-PEAK METERS: \$2.19

VARIABLE DISTRIBUTION SERVICE CHARGE:

All kWhs \$ x.xxxxx per kWh

ENERGY SUPPLY CHARGE:

Refer to the Generation Supply Adjustment Procurement Class 1.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

MINIMUM CHARGE: The minimum charge per month will be the Fixed Distribution Service Charge.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, UNIVERSAL SERVICE FUND CHARGE, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE, AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

PAYMENT TERMS. Standard.

RATE RH RESIDENTIAL HEATING SERVICE

AVAILABILITY.

Single phase service to the dwelling and appurtenances of a single private family (or to a multiple dwelling unit building consisting of two to five dwelling units, whether occupied or not), for domestic requirements when such service is provided through one meter and where the dwelling is heated by specified types of electric space heating systems. The systems eligible for this rate are (a) permanently connected electric resistance heaters where such heaters supply all of the heating requirements of the dwelling, (b) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by electric resistance heaters, and (c) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by non electric energy sources. All space heating installations must meet Company requirements. This rate schedule is not available for commercial, institutional or industrial establishments.

Each dwelling unit connected after May 10, 1980 except those dwelling units under construction or under written contract for construction as of that date, must be individually metered

CURRENT CHARACTERISTICS. Standard single phase secondary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$11.30

FIXED DISTRIBUTION SERVICE CHARGE FOR FORMER OFF-PEAK METERS: \$2.19

VARIABLE DISTRIBUTION SERVICE CHARGE:

SUMMER MONTHS. (June through September)

\$ x.xxxxx per kWh for all kWh.

WINTER MONTHS. (October through May)

\$ x.xxxxx per kWh for all kWh

ENERGY SUPPLY CHARGE:

Refer to the Generation Supply Adjustment Procurement Class 1.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

MINIMUM CHARGE. The minimum charge per month will be the Fixed Distribution Service Charge.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, UNIVERSAL SERVICE FUND CHARGE NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM COSTS AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

COMBINED RESIDENTIAL AND COMMERCIAL SERVICE. Where a portion of the service provided is used for commercial purposes, the appropriate general service rate is applicable to all service; or, at the option of the customer, the wiring may be so arranged that the residential service may be separately metered and this rate is then applicable to the residential service only.

PAYMENT TERMS. Standard.

RATE-GS GENERAL SERVICE**AVAILABILITY.**

Service for offices, professional, commercial or industrial establishments, governmental agencies, farms and other applications outside the scope of the Residence Service rate schedules.

Transformed service from the Company's distribution system where the company installs, owns, and maintains any transforming, switching and other receiving equipment required.

For service configurations that are nominally 120/208 volts, 3 phase, 4 wires – If either the service capacity or the parallel-generating capacity exceeds 750 kVA for transformers located inside the building, the only rate option available to the customer will be Rate HT. If either the service capacity or the parallel-generating capacity exceeds 750 kVA but remains at or below 1,500 kVA for transformers outside the building, the customer may request service at 277/480 volts, 3-phase 4-wires from transformers located outside the building. Otherwise the only rate option available to the customer will be Rate HT.

For service configurations that are nominally 277/480 volts, 3 phase, 4 wires - If either the service capacity or the parallel-generating capacity exceeds either 750 kVA for transformers located inside the building or 1,500 kVA for transformers located outside the building, the only rate option available to the customer will be Rate HT.

CURRENT CHARACTERISTICS.

Standard single-phase or polyphase secondary service.

MONTHLY RATE TABLE.**FIXED DISTRIBUTION SERVICE CHARGE:**

- \$ 24.47 for single-phase service without demand measurement, or
- \$ 31.20 for single-phase service with demand measurement, or
- \$ 74.66 for polyphase service.

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$11.34 per kW of billed demand

(\$0.0006) per kWh for all kWh

ENERGY EFFICIENCY CHARGE: \$ x.xxxxx per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and ¾.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand may be measured where consumption exceeds 1,100 kilowatt-hours per month for three consecutive months; or where load tests indicate a demand of five or more kilowatts; or where the customer requests demand measurement. Measured demands will be determined to the nearest 0.1 of a kilowatt but will not be less than 1.2 kilowatts, and will be adjusted for power factor in accordance with the Rules and Regulations.

For those customers with demand measurement the billing demand will be determined as follows:

- (a) For customers with demand up to 500 kW, the billing demand shall be the measured demand, with a minimum billing demand of 1.2 kW.
- (b) For customers with measured demand or maximum demand greater than 500 kW, the billing demand shall be the greater of (i) the measured demand, or (ii) 40% of the maximum contract demand.

If a measured demand customer has less than 1,100 monthly kilowatt-hours of use, the monthly billing demand will be the measured demand or the metered monthly kilowatt-hours divided by 175 hours, whichever is less, but not less than 1.2 kilowatts.

For those customers without demand measurement, the monthly billing demand will be computed by dividing the metered monthly kilowatt-hours by 175 hours. The computed demand will be determined to the nearest 0.1 of a kilowatt, but will not be less than 1.2 kilowatts.

MINIMUM CHARGE.

The monthly minimum charge for customers without demand measurement will be the Fixed Distribution Service Charge, plus the Variable Distribution Service Charge per KW of minimum billing demand as described above. The monthly minimum charge for customers with demand measurement will be the Fixed Distribution Service Charge, plus per KW of billing demand. In addition to the above, for customers in Procurement Class ¾ charges will be assessed on PJM's reliability pricing model.

RATE-PD PRIMARY DISTRIBUTION POWER**AVAILABILITY.**

Untransformed service from the primary supply lines of the Company's distribution system where the customer installs, owns, and maintains any transforming, switching and other receiving equipment required. However, standard primary service is not available in areas where the distribution voltage has been changed to either 13 kV or 33 kV unless the customer was served with standard primary service before the conversion of the area to either 13 kV or 33 kV. This rate is available only for service locations served on this rate on July 6, 1987 as long as the original primary service has not been removed. PECO Energy may refuse to increase the load supplied to a customer served under this rate when, in PECO Energy's sole judgment, any transmission or distribution capacity limitations exist. If a customer changes the billing rate of a location being served on this rate, PECO Energy may refuse to change that location back to Rate PD when, in PECO Energy's sole judgment, any transmission or distribution capacity limitations exist.

CURRENT CHARACTERISTICS.

Standard primary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$297.61

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$11.21 per kW of billing demand

(\$0.0006) per kWh for all kWh

ENERGY EFFICIENCY CHARGE: \$x.xx per kW of Peak Load Contribution

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and 3/4.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 25 kilowatts. The 25kW minimum shall apply to the Energy Supply Charge and the Transmission Supply Charge. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract.

MINIMUM CHARGE.

The monthly minimum charge shall be the Fixed Distribution Service Charge, plus the charge per kW component of the Variable Distribution Service Charge, plus in the case of Procurement Class 3/4 customers, charges assessed under PJM's reliability pricing model.

TERM OF CONTRACT.

The initial contract term shall be for at least three years.

PAYMENT TERMS.

Standard.

RATE-HT HIGH TENSION POWER**AVAILABILITY.**

Untransformed service from the Company's standard high tension lines, where the customer installs, owns, and maintains, any transforming, switching and other receiving equipment required.

CURRENT CHARACTERISTICS.

Standard high tension service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$371.68

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$7.12 per kW of billing demand
(\$0.0006) per kWh for all kWh

HIGH VOLTAGE DISTRIBUTION DISCOUNT:

For customers supplied at 33,000 volts: \$0.24 per kW of measured demand.
For customers supplied at 69,000 volts: \$1.94 per kW of measured demand.
For customers supplied over 69,000 volts: \$1.94 per kW of measured demand.

ENERGY EFFICIENCY CHARGE: \$x.xx per kW of Peak Load Contribution

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and 3/4.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 25 kilowatts. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract. The 25 kW minimum shall apply to the Energy Supply Charge and the Transmission Supply Charge.

CONJUNCTIVE BILLING OF MULTIPLE DELIVERY POINTS.

If the load of a customer located at a delivery point becomes greater than the capacity of the standard circuit or circuits established by the Company to supply the customer at that delivery point, upon the written request of the customer, the Company will establish a new delivery point and bill the customer as if it were delivering and metering the two services at a single point, as long as installation of the new service is, in the Company's opinion, less costly for the Company than upgrading the service to the first delivery point and provided that such multi-point delivery is not disadvantageous to the Company.

MINIMUM CHARGE.

The monthly minimum charge shall be the Fixed Distribution Service Charge, plus the charge per kW component of the Variable Distribution Service Charge, and modify less the high voltage discount where applicable plus in the case of Procurement Class 3/4 customers, charges assessed on PJM's reliability pricing model.

TERM OF CONTRACT.

The initial contract term shall be for at least three years.

PAYMENT TERMS.

Standard.

RATE EP ELECTRIC PROPULSION

AVAILABILITY.

This rate is available only to the National Rail Passenger Corporation (AMTRAK) and to the Southeastern Pennsylvania Transportation Authority (SEPTA) for untransformed service from the Company's standard high tension lines, where the customer installs, owns, and maintains any transforming, switching and other receiving equipment required and where the service is provided for the operation of electrified transit and railroad systems and appurtenances. Rate EP is also available to legacy transformed service that is receiving service pursuant to Rate EP as of January 1, 2020; Rate EP or successor rates shall remain available for such legacy transformed service until at least December 31, 2040.

CURRENT CHARACTERISTICS.

Standard sixty hertz (60 Hz) high tension service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$1,292.35 per delivery point

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$6.15 per kW of billing demand

(\$0.0006) per kWh for all kWh

HIGH VOLTAGE DISTRIBUTION DISCOUNT:

For delivery points supplied at 33,000 volts: \$0.24 per kW.

For delivery points supplied at 69,000 volts: \$1.94 per kW for first 10,000 kW of measured demand.

For delivery points supplied over 69,000 volts \$1.94 per kW for first 100,000 kW of measured demand.

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class ¾.

ENERGY EFFICIENCY CHARGE: \$x.xx per kW of Peak Load Contribution

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 5,000 kilowatts. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract.

CONJUNCTIVE BILLING OF MULTIPLE DELIVERY POINTS.

If the load of a customer located at a delivery point becomes greater than the capacity of the standard circuit or circuits established by the Company to supply the customer at that delivery point, upon the written request of the customer, the Company will establish a new delivery point and bill the customer as if it were delivering and metering the two services at a single point, as long as installation of the new service is, in the Company's opinion, less costly for the Company than upgrading the service to the first delivery point and provided that such multi-point delivery is not disadvantageous to the Company. Conjunctive billing under this section is available regardless of whether the conjunctively-billed sites take generation service from one or more generation suppliers and/or PECO default service.

RATE SL-E STREET LIGHTING CUSTOMER OWNED FACILITIES

AVAILABILITY.

To any governmental agency for outdoor lighting provided for the safety and convenience of the public of streets, highways, bridges, parks or similar places, including directional highway signs at locations where other outdoor lighting service is established hereunder only if all of the Utilization Facilities, as defined in Terms and Conditions in this Base Rate, are installed, owned and maintained by a governmental agency.

This rate is also available to community associations of residential property owners both inside and outside the City of Philadelphia for the lighting of streets that are not dedicated. This rate is not available to commercial or industrial customers. All facilities and their installation shall be approved by the Company.

MONTHLY RATE TABLE.

SERVICE LOCATION DISTRIBUTION CHARGE: \$x.xx per Service Location (as defined below) *
VARIABLE DISTRIBUTION CHARGE: \$0.02541 per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2*.

* The service location charge includes an Energy Efficiency Program Surcharge (\$0.08) per location.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SERVICE LOCATION.

A Service Location is the Point of Delivery on the Company's secondary circuit. That connects to one or more Utilization Facilities. A customer may connect multiple Utilization Facilities to a single Service Location in accordance with Paragraph 2c and approval by the Company.

DETERMINATION OF ENERGY BILLED.

The energy use for a month of a Service Location shall be computed to the nearest kilowatt hour as the product of one thousandth of its wattage and the effective hours of use of such wattage during the calendar month under the established operation schedules as set forth under Terms and Conditions, Paragraph 1 Service. The wattage, expressed to the nearest tenth of a watt, of a Service Location shall be composed of manufacturer's rating of its lamps, ballasts, transformers, individual controls and other load components required for its operation. The aggregate of the kilowatt hours thus computed for all Active Service Locations shall constitute the energy billed for the month.

TERMS AND CONDITIONS.

1. Service. Lighting service will be operated on all-night, every-night lighting schedules, under which lights normally are turned on after sunset and off before sunrise with approximately 4,100 annual operating hours (average monthly burning hours = 341.11 hours). Extended lighting service during all daylight hours will be supplied for lamps specified by the customer.
2. Ownership of Utilization Facilities.

a. Service Locations Supplied from Aerial Circuits: customer shall provide, own and maintain the Utilization Facilities defined as the brackets, hangers, luminaires, lamps/LED array(s), ballasts/drivers, transformers, individual controls, conductors, molding and supporting insulators between the lamp receptacles and line wires of the Company's distribution facilities and any other components as required for the operation of each Service Location.

The Company shall provide the supporting pole or post for such aerially supplied Service Location and will issue authorization to permit the customer to install thereon the said Utilization Facilities. If the Company sells aerially supplied streetlighting facilities to a government agency in order to qualify for SL-E, such sale will include the supporting pole or post.

b. Service Locations Supplied from Underground Circuits: customer shall provide, own and maintain the Utilization Facilities defined as brackets or hangers, luminaires, lamps/LED array(s), ballasts/drivers, transformers, individual controls, and conductors and shall assume all costs of installing such Utilization Facilities. Customer shall also provide, own, and maintain the supporting pole or post foundation with 90 degree pipe bend, and conduits from the luminaires to sidewalk level, or in special cases, such as Federally and State financed limited access highways, to a Service Location designated by the Company on its secondary voltage circuit.

Except as provided in Paragraph 5 Supply Facilities, the Company shall own conduit from the distribution circuit to the 90 degree pipe bend, shall own conductors from its distribution system to the designated Service Location and shall provide sufficient length of conductors for splicing at the designated Service Location or in the post base where sidewalk level access is provided.

c. Service to Group of Utilization Facilities:

AERIAL SUPPLY

When the customer requests service to a group of Utilization Facilities supplied from aerial distribution facilities, the customer is responsible for providing the support poles or posts for the Utilization Facilities. The Company will provide a service, nominally 100 feet, to the customer's first supporting structure. The customer is responsible for installing supply conductors from the first supporting structure to all Utilization Facilities.

UNDERGROUND SUPPLY

When groups of Utilization Facilities are supplied from underground distribution facilities, the customer is responsible for the supporting poles or posts and the supply conductors to each Utilization Facility from the designated Service Location. If the customer requests an underground supply to a group of Utilization Facilities and the designated Service Location is a secondary terminal pole, the customer will install, own, maintain all cable, including the cable on the pole.

3. Standards of Construction for Utilization Facilities. Customer construction shall meet the Company's standards which are based upon the National Electrical Safety Code. Designs of proposed construction deviating from such standards shall be submitted to the Company for approval before proceeding with any work.

RATE SL-C SMART LIGHTING CONTROL LIGHTING CUSTOMER OWNED FACILITIES

AVAILABILITY.

Any governmental agency for outdoor lighting, provided for the safety and convenience of the public of streets, highways, bridges, parks or similar places, that complies with each of the following conditions:

- (A) Installs a Smart Lighting Control Module approved by the Company that has capabilities including but not necessarily limited to:
 - a. Measurement of energy usage at the individual Utilization Facility level.
 - b. Customer control of the lamp's burning hours.
 - c. Data showing failure of the lamp to burn, such as customer notification, that customer can provide to Company upon request.
 - d. Ability of customer to dim the lights (LED only).
- (B) Provides energy usage to the Company as described below under Data Requirements.
- (C) Installs, owns, and maintains all Utilization Facilities, as defined in the Terms and Conditions of this Base Rate. (All facilities and their installation shall be approved by the Company.)

This rate is also available to community associations of residential property owners both inside and outside the City of Philadelphia for the lighting of streets that are not dedicated. This rate is not available to commercial or industrial customers.

Customers may take service under the rate beginning on July 1, 2019. The below listed pricing will be revised, as needed, based on applicable surcharge adjustments prior to the SL-C effective service date of July 1, 2019.

MONTHLY RATE TABLE.

SERVICE LOCATION DISTRIBUTION CHARGE: \$x.xx per Service Location (as defined below)*
 VARIABLE DISTRIBUTION CHARGE: \$0.04780 per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2*.

* The service location charge includes an Energy Efficiency Program Surcharge of \$x.xx per location.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SERVICE LOCATION.

A Service Location is the Point of Delivery on the Company's secondary circuit that connects to one or more Utilization Facilities. A customer may connect multiple Utilization Facilities to a single Service Location in accordance with Paragraph 2c and approval by the Company

DATA REQUIREMENTS.

The customer must notify the Company of its intent to enroll or modify lights under this rate at least 30 days prior to the start of the regularly scheduled billing cycle during which the enrollment or modification will become effective.

The customer must provide the following data to the Company from its Company-approved Smart Lighting Control Module for each light added or modified:

- 8. Manufacturer-rated wattage
- 9. Annual burning hours, if different than the standard 4,100 burning hours as defined below under paragraph 1 Service of Terms and Conditions
- 10. Dimming percentage/factor

The Company also requires the customer to provide the Global Positioning System (GPS) coordinates for each light.

DETERMINATION OF ENERGY BILLED.

Upon acceptance of the required data, the Company shall modify the energy billed going forward for a period of up to twelve months or at another frequency as required by the Company. The energy use for a month of a Service Location shall be computed to the nearest kilowatt hour as the product of one thousandth of its wattage, adjusted based on the provided dimming percentage/factor, and the provided burning hours during the calendar month.

The Company may, at any time and without prior notice, request that the customer provide updates to the above data or provide actual energy consumption data and burning hours for each light, by calendar month, for up to the past 12 months to verify the continued accuracy of Company billing.

For any regularly scheduled billing cycle in which the customer has not provided acceptable information from its Company-approved Smart Lighting Control Module, the Company shall modify the energy billed going forward by changing the burning hours used to the standard 4,100 burning hours as defined below under Paragraph 1 Service of Terms and Conditions.

The Company reserves the right to modify the customer's rate to SL-E in the continued absence of required data from the customer.

TERMS AND CONDITIONS.

1. Service. For any regularly scheduled billing cycle in which the customer has not provided acceptable information from its Company-approved Smart Lighting Control Module, lighting service will be operated on all-night, every-night lighting schedules, under which lights normally are turned on after sunset and off before sunrise with approximately 4,100 annual operating hours (average monthly burning hours = 341.11 hours). Extended lighting service during all daylight hours will be supplied for lamps specified by the customer. If the customer provides information from the Smart Lighting Control Module as described above to justify a different billing usage, the burning hours provided by the customer will be used instead of the standard 4,100 annual operating hours.

RATE TLCL TRAFFIC LIGHTING CONSTANT LOAD SERVICE**AVAILABILITY.**

To any municipality using the Company's standard service for (a) electric traffic signal lights installed, owned and maintained by the municipality, and/or (b) unmetered traffic control cameras or other small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the municipality.

To any non-municipal non-residential customer using the Company's standard service for unmetered small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the non-municipal customer, which are electrically separate from any other facilities, whether municipally-owned or non-municipally-owned, that are receiving service from PECO as a separate account.

To any non-municipal non-residential customer using the Company's standard service for unmetered small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the non-municipal customer, which are electrically integrated with any other facilities, whether municipally-owned or non-municipally-owned, that are receiving service from PECO as a separate account, but only if the non-municipal customer meets the conditions of the Special Termination Rights provision of this Rate.

CURRENT CHARACTERISTICS.

Standard single phase secondary service.

RATE TABLE.

SERVICE LOCATION CHARGE: \$4.08 PER LOCATION

VARIABLE DISTRIBUTION SERVICE CHARGE: \$x.xxxxx per kWh (as defined below)*

*The Variable Distribution charge includes an Energy Efficiency Program Surcharge of (\$x.xxxxx) per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, NON-BYPASSABLE TRANSMISSION CHARGE, CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SPECIAL RULES AND REGULATIONS.

The use of energy will be estimated by the Company on the basis of the size of lamps and controlling apparatus and the burning hours. The customer shall immediately notify the Company whenever any change is made in the equipment or the burning hours or constant load devices, so that the Company may forthwith revise its estimate of the energy used.

The Company shall not be liable for damage to person or property arising, accruing or resulting from the attachment of the signal equipment to its poles, wires, or fixtures. The customer shall be responsible to determine the amount, location and sufficiency of illumination, including conducting all studies of luminosity, lighting location, and traffic.

SPECIAL TERMINATION RIGHTS

Some facilities that receive service under Rate TLCL may be electrically configured such that it is not possible to terminate service to the Rate TLCL facility without also terminating service to a facility that is receiving service under a separate account, Rate or Rider. In the event of non-payment of bills for service to such a Rate TLCL facility, PECO will provide a termination notice to the customer. The customer may then, at its discretion, notify PECO that it intends to engage in self-termination by removing its facilities from the PECO system within 30 days. If the customer has not removed its facilities within 30 days, then PECO may, at its sole discretion and upon 72-hour notice, physically remove the customer facility as a means of terminating service to that facility. Taking service under Rate TLCL constitutes full customer permission for PECO to engage in such removals. Notwithstanding any removal of such facilities by either the customer of PECO, the customer shall remain fully obligated to PECO for payment of all charges incurred under Rate TLCL. In addition, the customer shall pay to PECO its full cost of removing the facilities, including direct and indirect labor costs, use of truck or other equipment, fuel costs, and costs of storing the customer equipment, all at PECO's normal rates for such work at such time as it may perform such removals. PECO shall not be liable for damage, if any, to the customer equipment that occurs during removal or storage.

TERM OF CONTRACT.

The initial contract term for each signal light installation and constant load device shall be for at least one year.

PAYMENT TERMS.

Standard.

RATE AL – ALLEY LIGHTING IN CITY OF PHILADELPHIA

APPLICABILITY. To multiple, unmetered lighting service supplied the City of Philadelphia to operate lamps and appurtenances for all night outdoor lighting of alleys and courts that are installed, owned and maintained by the City, which assumes the cost involved in making the connections to the Company's facilities. This rate shall no longer be available to new lighting installations effective January 1, 2011.

LIGHTING DISTRIBUTION SERVICE DEFINED. All night outdoor lighting of alleys and courts by lights installed on poles or supports supplied by the City.

NOTICE TO COMPANY. The City shall give advance notice to the Company of all proposed new installations or of the replacement, removal or reconstruction of existing installations. The City shall advise the Company as to each new installation or change in the equipment or connected load of an existing installation, including any change in burning hours and the date on which such new or changed operation took effect.

MONTHLY RATE TABLE.

SERVICE LOCATION CHARGE: \$x.xx Per Location (as defined below)*

*The service location charge includes an Energy Efficiency Program Surcharge of \$x.xx

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT CLAUSE APPLY TO THIS RATE.

PLAN OF MONTHLY BILLING.

Bills may be rendered in equal monthly installments, computed from the calculated annual use of energy, adjusted each month to give effect to any new or changed rate of annual use, by reason of changes in the City's installation, with charge or credit for fractional parts of the month during which a change occurred.

LIABILITY PROVISION.

The Company shall not be liable for damage, or for claims for damage, to persons or property, arising, accruing or resulting from, installation, location or use of lamps, wires, fixtures and appurtenances; or resulting from failure of any light, or lights, to burn for any cause whatsoever. The customer shall be responsible to determine the amount, location and sufficiency of illumination, including conducting all studies of luminosity, lighting location, and traffic.

Supplement No. ~~xx~~ to
ELECTRIC PA P.U.C NO. 8

Deleted: ¶

PECO Energy Company

Electric Service Tariff

COMPANY OFFICE LOCATION

2301 Market Street
Philadelphia, Pennsylvania 19103

For List of Communities Served, See Page 4.

Issued ~~December 1~~, 2025

Effective ~~June 1~~, 2026

Deleted: August

Deleted: 29

Deleted: September

Deleted: 5

ISSUED BY: David M. Vahos – President & CEO
PECO Energy Distribution Company
2301 MARKET STREET
PHILADELPHIA, PA. 19103

NOTICE

PECO Energy Company

Supplement No. ~~xx~~ to
Tariff Electric Pa. P.U.C. No. 8

~~xx~~ Revised Page No. 1

Supersedes ~~xx~~ Revised Page No. 1

LIST OF CHANGES MADE BY THIS SUPPLEMENT

PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS

(EEPC) ~~xx~~ Revised Page No. 48.

Changes as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE R RESIDENCE SERVICE – ~~xx~~ Revised Page No. 52

Change to the Variable Distribution Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE R-H RESIDENTIAL HEATING SERVICE – ~~xx~~ Revised Page No. 53

Change to the Variable Distribution Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-GS GENERAL SERVICE – ~~xx~~ Revised Page No. 57

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-PD PRIMARY-DISTRIBUTION POWER – ~~xx~~ Revised Page No. 59

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE-HT HIGH-TENSION POWER – ~~xx~~ Revised Page No. 60

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE EP ELECTRIC PROPULSION – ~~xx~~ Revised Page No. 61

Change to the Energy Efficiency Charge as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE SL-E STREET LIGHTING CUSTOMER-OWNED FACILITIES – ~~xx~~ Revised Page No. 66

Changes as a result of Phase V of the Energy Efficiency and Conservation Program.

Rate SL-C SMART LIGHTING CONTROL CUSTOMER OWNED FACILITIES - ~~xx~~ Revised Page No. 68

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE TLCL TRAFFIC LIGHTING CONSTANT LOAD SERVICE - ~~xx~~ Revised Page No. 71

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

RATE AL - ALLEY LIGHTING IN CITY OF PHILADELPHIA - ~~xx~~ Revised Page No. 73

Change as a result of Phase V of the Energy Efficiency and Conservation Program.

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Issued ~~December 1~~, 2025

Effective ~~June 1~~, 2026

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Removal of the Commercial/Industrial Direct Load Control Program (DLC) Rider and Residential Direct Load Control Program (DLC) Rider. ¶

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Rider being eliminated in accordance with PECO's Phase V Energy Efficiency and Conservation Program. Thus, this page intentionally left blank. ¶

RATE POL PRIVATE OUTDOOR LIGHTING –Third Revised Page No. 62 – Clean-up page which reflects all rate changes effective September 1, 2025.¶

¶
RATE SL-S STREET LIGHTING-SUBURBAN COUNTIES – Third Revised Page No. 64 – Clean-up page which reflects all rate changes effective September 1, 2025.¶

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PECO Energy Company

Supplement No. ~~xx~~ to
Tariff Electric Pa. P.U.C. No. 8
~~Revised~~ Page No. 2
Supersedes ~~Revised~~ Page No. 2

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Issued December 1, 2025

Effective June 1, 2026

PECO Energy Company

PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS (EEPC)

Purpose: The purpose of this surcharge is to provide for full and current cost recovery of expenditures associated with the Company's Phase ~~v~~ Energy Efficiency and Conservation Program Costs (EEPC).

Applicability: The surcharge shall be a calculated for billing purposes for all customers. The EEPC shall be charged to each rate schedule using the following units:
Phase ~~v~~

Rates R, RS, RH: ~~\$x.xxxxx~~/kWh
Rates GS: ~~\$x.xxxxx~~/kWh
Rate SL-E, ~~\$x.xx~~/location
Rate SL-C ~~\$x.xx~~/location
Rate AL: ~~\$x.xx~~/location
Rate TLCL ~~\$x.xxxxx~~/kWh
Rates HT, PD, EP: ~~\$x.xx~~/kW based on PJM Peak Load Contribution (PLC)

~~*The TLCL surcharge is eliminated; any remaining over/under balances will be applied as needed.*~~

The Variable Distribution Service charges, for the residential rate schedules shall include the above listed EEPC surcharge. For the municipal lighting rate schedules, the applicable variable or fixed distribution service charges shall include the EEPC surcharge.

For Rate GS, the EEPC shall be recovered through a separate variable distribution charge listed on customer's bills. For Rates PD, HT and EP, a PJM PLC shall be determined in accordance with PJM rules and used to calculate the EEPC. Customer's PLC will be computed to the nearest kilowatt. The EEPC shall be recovered through a separate variable distribution charge listed on customer bills.

Calculation of EEPC Surcharge and the Over/Under Recovery:

Billing Provisions: The surcharge and over/under recovery shall be calculated by rate schedule on an annual basis using the following formulas:

$$EEPC(n) = \frac{(C-E)+(SWE)}{(BU)} \times \frac{(1)}{(1-T)}$$

C – The cost of the Energy Efficiency and Conservation Program includes: all expenditures, of the individual programs such as materials, equipment, installation, custom programs, evaluation measurement/verification, educating customers about availability to the extent not included in Consumer Education cost, not recovered through any separate recovery mechanism, and any other cost associated with implementation of the programs. Costs that relate to measures that are applicable to more than one rate class or that are shown to provide system-wide benefits, will be allocated to each class based on the ratio of class-specific projected program costs to the total projected program costs. The program costs are those approved by the PAPUC and audit costs for the Phase ~~v~~ program ending May 31, 2026

E – The over or (under) recovery from the applicable reconciliation period. Interest will not be applied to any over/under collections.

SWE – The cost in dollars of the PaPUC's Statewide Evaluator. These costs will be reconciled separately and added to the EEPC and will not be subject to the 2% spending limit of the EE&C Plan.

BU – The total Billing Units for the applicable recovery period.

T – The current Pennsylvania gross receipts tax rate included in base rates.

n – The rate class for which the EEPC is being calculated: 1 = Residential, 2 = Small C&I, 3 = LC&I, 4 = Street lighting
Residential - Rates R, RH
Small C&I – Rate GS
Large C&I – Rates HT, PD, EP
Street Lighting – Rates SLE, SLC, AL, TLCL

Filings and Reconciliations: The EEPC shall be filed by May 1, each year to be effective June 1 through May 31.

~~The EEPC, effective June 1 each year will be calculated using a 12 month "C factor" for the period June 1 through May 31 and an "E factor" for the period of April 1 through March 31.~~

A reconciliation statement filing, in accordance with C.S. Title 66 §1307(e), will be made by April 30 of each year. The EEPC mechanism is subject to annual audit review by the Bureau of Audits.

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Effective June 1, 2026

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Deleted: The first surcharge, effective June 1, 2021 will contain "C" and "E" factors calculated as follows: The "C-factor" will have two components;¶ one including Phase III costs and the other including Phase IV costs. The Phase IV component will be set using projected costs for the 12 month period from June 1, 2021 through May 31, 2022. The Phase III component will be set using any Phase III costs from projects started prior to the end of Phase III, but not yet billed as of June 1, 2021. For the "E-factor" over/under rate will include the Phase III costs for the 10 month period from June 1, 2020 through March 31, 2021. ¶

Deleted: The second EEPC, effective June 1, 2022, will be calculated as follows: the "C-factor" will include Phase IV costs for the period June 1, 2022 through May 31, 2023 and the "E-factor" will include costs for 12 months comprising Phase III costs for the 2 months of April and May 2021 and Phase IV costs for the 10 months of June 1, 2021 through March 31, 2022. Subsequent

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PECO Energy Company

RATE R RESIDENCE SERVICE

AVAILABILITY.

Single phase service in the entire territory of the Company to the dwelling and appurtenances of a single private family (or to a multiple dwelling unit building consisting of two to five dwelling units, whether occupied or not), for the domestic requirements of its members when such service is supplied through one meter. Service is also available for related farm purposes when such service is supplied through one meter in conjunction with the farmhouse domestic requirements.

Each dwelling unit connected after May 10, 1980 except those dwelling units under construction or under written contract for construction as of that date must be individually metered for their basic service supply. Centrally supplied master metered heating, cooling or water heating service may be provided if such supply will result in energy conservation.

The term "residence service" includes service to: (a) the separate dwelling unit in an apartment house or condominium, but not the halls, basement, or other portions of such building common to more than one such unit; (b) the premises occupied as the living quarters of five persons or less who unite to establish a common dwelling place for their own personal comfort and convenience on a cost sharing basis; (c) the premises owned by a church, and primarily designated or set aside for, and actually occupied and used as, the dwelling place of a priest, rabbi, pastor, rector, nun or other functioning Church Divine, and the resident associates; (d) private dwellings in which a portion of the space is used for the conduct of business by a person residing therein; (e) A detached garage, located on the same premises as the customer's dwelling unit, that is utilized solely for the domestic requirements of the dwelling unit's members and is served through the same meter as the dwelling unit; (g) A detached garage, located on the same premises as the customer's dwelling unit, that is utilized solely for the domestic requirements of the dwelling unit's members and requires separate metering service as a result of wiring restrictions or legal requirements.

The term does NOT include service to: (a) Premises institutional in character including Clubs, Fraternities, Orphanages or Homes; (b) premises defined as a rooming house or boarding house in the Municipal Code for Cities of the First Class enacted by Act of General Assembly; (c) a premises containing a residence unit but primarily devoted to a professional or other office, studio, or other gainful pursuit; (d) electric furnaces or welding apparatus other than a transformer type "limited input" arc welder with an input not to exceed 37 1/2 amperes at 240 volts.

CURRENT CHARACTERISTICS. Standard single phase secondary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$11.30

FIXED DISTRIBUTION SERVICE CHARGE FOR FORMER OFF-PEAK METERS: \$2.19

VARIABLE DISTRIBUTION SERVICE CHARGE:

All kWhs \$ ~~x.xxxxx~~ per kWh

ENERGY SUPPLY CHARGE:

Refer to the Generation Supply Adjustment Procurement Class 1.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

MINIMUM CHARGE: The minimum charge per month will be the Fixed Distribution Service Charge.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, UNIVERSAL SERVICE FUND CHARGE, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE, AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

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PECO Energy Company

RATE RH RESIDENTIAL HEATING SERVICE

AVAILABILITY.

Single phase service to the dwelling and appurtenances of a single private family (or to a multiple dwelling unit building consisting of two to five dwelling units, whether occupied or not), for domestic requirements when such service is provided through one meter and where the dwelling is heated by specified types of electric space heating systems. The systems eligible for this rate are (a) permanently connected electric resistance heaters where such heaters supply all of the heating requirements of the dwelling, (b) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by electric resistance heaters, and (c) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by non electric energy sources. All space heating installations must meet Company requirements. This rate schedule is not available for commercial, institutional or industrial establishments.

Each dwelling unit connected after May 10, 1980 except those dwelling units under construction or under written contract for construction as of that date, must be individually metered

CURRENT CHARACTERISTICS. Standard single phase secondary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$11.30

FIXED DISTRIBUTION SERVICE CHARGE FOR FORMER OFF-PEAK METERS: \$2.19

VARIABLE DISTRIBUTION SERVICE CHARGE:

SUMMER MONTHS. (June through September)

\$ ~~x.xxxxx~~ per kWh for all kWh.

WINTER MONTHS. (October through May)

\$ ~~x.xxxxx~~ per kWh for all kWh

ENERGY SUPPLY CHARGE:

Refer to the Generation Supply Adjustment Procurement Class 1.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

MINIMUM CHARGE. The minimum charge per month will be the Fixed Distribution Service Charge.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, UNIVERSAL SERVICE FUND CHARGE NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM COSTS AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

COMBINED RESIDENTIAL AND COMMERCIAL SERVICE. Where a portion of the service provided is used for commercial purposes, the appropriate general service rate is applicable to all service; or, at the option of the customer, the wiring may be so arranged that the residential service may be separately metered and this rate is then applicable to the residential service only.

PAYMENT TERMS. Standard.

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PECO Energy Company

RATE-GS GENERAL SERVICE

AVAILABILITY.

Service for offices, professional, commercial or industrial establishments, governmental agencies, farms and other applications outside the scope of the Residence Service rate schedules.

Transformed service from the Company's distribution system where the company installs, owns, and maintains any transforming, switching and other receiving equipment required.

For service configurations that are nominally 120/208 volts, 3 phase, 4 wires – If either the service capacity or the parallel-generating capacity exceeds 750 kVA for transformers located inside the building, the only rate option available to the customer will be Rate HT. If either the service capacity or the parallel-generating capacity exceeds 750 kVA but remains at or below 1,500 kVA for transformers outside the building, the customer may request service at 277/480 volts, 3-phase 4-wires from transformers located outside the building. Otherwise the only rate option available to the customer will be Rate HT.

For service configurations that are nominally 277/480 volts, 3 phase, 4 wires - If either the service capacity or the parallel-generating capacity exceeds either 750 kVA for transformers located inside the building or 1,500 kVA for transformers located outside the building, the only rate option available to the customer will be Rate HT.

CURRENT CHARACTERISTICS.

Standard single-phase or polyphase secondary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE:

- \$ 24.47 for single-phase service without demand measurement, or
- \$ 31.20 for single-phase service with demand measurement, or
- \$ 74.66 for polyphase service.

VARIABLE DISTRIBUTION SERVICE CHARGE:

- \$11.34 per kW of billed demand
- (\$0.0006) per kWh for all kWh

ENERGY EFFICIENCY CHARGE: \$ ~~x.xxxxx~~ per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and ¼.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand may be measured where consumption exceeds 1,100 kilowatt-hours per month for three consecutive months; or where load tests indicate a demand of five or more kilowatts; or where the customer requests demand measurement. Measured demands will be determined to the nearest 0.1 of a kilowatt but will not be less than 1.2 kilowatts, and will be adjusted for power factor in accordance with the Rules and Regulations.

For those customers with demand measurement the billing demand will be determined as follows:

- (a) For customers with demand up to 500 kW, the billing demand shall be the measured demand, with a minimum billing demand of 1.2 kW.
- (b) For customers with measured demand or maximum demand greater than 500 kW, the billing demand shall be the greater of (i) the measured demand, or (ii) 40% of the maximum contract demand.

If a measured demand customer has less than 1,100 monthly kilowatt-hours of use, the monthly billing demand will be the measured demand or the metered monthly kilowatt-hours divided by 175 hours, whichever is less, but not less than 1.2 kilowatts.

For those customers without demand measurement, the monthly billing demand will be computed by dividing the metered monthly kilowatt-hours by 175 hours. The computed demand will be determined to the nearest 0.1 of a kilowatt, but will not be less than 1.2 kilowatts.

MINIMUM CHARGE.

The monthly minimum charge for customers without demand measurement will be the Fixed Distribution Service Charge, plus the Variable Distribution Service Charge per KW of minimum billing demand as described above. The monthly minimum charge for customers with demand measurement will be the Fixed Distribution Service Charge, plus per KW of billing demand. In addition to the above, for customers in Procurement Class ¼ charges will be assessed on PJM's reliability pricing model.

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PECO Energy Company

RATE-PD PRIMARY DISTRIBUTION POWER

AVAILABILITY.

Untransformed service from the primary supply lines of the Company's distribution system where the customer installs, owns, and maintains any transforming, switching and other receiving equipment required. However, standard primary service is not available in areas where the distribution voltage has been changed to either 13 kV or 33 kV unless the customer was served with standard primary service before the conversion of the area to either 13 kV or 33 kV. This rate is available only for service locations served on this rate on July 6, 1987 as long as the original primary service has not been removed. PECO Energy may refuse to increase the load supplied to a customer served under this rate when, in PECO Energy's sole judgment, any transmission or distribution capacity limitations exist. If a customer changes the billing rate of a location being served on this rate, PECO Energy may refuse to change that location back to Rate PD when, in PECO Energy's sole judgment, any transmission or distribution capacity limitations exist.

CURRENT CHARACTERISTICS.

Standard primary service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$297.61

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$11.21 per kW of billing demand
(\$0.0006) per kWh for all kWh

ENERGY EFFICIENCY CHARGE: ~~\$x.xx~~ per kW of Peak Load Contribution

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and 3/4.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), NUCLEAR DECOMMISSIONING COST ADJUSTMENT PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE AND PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 25 kilowatts. The 25kW minimum shall apply to the Energy Supply Charge and the Transmission Supply Charge. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract.

MINIMUM CHARGE.

The monthly minimum charge shall be the Fixed Distribution Service Charge, plus the charge per kW component of the Variable Distribution Service Charge, plus in the case of Procurement Class 3/4 customers, charges assessed under PJM's reliability pricing model.

TERM OF CONTRACT.

The initial contract term shall be for at least three years.

PAYMENT TERMS.

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PECO Energy Company

RATE-HT HIGH TENSION POWER

AVAILABILITY.

Untransformed service from the Company's standard high tension lines, where the customer installs, owns, and maintains, any transforming, switching and other receiving equipment required.

CURRENT CHARACTERISTICS.

Standard high tension service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$371.68

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$7.12 per kW of billing demand
(\$0.0006) per kWh for all kWh

HIGH VOLTAGE DISTRIBUTION DISCOUNT:

For customers supplied at 33,000 volts: \$0.24 per kW of measured demand.
For customers supplied at 69,000 volts: \$1.94 per kW of measured demand.
For customers supplied over 69,000 volts: \$1.94 per kW of measured demand.

ENERGY EFFICIENCY CHARGE: ~~\$x.xx~~ per kW of Peak Load Contribution

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Classes 2 and 3/4.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND CONSERVATION PROGRAM AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 25 kilowatts. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract. The 25 kW minimum shall apply to the Energy Supply Charge and the Transmission Supply Charge.

CONJUNCTIVE BILLING OF MULTIPLE DELIVERY POINTS.

If the load of a customer located at a delivery point becomes greater than the capacity of the standard circuit or circuits established by the Company to supply the customer at that delivery point, upon the written request of the customer, the Company will establish a new delivery point and bill the customer as if it were delivering and metering the two services at a single point, as long as installation of the new service is, in the Company's opinion, less costly for the Company than upgrading the service to the first delivery point and provided that such multi-point delivery is not disadvantageous to the Company.

MINIMUM CHARGE.

The monthly minimum charge shall be the Fixed Distribution Service Charge, plus the charge per kW component of the Variable Distribution Service Charge, and modify less the high voltage discount where applicable plus in the case of Procurement Class 3/4 customers, charges assessed on PJM's reliability pricing model.

TERM OF CONTRACT.

The initial contract term shall be for at least three years.

PAYMENT TERMS.

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PECO Energy Company

RATE EP ELECTRIC PROPULSION

AVAILABILITY.

This rate is available only to the National Rail Passenger Corporation (AMTRAK) and to the Southeastern Pennsylvania Transportation Authority (SEPTA) for untransformed service from the Company's standard high tension lines, where the customer installs, owns, and maintains any transforming, switching and other receiving equipment required and where the service is provided for the operation of electrified transit and railroad systems and appurtenances. Rate EP is also available to legacy transformed service that is receiving service pursuant to Rate EP as of January 1, 2020; Rate EP or successor rates shall remain available for such legacy transformed service until at least December 31, 2040.

CURRENT CHARACTERISTICS.

Standard sixty hertz (60 Hz) high tension service.

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: \$1,292.35 per delivery point

VARIABLE DISTRIBUTION SERVICE CHARGE:

\$6.15 per kW of billing demand
(\$0.0006) per kWh for all kWh

HIGH VOLTAGE DISTRIBUTION DISCOUNT:

For delivery points supplied at 33,000 volts: \$0.24 per kW.
For delivery points supplied at 69,000 volts: \$1.94 per kW for first 10,000 kW of measured demand.
For delivery points supplied over 69,000 volts \$1.94 per kW for first 100,000 kW of measured demand.

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class %.

ENERGY EFFICIENCY CHARGE: ~~\$x.xx~~ per kW of Peak Load Contribution

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

DETERMINATION OF BILLING DEMAND.

The billing demand will be computed to the nearest kilowatt and will never be less than the measured demand, adjusted for power factor in accordance with the Rules and Regulations, nor less than 5,000 kilowatts. Additionally, the billing demand will not be less than 40% of the maximum demand specified in the contract.

CONJUNCTIVE BILLING OF MULTIPLE DELIVERY POINTS.

If the load of a customer located at a delivery point becomes greater than the capacity of the standard circuit or circuits established by the Company to supply the customer at that delivery point, upon the written request of the customer, the Company will establish a new delivery point and bill the customer as if it were delivering and metering the two services at a single point, as long as installation of the new service is, in the Company's opinion, less costly for the Company than upgrading the service to the first delivery point and provided that such multi-point delivery is not disadvantageous to the Company. Conjunctive billing under this section is available regardless of whether the conjunctively-billed sites take generation service from one or more generation suppliers and/or PECO default service.

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PECO Energy Company

RATE SL-E STREET LIGHTING CUSTOMER OWNED FACILITIES

AVAILABILITY.

To any governmental agency for outdoor lighting provided for the safety and convenience of the public of streets, highways, bridges, parks or similar places, including directional highway signs at locations where other outdoor lighting service is established hereunder only if all of the Utilization Facilities, as defined in Terms and Conditions in this Base Rate, are installed, owned and maintained by a governmental agency.

This rate is also available to community associations of residential property owners both inside and outside the City of Philadelphia for the lighting of streets that are not dedicated. This rate is not available to commercial or industrial customers. All facilities and their installation shall be approved by the Company.

MONTHLY RATE TABLE.

SERVICE LOCATION DISTRIBUTION CHARGE: ~~\$x~~ ~~xx~~ per Service Location (as defined below) *
VARIABLE DISTRIBUTION CHARGE: \$0.02541 per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2*.

* The service location charge includes an Energy Efficiency Program Surcharge (\$0.08) per location.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SERVICE LOCATION.

A Service Location is the Point of Delivery on the Company's secondary circuit. That connects to one or more Utilization Facilities. A customer may connect multiple Utilization Facilities to a single Service Location in accordance with Paragraph 2c and approval by the Company.

DETERMINATION OF ENERGY BILLED.

The energy use for a month of a Service Location shall be computed to the nearest kilowatt hour as the product of one thousandth of its wattage and the effective hours of use of such wattage during the calendar month under the established operation schedules as set forth under Terms and Conditions, Paragraph 1 Service. The wattage, expressed to the nearest tenth of a watt, of a Service Location shall be composed of manufacturer's rating of its lamps, ballasts, transformers, individual controls and other load components required for its operation. The aggregate of the kilowatt hours thus computed for all Active Service Locations shall constitute the energy billed for the month.

TERMS AND CONDITIONS.

1. Service. Lighting service will be operated on all-night, every-night lighting schedules, under which lights normally are turned on after sunset and off before sunrise with approximately 4,100 annual operating hours (average monthly burning hours = 341.11 hours). Extended lighting service during all daylight hours will be supplied for lamps specified by the customer.

2. Ownership of Utilization Facilities.

a. Service Locations Supplied from Aerial Circuits: customer shall provide, own and maintain the Utilization Facilities defined as the brackets, hangers, luminaires, lamps/LED array(s), ballasts/drivers, transformers, individual controls, conductors, molding and supporting insulators between the lamp receptacles and line wires of the Company's distribution facilities and any other components as required for the operation of each Service Location.

The Company shall provide the supporting pole or post for such aerially supplied Service Location and will issue authorization to permit the customer to install thereon the said Utilization Facilities. If the Company sells aerially supplied streetlighting facilities to a government agency in order to qualify for SL-E, such sale will include the supporting pole or post.

b. Service Locations Supplied from Underground Circuits: customer shall provide, own and maintain the Utilization Facilities defined as brackets or hangers, luminaires, lamps/LED array(s), ballasts/drivers, transformers, individual controls, and conductors and shall assume all costs of installing such Utilization Facilities. Customer shall also provide, own, and maintain the supporting pole or post foundation with 90 degree pipe bend, and conduits from the luminaires to sidewalk level, or in special cases, such as Federally and State financed limited access highways, to a Service Location designated by the Company on its secondary voltage circuit.

Except as provided in Paragraph 5 Supply Facilities, the Company shall own conduit from the distribution circuit to the 90 degree pipe bend, shall own conductors from its distribution system to the designated Service Location and shall provide sufficient length of conductors for splicing at the designated Service Location or in the post base where sidewalk level access is provided.

- c. Service to Group of Utilization Facilities:

AERIAL SUPPLY

When the customer requests service to a group of Utilization Facilities supplied from aerial distribution facilities, the customer is responsible for providing the support poles or posts for the Utilization Facilities. The Company will provide a service, nominally 100 feet, to the customer's first supporting structure. The customer is responsible for installing supply conductors from the first supporting structure to all Utilization Facilities.

UNDERGROUND SUPPLY

When groups of Utilization Facilities are supplied from underground distribution facilities, the customer is responsible for the supporting poles or posts and the supply conductors to each Utilization Facility from the designated Service Location. If the customer requests an underground supply to a group of Utilization Facilities and the designated Service Location is a secondary terminal pole, the customer will install, own, maintain all cable, including the cable on the pole.

3. Standards of Construction for Utilization Facilities. Customer construction shall meet the Company's standards which are based upon the National Electrical Safety Code. Designs of proposed construction deviating from such standards shall be submitted to the Company for approval before proceeding with any work.

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PECO Energy Company

RATE SL-C SMART LIGHTING CONTROL LIGHTING CUSTOMER OWNED FACILITIES

AVAILABILITY.

Any governmental agency for outdoor lighting, provided for the safety and convenience of the public of streets, highways, bridges, parks or similar places, that complies with each of the following conditions:

- (A) Installs a Smart Lighting Control Module approved by the Company that has capabilities including but not necessarily limited to:
 - a. Measurement of energy usage at the individual Utilization Facility level.
 - b. Customer control of the lamp's burning hours.
 - c. Data showing failure of the lamp to burn, such as customer notification, that customer can provide to Company upon request.
 - d. Ability of customer to dim the lights (LED only).
- (B) Provides energy usage to the Company as described below under Data Requirements.
- (C) Installs, owns, and maintains all Utilization Facilities, as defined in the Terms and Conditions of this Base Rate. (All facilities and their installation shall be approved by the Company.)

This rate is also available to community associations of residential property owners both inside and outside the City of Philadelphia for the lighting of streets that are not dedicated. This rate is not available to commercial or industrial customers.

Customers may take service under the rate beginning on July 1, 2019. The below listed pricing will be revised, as needed, based on applicable surcharge adjustments prior to the SL-C effective service date of July 1, 2019.

MONTHLY RATE TABLE.

SERVICE LOCATION DISTRIBUTION CHARGE: ~~\$x.xx per~~ Service Location (as defined below)*
VARIABLE DISTRIBUTION CHARGE: \$0.04780 per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2*.

* The service location charge includes an Energy Efficiency Program Surcharge of ~~\$x.xx~~ per location.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SERVICE LOCATION.

A Service Location is the Point of Delivery on the Company's secondary circuit that connects to one or more Utilization Facilities. A customer may connect multiple Utilization Facilities to a single Service Location in accordance with Paragraph 2c and approval by the Company

DATA REQUIREMENTS.

The customer must notify the Company of its intent to enroll or modify lights under this rate at least 30 days prior to the start of the regularly scheduled billing cycle during which the enrollment or modification will become effective.

The customer must provide the following data to the Company from its Company-approved Smart Lighting Control Module for each light added or modified:

- 8. Manufacturer-rated wattage
- 9. Annual burning hours, if different than the standard 4,100 burning hours as defined below under paragraph 1 Service of Terms and Conditions
- 10. Dimming percentage/factor

The Company also requires the customer to provide the Global Positioning System (GPS) coordinates for each light.

DETERMINATION OF ENERGY BILLED.

Upon acceptance of the required data, the Company shall modify the energy billed going forward for a period of up to twelve months or at another frequency as required by the Company. The energy use for a month of a Service Location shall be computed to the nearest kilowatt hour as the product of one thousandth of its wattage, adjusted based on the provided dimming percentage/factor, and the provided burning hours during the calendar month.

The Company may, at any time and without prior notice, request that the customer provide updates to the above data or provide actual energy consumption data and burning hours for each light, by calendar month, for up to the past 12 months to verify the continued accuracy of Company billing.

For any regularly scheduled billing cycle in which the customer has not provided acceptable information from its Company-approved Smart Lighting Control Module, the Company shall modify the energy billed going forward by changing the burning hours used to the standard 4,100 burning hours as defined below under Paragraph 1 Service of Terms and Conditions.

The Company reserves the right to modify the customer's rate to SL-E in the continued absence of required data from the customer.

TERMS AND CONDITIONS.

1. Service. For any regularly scheduled billing cycle in which the customer has not provided acceptable information from its Company-approved Smart Lighting Control Module, lighting service will be operated on all-night, every-night lighting schedules, under which lights normally are turned on after sunset and off before sunrise with approximately 4,100 annual operating hours (average monthly burning hours = 341.11 hours). Extended lighting service during all daylight hours will be supplied for lamps specified by the customer. If the customer provides information from the Smart Lighting Control Module as described above to justify a different billing usage, the burning hours provided by the customer will be used instead of the standard 4,100 annual operating hours.

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PECO Energy Company

RATE TLCL TRAFFIC LIGHTING CONSTANT LOAD SERVICE

AVAILABILITY.

To any municipality using the Company's standard service for (a) electric traffic signal lights installed, owned and maintained by the municipality, and/or (b) unmetered traffic control cameras or other small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the municipality.

To any non-municipal non-residential customer using the Company's standard service for unmetered small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the non-municipal customer, which are electrically separate from any other facilities, whether municipally-owned or non-municipally-owned, that are receiving service from PECO as a separate account.

To any non-municipal non-residential customer using the Company's standard service for unmetered small constant load electronic devices with a demand of less than 1.2 kW, owned and maintained by the non-municipal customer, which are electrically integrated with any other facilities, whether municipally-owned or non-municipally-owned, that are receiving service from PECO as a separate account, but only if the non-municipal customer meets the conditions of the Special Termination Rights provision of this Rate.

CURRENT CHARACTERISTICS.

Standard single phase secondary service.

RATE TABLE.

SERVICE LOCATION CHARGE: \$4.08 PER LOCATION

VARIABLE DISTRIBUTION SERVICE CHARGE: \$~~x~~.~~xxxx~~ per kWh (as defined below)*

*The Variable Distribution charge includes an Energy Efficiency Program Surcharge of (\$~~x~~.~~xxxx~~) per kWh

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS, PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY, NON-BYPASSABLE TRANSMISSION CHARGE, CONSERVATION PROGRAM COSTS, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT APPLY TO THIS RATE.

SPECIAL RULES AND REGULATIONS.

The use of energy will be estimated by the Company on the basis of the size of lamps and controlling apparatus and the burning hours. The customer shall immediately notify the Company whenever any change is made in the equipment or the burning hours or constant load devices, so that the Company may forthwith revise its estimate of the energy used.

The Company shall not be liable for damage to person or property arising, accruing or resulting from the attachment of the signal equipment to its poles, wires, or fixtures. The customer shall be responsible to determine the amount, location and sufficiency of illumination, including conducting all studies of luminosity, lighting location, and traffic.

SPECIAL TERMINATION RIGHTS

Some facilities that receive service under Rate TLCL may be electrically configured such that it is not possible to terminate service to the Rate TLCL facility without also terminating service to a facility that is receiving service under a separate account, Rate or Rider. In the event of non-payment of bills for service to such a Rate TLCL facility, PECO will provide a termination notice to the customer. The customer may then, at its discretion, notify PECO that it intends to engage in self-termination by removing its facilities from the PECO system within 30 days. If the customer has not removed its facilities within 30 days, then PECO may, at its sole discretion and upon 72-hour notice, physically remove the customer facility as a means of terminating service to that facility. Taking service under Rate TLCL constitutes full customer permission for PECO to engage in such removals. Notwithstanding any removal of such facilities by either the customer of PECO, the customer shall remain fully obligated to PECO for payment of all charges incurred under Rate TLCL. In addition, the customer shall pay to PECO its full cost of removing the facilities, including direct and indirect labor costs, use of truck or other equipment, fuel costs, and costs of storing the customer equipment, all at PECO's normal rates for such work at such time as it may perform such removals. PECO shall not be liable for damage, if any, to the customer equipment that occurs during removal or storage.

TERM OF CONTRACT.

The initial contract term for each signal light installation and constant load device shall be for at least one year.

PAYMENT TERMS.

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PECO Energy Company

RATE AL – ALLEY LIGHTING IN CITY OF PHILADELPHIA

APPLICABILITY. To multiple, unmetered lighting service supplied the City of Philadelphia to operate lamps and appurtenances for all night outdoor lighting of alleys and courts that are installed, owned and maintained by the City, which assumes the cost involved in making the connections to the Company's facilities. This rate shall no longer be available to new lighting installations effective January 1, 2011.

LIGHTING DISTRIBUTION SERVICE DEFINED. All night outdoor lighting of alleys and courts by lights installed on poles or supports supplied by the City.

NOTICE TO COMPANY. The City shall give advance notice to the Company of all proposed new installations or of the replacement, removal or reconstruction of existing installations. The City shall advise the Company as to each new installation or change in the equipment or connected load of an existing installation, including any change in burning hours and the date on which such new or changed operation took effect.

MONTHLY RATE TABLE.

SERVICE LOCATION CHARGE: \$~~x.xx~~ Per Location (as defined below)*

*The service location charge includes an Energy Efficiency Program Surcharge of \$~~x.xx~~

ENERGY SUPPLY CHARGE: Refer to the Generation Supply Adjustment Procurement Class 2.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT SERVICE: The Transmission Service Charge shall apply.

STATE TAX ADJUSTMENT CLAUSE, DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC), PROVISION FOR THE RECOVERY OF CONSUMER EDUCATION PLAN COSTS PROVISION FOR THE RECOVERY OF ENERGY EFFICIENCY AND CONSERVATION PROGRAM COSTS, NON-BYPASSABLE TRANSMISSION CHARGE, FIBER AFFILIATE REVENUE SURCHARGE, INCREMENTAL COVID-19 RELATED UNCOLLECTIBLE SURCHARGE AND NUCLEAR DECOMMISSIONING COST ADJUSTMENT CLAUSE APPLY TO THIS RATE.

PLAN OF MONTHLY BILLING.

Bills may be rendered in equal monthly installments, computed from the calculated annual use of energy, adjusted each month to give effect to any new or changed rate of annual use, by reason of changes in the City's installation, with charge or credit for fractional parts of the month during which a change occurred.

LIABILITY PROVISION.

The Company shall not be liable for damage, or for claims for damage, to persons or property, arising, accruing or resulting from, installation, location or use of lamps, wires, fixtures and appurtenances; or resulting from failure of any light, or lights, to burn for any cause whatsoever. The customer shall be responsible to determine the amount, location and sufficiency of illumination, including conducting all studies of luminosity, lighting location, and traffic.

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**PHASE V ENERGY EFFICIENCY AND CONSERVATION PLAN
PROGRAM COST BY RATE CLASS (PY18 -PY22)**

Cost	Residential (Includes Low Income)	Small C&I	Large C&I	Municipal*	Total
Residential					
1. Incentives	\$77,172,235	\$0	\$0	\$0	\$77,172,235
2. CSP Delivery Fees	\$48,223,069	\$0	\$0	\$0	\$48,223,069
3. Marketing	\$11,265,135	\$0	\$0	\$0	\$11,265,135
4. AEPS Registration Support	\$0	\$0	\$0	\$0	\$0
5. Common Costs	\$25,039,032	\$0	\$0	\$0	\$25,039,032
Subtotal Residential Programs	\$161,699,470	\$0	\$0	\$0	\$161,699,470
Small Commercial					
6. Incentives	\$0	\$69,622,197	\$0	\$0	\$69,622,197
7. CPS Delivery Fees	\$0	\$36,103,112	\$0	\$0	\$36,103,112
8. Marketing	\$0	\$1,585,504	\$0	\$0	\$1,585,504
9. AEPS Registration Support	\$0	\$33,423	\$0	\$0	\$33,423
10. Common Costs	\$0	\$21,016,193	\$0	\$0	\$21,016,193
Subtotal C&I Small Programs	\$0	\$128,360,429	\$0	\$0	\$128,360,429
Large Commercial					
11. Incentives	\$0	\$0	\$71,842,639	\$0	\$71,842,639
12. CPS Delivery Fees	\$0	\$0	\$42,393,912	\$0	\$42,393,912
13. Marketing	\$0	\$0	\$1,792,947	\$0	\$1,792,947
14. AEPS Registration Support	\$0	\$0	\$39,327	\$0	\$39,327
15. Common Costs	\$0	\$0	\$21,199,117	\$0	\$21,199,117
Subtotal C&I Large Programs	\$0	\$0	\$137,267,942	\$0	\$137,267,942
Municipal					
16. Incentives	\$0	\$0	\$0	\$253	\$253
17. CPS Delivery Fees	\$0	\$0	\$0	\$37,066	\$37,066
18. Marketing	\$0	\$0	\$0	\$0	\$0
19. AEPS Registration Support	\$0	\$0	\$0	\$0	\$0
20. Common Costs	\$0	\$0	\$0	\$20,671	\$20,671
Subtotal Municipal Programs	\$0	\$0	\$0	\$57,991	\$57,991
Subtotal Com., Ind. & Muni. Programs	\$0	\$128,360,429	\$137,267,942	\$57,991	\$265,686,362
Grand Total	\$161,699,470	\$128,360,429	\$137,267,942	\$57,991	\$427,385,831

* Municipal lighting costs have been allocated across the Small C&I, Large C&I and ML rate classes using the allocation methodology approved by the Commission at Docket No. M-2020-3020830, adopted on May 23, 2024.

**PHASE V ENERGY EFFICIENCY AND CONSERVATION PLAN
PROGRAM COST BY RATE CLASS (PY18)**

Cost	Residential (Includes Low Income)	Small C&I	Large C&I	Municipal*	Total
Residential					
1. Incentives	\$15,939,279	\$0	\$0	\$0	\$15,939,279
2. CSP Delivery Fees	\$9,825,060	\$0	\$0	\$0	\$9,825,060
3. Marketing	\$2,358,099	\$0	\$0	\$0	\$2,358,099
4. AEPS Registration Support	\$0	\$0	\$0	\$0	\$0
5. Common Costs	\$5,224,837	\$0	\$0	\$0	\$5,224,837
Subtotal Residential Programs	\$33,347,275	\$0	\$0	\$0	\$33,347,275
Small Commercial					
6. Incentives	\$0	\$11,513,741	\$0	\$0	\$11,513,741
7. CPS Delivery Fees	\$0	\$5,770,556	\$0	\$0	\$5,770,556
8. Marketing	\$0	\$290,492	\$0	\$0	\$290,492
9. AEPS Registration Support	\$0	\$8,011	\$0	\$0	\$8,011
10. Common Costs	\$0	\$4,094,773	\$0	\$0	\$4,094,773
Subtotal C&I Small Programs	\$0	\$21,677,573	\$0	\$0	\$21,677,573
Large Commercial					
11. Incentives	\$0	\$0	\$9,591,313	\$0	\$9,591,313
12. CPS Delivery Fees	\$0	\$0	\$6,655,619	\$0	\$6,655,619
13. Marketing	\$0	\$0	\$335,018	\$0	\$335,018
14. AEPS Registration Support	\$0	\$0	\$9,239	\$0	\$9,239
15. Common Costs	\$0	\$0	\$4,131,258	\$0	\$4,131,258
Subtotal C&I Large Programs	\$0	\$0	\$20,722,447	\$0	\$20,722,447
Municipal					
16. Incentives	\$0	\$0	\$0	\$51	\$51
17. CPS Delivery Fees	\$0	\$0	\$0	\$7,413	\$7,413
18. Marketing	\$0	\$0	\$0	\$0	\$0
19. AEPS Registration Support	\$0	\$0	\$0	\$0	\$0
20. Common Costs	\$0	\$0	\$0	\$4,134	\$4,134
Subtotal Municipal Programs	\$0	\$0	\$0	\$11,598	\$11,598
Subtotal Com., Ind. & Muni. Programs	\$0	\$21,677,573	\$20,722,447	\$11,598	\$42,411,618
Grand Total	\$33,347,275	\$21,677,573	\$20,722,447	\$11,598	\$75,758,893

* Municipal lighting costs have been allocated across the Small C&I, Large C&I and ML rate classes using the allocation methodology approved by the Commission at Docket No. M-2020-3020830, adopted on May 23, 2024.

PECO - Electric
Calculation of EEPC Phase V Rate Effective June 1, 2026
Residential

		<u>Amount</u>	<u>\$/KWH</u>	
(1)	C = Projected Recoverable EEPC Costs	\$ 33,045,196	\$0.00230	p. 2 of 3
(2)	E = Experienced & Estimated Net Over/(Under) Over/(Under) - Phase IV - Year 5 ^(a) ^(b)	<u>\$ 665,230</u>	\$0.00005	p. 3 of 3
(3)	Net Recoverable (C - E)	\$ 32,379,966	\$0.00226	
(4)	BU = Projected R, RH Sales for Computation Period	14,337,885,762		
(5)	T = Pennsylvania gross receipts tax rate	5.90%		
(6)	EEPC = [(C-E)+(SWE)/BU]/(1-T)	\$0.00240		

(a) Includes SWE costs

(b) E-factor includes a credit estimate of \$117,425 of true up from the Phase IV PJM FCM Cost Reduction. This was eliminated in the Phase V program.

PECO
Phase V Energy Efficiency and Conservation Plan
C-Factor Calculation

Exhibit MAM-3
Page 2 of 12

Residential - C-Factor	
	Expenditures
EE&C Recovery - Phase V (2026-2027)	\$ 33,347,275
Less Embedded EE&C Labor⁽¹⁾	\$ 453,417
Plus Statewide Evaluator⁽²⁾	\$ 151,338
Total EE&C and Statewide Evaluator	\$ 33,045,196
Estimated Sales - kWh	14,337,885,762

⁽¹⁾Adjustment for the costs of embedded employees working on Phase V EE&C

⁽²⁾ Statewide Evaluator costs based on estimated Phase V spend prorated to 5 years for Phase V

PECO - Electric
Phase IV Energy Efficiency and Conservation Program Costs (EEPC)
Residential Class
(Rates R, RH, CAP)
E-Factor Calculation

Phase IV Balance Y4 **\$ 1,010,936**

E-Factor Period			C-Factor												Cumulative Over/(Under)
	Phase III Expenditures	Phase IV Expenditures	Residential Sales - kWh	C-Factor Rate	C-Factor Revenue ^(b)	Over/(Under) Recovery	E-Factor Rate	E-Factor Revenue ^(b)	SWE Revenues	Total E-Factor Revenues (a)	Total Revenues (E + C) Recovery	Over/(Under) Recovery			
	(1)	(2)	(3)	(4)	(5)	(6) = (5) - (1) - (2)	(7)	(8)	(9)	(10) = (8) - (9)	(11) = (10) + (5)	(12) = (11) - (1) - (2)	(13)		
Apr-25	\$ -	\$ 1,978,625	942,079,494	0.00185	\$ 1,895,893	\$ (82,731)	0.00028	\$ 107,589	\$ 17,591	\$ 89,998	\$ 1,985,892	\$ 7,267	\$ 1,018,203		
May-25	\$ -	\$ 2,161,337	875,590,961	0.00185	\$ 1,762,088	\$ (399,249)	0.00028	\$ 99,996	\$ 16,349	\$ 83,647	\$ 1,845,735	\$ (315,602)	\$ 702,601		
Jun-25	\$ -	\$ 2,585,168	1,004,956,432	0.00174	\$ 1,996,823	\$ (588,345)	(0.00008)	\$ (96,038)	\$ 16,689	\$ (112,728)	\$ 1,884,095	\$ (701,073)	\$ 1,528		
Jul-25	\$ -	\$ 2,760,444	1,590,960,287	0.00174	\$ 3,554,382	\$ 793,938	(0.00008)	\$ (170,950)	\$ 23,135	\$ (194,085)	\$ 3,360,297	\$ 599,853	\$ 601,381		
Aug-25	\$ -	\$ 2,826,066	1,504,213,125	0.00174	\$ 2,617,088	\$ (208,978)	(0.00008)	\$ (125,870)	\$ 21,873	\$ (147,744)	\$ 2,469,344	\$ (356,721)	\$ 244,660		
Sep-25	\$ -	\$ 1,888,713	1,113,421,847	0.00174	\$ 1,937,174	\$ 48,461	(0.00008)	\$ (93,170)	\$ 16,191	\$ (109,360)	\$ 1,827,814	\$ (60,900)	\$ 183,760		
Oct-25	\$ -	\$ 1,782,664	993,372,150	0.00174	\$ 1,728,307	\$ (54,357)	(0.00008)	\$ (83,124)	\$ 14,445	\$ (97,569)	\$ 1,630,738	\$ (151,926)	\$ 31,834		
Nov-25 (est)	\$ -	\$ 2,036,543	1,032,026,305	0.00174	\$ 1,795,410	\$ (241,132)	(0.00008)	\$ (86,351)	\$ 14,445	\$ (100,796)	\$ 1,694,614	\$ (341,929)	\$ (310,094)		
Dec-25 (est)	\$ -	\$ 2,015,086	1,358,577,647	0.00174	\$ 2,363,510	\$ 348,424	(0.00008)	\$ (113,674)	\$ 14,445	\$ (128,119)	\$ 2,235,391	\$ 220,305	\$ (89,790)		
Jan-26 (est)	\$ -	\$ 2,078,661	1,494,435,038	0.00174	\$ 2,599,860	\$ 521,199	(0.00008)	\$ (125,042)	\$ 14,445	\$ (139,487)	\$ 2,460,373	\$ 381,712	\$ 291,923		
Feb-26 (est)	\$ -	\$ 2,094,949	1,237,299,955	0.00174	\$ 2,152,524	\$ 57,575	(0.00008)	\$ (103,527)	\$ 14,445	\$ (117,972)	\$ 2,034,552	\$ (60,397)	\$ 231,526		
Mar-26 (est)	\$ -	\$ 2,029,910	1,128,688,505	0.00174	\$ 1,963,573	\$ (66,337)	(0.00008)	\$ (94,439)	\$ 14,445	\$ (108,884)	\$ 1,854,689	\$ (175,221)	\$ 56,305		
Total	\$ -	\$ 26,238,165	14,275,621,745		\$ 26,366,634	\$ 128,468		\$ (884,601)	\$ 198,499	\$ (1,083,100)	\$ 25,283,534	\$ (954,631)			
SWE Over/Under													\$ 491,500		
Total Over/(Under)													\$ 547,805		

(a) Revenues do not include GRT and rounding

(b) C Factor and E Factor Revenues are allocated on a percentage basis.

PECO - Electric
Calculation of EEPC Phase V Rate Effective June 1, 2026
Commercial

		<u>Amount</u>	<u>\$/KWH</u>	
(1)	C = Projected Recoverable EEPC Costs ^(c)	\$ 21,652,856	\$0.00285	p. 2 of 3
(2)	E = Experienced & Estimated Net Over/(Under) Over/(Under) - Phase IV - Year 5 ^{(a) (b)}	\$ 11,232,045	\$0.00148	p. 3 of 3
(3)	Net Recoverable (C - E)	\$ 10,420,810	\$0.00137	
(4)	BU = Projected SCI Sales for Computation Period	7,610,659,471		
(5)	T = Pennsylvania gross receipts tax rate	5.90%		
(6)	EEPC = [(C-E)+(SWE)/BU]/(1-T)	\$0.00146		

(a) Includes SWE costs

(b) E-factor includes a charge estimate of \$1,449,704 of true up from the Phase IV PJM FCM Cost Reduction. This was eliminated in the Phase V program.

(c) Municipal lighting costs have been allocated in accordance with the Opinion and Order at Docket No. M-2020-3020830, adopted on May 23, 2024.

PECO
Phase V Energy Efficiency and Conservation Plan
C-Factor Calculation

Exhibit MAM-3
Page 5 of 12

Commercial - C-Factor	
	Expenditures
EE&C Recovery - Phase IV (2026-2027)	\$ 21,677,573
Less Embedded EE&C Labor⁽¹⁾	\$ 144,853
Plus Statewide Evaluator⁽²⁾	\$ 120,135
Total EE&C and Statewide Evaluator	\$ 21,652,856
Estimated Sales - kWh	7,610,659,471

⁽¹⁾ Adjustment for the costs of embedded employees working on Phase V EE&C

⁽²⁾ Statewide Evaluator costs based on estimated Phase V spend prorated to 5 years for Phase V

PECO - Electric
Phase IV Energy Efficiency and Conservation Program costs (EEPC)
Commercial Class
(Rate GS)
E Factor Calculation

Exhibit MAM-3
Page 6 of 12

Phase IV Balance Y4 **\$ (4,287,701)**

E-Factor Period	Phase III		Commercial Sales - kWh (3)	C-Factor Rate (4)	C-Factor Revenue ^(b) (5)	C-Factor Over/(Under) Recovery (6) = (5) - (1) - (2)		E-Factor Rate (7)	E-Factor Revenue ^(b) (8)	SWE Revenues (9)	Total E-Factor Revenues (a) Recovery (10) = (8) - (9) (11) = (10) + (5)		Over/(Under) Recovery (12) = (11) - (1) - (2)		Cumulative Over/(Under) (13)
	Expenditures	Expenditures													
	(1)	(2)													
Apr-25	\$ -	\$ 1,466,867	627,677,521	0.00415	\$ 4,766,879	\$ 3,300,011	\$ 0.00431	\$ 518,025	\$ 39,231	\$ 478,793	\$ 5,245,672	\$ 3,778,805	\$ (508,896)		
May-25	\$ -	\$ 3,138,256	597,590,050	0.00415	\$ 4,534,309	\$ 1,396,053	\$ 0.00431	\$ 492,751	\$ 37,317	\$ 455,434	\$ 4,989,743	\$ 1,851,487	\$ 1,342,590		
Jun-25	\$ -	\$ 1,594,503	651,194,605	0.00335	\$ 3,720,406	\$ 2,125,903	\$ 0.00034	\$ 373,449	\$ 30,390	\$ 343,059	\$ 4,063,465	\$ 2,468,962	\$ 3,811,553		
Jul-25	\$ -	\$ 2,794,499	714,580,392	0.00335	\$ 2,348,278	\$ (446,221)	\$ 0.00034	\$ 235,717	\$ 19,182	\$ 216,535	\$ 2,564,813	\$ (229,686)	\$ 3,581,866		
Aug-25	\$ -	\$ 2,015,638	744,005,937	0.00335	\$ 2,640,608	\$ 624,970	\$ 0.00034	\$ 265,060	\$ 21,570	\$ 243,491	\$ 2,884,099	\$ 868,461	\$ 4,450,327		
Sep-25	\$ -	\$ 2,206,089	639,831,573	0.00335	\$ 2,176,722	\$ (29,367)	\$ 0.00034	\$ 218,496	\$ 17,780	\$ 200,716	\$ 2,377,438	\$ 171,349	\$ 4,621,676		
Oct-25	\$ -	\$ 1,209,475	624,781,910	0.00335	\$ 2,090,566	\$ 881,091	\$ 0.00034	\$ 209,848	\$ 17,077	\$ 192,771	\$ 2,283,337	\$ 1,073,863	\$ 5,695,539		
Nov-25 (est)	\$ -	\$ 1,584,146	565,858,169	0.00335	\$ 1,894,696	\$ 310,550	\$ 0.00034	\$ 190,187	\$ 17,077	\$ 173,110	\$ 2,067,806	\$ 483,660	\$ 6,179,198		
Dec-25 (est)	\$ -	\$ 1,279,436	657,936,380	0.00335	\$ 2,203,007	\$ 923,571	\$ 0.00034	\$ 221,135	\$ 17,077	\$ 204,058	\$ 2,407,064	\$ 1,127,628	\$ 7,306,826		
Jan-26 (est)	\$ -	\$ 870,838	708,934,566	0.00335	\$ 2,373,767	\$ 1,502,928	\$ 0.00034	\$ 238,275	\$ 17,077	\$ 221,198	\$ 2,594,965	\$ 1,724,127	\$ 9,030,953		
Feb-26 (est)	\$ -	\$ 940,291	623,678,589	0.00335	\$ 2,088,299	\$ 1,148,008	\$ 0.00034	\$ 209,620	\$ 17,077	\$ 192,543	\$ 2,280,843	\$ 1,340,552	\$ 10,371,505		
Mar-26 (est)	\$ -	\$ 480,118	625,830,913	0.00335	\$ 2,095,506	\$ 1,615,388	\$ 0.00034	\$ 210,344	\$ 17,077	\$ 193,267	\$ 2,288,773	\$ 1,808,655	\$ 12,180,160		
Total	\$ -	\$ 19,580,156	7,781,900,605		\$ 32,933,042	\$ 13,352,885		\$ 3,382,907	\$ 267,932	\$ 3,114,976	\$ 36,048,017	\$ 16,467,861	\$ 501,589	\$ 12,681,749	
														SWE Over/Under	\$ 501,589
														Total Over/(Under)	\$ 12,681,749

- (a) Revenues do not include GRT and rounding
(b) C Factor and E Factor Revenues are allocated on a percentage basis.

PECO - Electric
Calculation of EEPC Phase V Rate Effective June 1, 2026
Industrial

		<u>Amount</u>	<u>\$/KW</u>	
(1)	C = Projected Recoverable EEPC Costs ^(c)	\$ 20,538,487	\$0.73	p. 2 of 3
(2)	E = Experienced & Estimated Net Over/(Under) Over/(Under) - Phase IV - Year 5 ^{(a) (b)}	<u>\$ 4,279,852</u>	\$0.15	p. 3 of 3
(3)	Net Recoverable (C - E)	\$ 16,258,635	\$0.58	
(4)	BU = Projected Industrial Sales for Computation Period	28,163,433		
(5)	T = Pennsylvania gross receipts tax rate	5.90%		
(6)	EEPC = [(C-E)+(SWE)/BU]/(1-T)	\$0.61		

(a) Includes SWE costs

(b) E-factor includes a charge estimate of \$924,975 of true up from the Phase IV PJM FCM Cost Reduction. This was eliminated in the Phase V program.

(c) Municipal lighting costs have been allocated in accordance with the Opinion and Order at Docket No. M-2020-3020830, adopted on May 23, 2024.

PECO
Phase V Energy Efficiency and Conservation Plan
C-Factor Calculation

Exhibit MAM-3
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Industrial - C-Factor	
	Expenditures
EE&C Recovery - Phase IV (2026-2027)	\$ 20,722,447
Less Embedded EE&C Labor⁽¹⁾	\$ 312,432
Plus Statewide Evaluator⁽²⁾	\$ 128,472
Total EE&C and Statewide Evaluator	\$ 20,538,487
Estimated Sales - PLC	28,163,433

⁽¹⁾ Adjustment for the costs of embedded employees working on Phase V EE&C

⁽²⁾ Statewide Evaluator costs based on estimated Phase V spend prorated to 5 years for Phase V

PECO - Electric
Phase IV Energy Efficiency and Conservation Program Costs (EEPC)
Industrial Class
(Rates PD, HT, EP)
E-Factor Calculation

Phase IV Balance Y4 \$ (944,255)

E-Factor Period	C-Factor													Cumulative Over/(Under)
	Phase III Expenditures	Phase IV Expenditures	Industrial Sales - PLC	C-Factor Rate	C-Factor Revenue ^(b)	Over/(Under) Recovery	E-Factor Rate	E-Factor Revenue ^(b)	SWE Revenues	Total E-Factor Revenues (a)	Total Revenues (E + C) Recovery	Over/(Under) Recovery		
	(1)	(2)	(3)	(4)	(5)	(6) = (5) - (1) - (2)	(7)	(8)	(9)	(10) = (8) - (9)	(11) = (10) + (5)	(12) = (11) - (1) - (2)	(13)	
Apr-25	\$ -	\$ 1,896,133	2,278,619	0.98	\$ 3,700,655	\$ 1,804,522	\$ 0.09	\$ (1,256,290)	\$ 19,306	\$ (1,275,596)	\$ 2,425,059	\$ 528,926	\$ (415,329)	
May-25	\$ -	\$ 2,714,865	2,469,055	0.98	\$ 4,009,938	\$ 1,295,073	\$ 0.09	\$ (1,361,284)	\$ 20,920	\$ (1,382,204)	\$ 2,627,734	\$ (87,131)	\$ (502,460)	
Jun-25	\$ -	\$ 1,980,209	2,368,468	1.12	\$ 2,655,264	\$ 675,055	\$ (0.01)	\$ (25,364)	\$ 20,771	\$ (46,136)	\$ 2,609,128	\$ 628,919	\$ 126,459	
Jul-25	\$ -	\$ 2,902,080	2,772,826	1.12	\$ 3,108,585	\$ 206,506	\$ (0.01)	\$ (29,695)	\$ 24,318	\$ (54,012)	\$ 3,054,573	\$ 152,493	\$ 278,953	
Aug-25	\$ -	\$ 2,834,172	2,262,426	1.12	\$ 2,536,382	\$ (297,790)	\$ (0.01)	\$ (24,229)	\$ 19,841	\$ (44,070)	\$ 2,492,311	\$ (341,860)	\$ (62,907)	
Sep-25	\$ -	\$ 2,698,660	2,295,079	1.12	\$ 2,572,989	\$ (125,671)	\$ (0.01)	\$ (24,579)	\$ 20,128	\$ (44,706)	\$ 2,528,283	\$ (170,378)	\$ (233,285)	
Oct-25	\$ -	\$ 2,121,462	2,477,623	1.12	\$ 2,777,636	\$ 656,174	\$ (0.01)	\$ (26,533)	\$ 21,729	\$ (48,262)	\$ 2,729,374	\$ 607,912	\$ 374,627	
Nov-25 (est)	\$ -	\$ 2,170,415	2,298,743	1.12	\$ 2,582,315	\$ 411,900	\$ (0.01)	\$ (4,420)	\$ 21,729	\$ (26,149)	\$ 2,556,166	\$ 385,751	\$ 760,379	
Dec-25 (est)	\$ -	\$ 2,415,833	2,521,222	1.12	\$ 2,832,239	\$ 416,405	\$ (0.01)	\$ (4,468)	\$ 21,729	\$ (26,197)	\$ 2,806,041	\$ 390,208	\$ 1,150,587	
Jan-26 (est)	\$ -	\$ 1,121,325	2,352,233	1.12	\$ 2,642,403	\$ 1,521,078	\$ (0.01)	\$ (16,323)	\$ 21,729	\$ (38,052)	\$ 2,604,352	\$ 1,483,027	\$ 2,633,613	
Feb-26 (est)	\$ -	\$ 1,418,280	2,292,567	1.12	\$ 2,575,377	\$ 1,157,097	\$ (0.01)	\$ (12,417)	\$ 21,729	\$ (34,146)	\$ 2,541,231	\$ 1,122,951	\$ 3,756,565	
Mar-26 (est)	\$ -	\$ 998,992	2,200,837	1.12	\$ 2,472,331	\$ 1,473,339	\$ (0.01)	\$ (15,810)	\$ 21,729	\$ (37,539)	\$ 2,434,792	\$ 1,435,799	\$ 5,192,364	
Total	\$ -	\$ 25,272,425	28,589,697		\$ 34,466,114	\$ 9,193,688		\$ (2,801,412)	\$ 255,657	\$ (3,057,070)	\$ 31,409,044	\$ 6,136,619		
													SWE Over/Under	\$ 12,463
													Total Over/(Under)	\$ 5,204,827

- (a) Revenues do not include GRT and rounding
(b) C Factor and E Factor Revenues are allocated on a percentage basis.

PECO - Electric
Calculation of EEPC Phase V Rate Effective June 1, 2026
Municipal Lighting

		<u>Amount</u>	<u>\$/KWH</u>	
(1)	C = Projected Recoverable EEPC Costs ^(c)	\$ 8,847	\$0.00006	p. 2 of 3
(2)	E = Experienced & Estimated Net Over/(Under) Over/(Under) - Phase IV - Year 5 ^{(a) (b)}	<u>\$ 317,369</u>	\$0.00210	p. 3 of 3
(3)	Net Recoverable (C - E)	\$ (308,522)	(\$0.00204)	
(4)	BU = Projected Municipal Sales for Computation Period	151,152,685		
(5)	T = Pennsylvania gross receipts tax rate	5.90%		
(6)	EEPC = [(C-E)+(SWE)/BU]/(1-T)	(\$0.00217)		

(a) Includes SWE costs

(b) E-factor includes a charge estimate of \$55,006 of true up from the Phase IV PJM FCM Cost Reduction. This was eliminated in the Phase V program.

(c) Municipal lighting costs have been allocated in accordance with the Opinion and Order at Docket No. M-2020-3020830, adopted on May 23, 2024.

PECO
Phase V Energy Efficiency and Conservation Plan
C-Factor Calculation

Exhibit MAM-3
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Municipal Lighting - C-Factor	
	Expenditures
EE&C Recovery - Phase IV (2026-2027)	\$ 11,598
Less Embedded EE&C Labor⁽¹⁾	\$ 2,805
Plus Statewide Evaluator⁽²⁾	\$ 54
Total EE&C and Statewide Evaluator	\$ 8,847
Estimated Sales - kWh	151,152,685

⁽¹⁾ Adjustment for the costs of embedded employees working on Phase V EE&C

⁽²⁾ Statewide Evaluator costs based on estimated Phase V spend prorated to 5 years for Phase V

PECO - Electric
Phase IV Energy Efficiency and Conservation Program Costs
Municipal Lighting Rates
E-Factor Calculation

Previous Balance																				
\$ 657,246																				
E-Factor Period	SLE			SLC			AL			TLCL			E Factor Revenues	SWE Revenues	Total Revenues	Phase III Expenditures	Phase IV Expenditures	Over/(Under) Recovery	Over/(Under) Cumulative	
	Locations	Rate	Revenues	Locations	Rate	Revenues	Location	Rate	Revenues	kWh	Rate	Revenues								
Apr-25	183,091	\$0.00	\$ -	10,638	\$0.00	\$ -	16,032	\$0.00	\$ -	6,418,044	\$0.00002	\$ 128	\$ 128	(1)	\$ 129	\$ -	\$ 4,227	\$ (4,098)	\$ 653,148	
May-25	183,091	\$0.00	\$ -	10,638	\$0.00	\$ -	16,032	\$0.00	\$ -	3,869,953	\$0.00002	\$ 77	\$ 77	(1)	\$ 78	\$ -	\$ 15,504	\$ (15,426)	\$ 637,722	
Jun-25	183,091	-\$0.04	\$ (7,753)	10,638	-\$0.04	\$ (400)	16,032	-\$0.01	\$ (151)	3,662,810	(\$0.00042)	\$ (1,551)	\$ (9,855)	(22)	\$ (9,833)	\$ -	\$ 4,586	\$ (14,419)	\$ 623,302	
Jul-25	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	6,011,435	(\$0.00080)	\$ (4,828)	\$ (19,260)	(36)	\$ (19,224)	\$ -	\$ 23,241	\$ (42,465)	\$ 580,837	
Aug-25	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,625,501	(\$0.00080)	\$ (2,911)	\$ (17,344)	(22)	\$ (17,322)	\$ -	\$ 21,272	\$ (38,594)	\$ 542,243	
Sep-25	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,905,368	(\$0.00080)	\$ (3,136)	\$ (17,568)	(23)	\$ (17,545)	\$ -	\$ 19,124	\$ (36,669)	\$ 505,574	
Oct-25	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	4,134,823	(\$0.00080)	\$ (3,320)	\$ (17,753)	(25)	\$ (17,728)	\$ -	\$ 3,192	\$ (20,920)	\$ 484,654	
Nov-25 (est)	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,736,104	(\$0.00080)	\$ (3,000)	\$ (17,432)	(25)	\$ (17,407)	\$ -	\$ 14,761	\$ (32,169)	\$ 452,486	
Dec-25 (est)	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,706,006	(\$0.00080)	\$ (2,976)	\$ (17,408)	(25)	\$ (17,383)	\$ -	\$ 764	\$ (18,148)	\$ 434,338	
Jan-26 (est)	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,876,627	(\$0.00080)	\$ (3,113)	\$ (17,545)	(25)	\$ (17,520)	\$ -	\$ 5,023	\$ (22,544)	\$ 411,795	
Feb-26 (est)	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,377,741	(\$0.00080)	\$ (2,713)	\$ (17,145)	(25)	\$ (17,120)	\$ -	\$ 5,023	\$ (22,143)	\$ 389,652	
Mar-26 (est)	183,091	-\$0.07	\$ (13,376)	10,638	-\$0.07	\$ (735)	16,032	-\$0.02	\$ (322)	3,674,120	(\$0.00080)	\$ (2,951)	\$ (17,383)	(25)	\$ (17,358)	\$ -	\$ 8,974	\$ (26,332)	\$ 363,320	
Total	2,197,092	\$	\$ (128,137)	127,656	\$	\$ (7,011)	192,384	\$	\$ (3,046)	49,998,532	\$	\$ (30,294)	\$ (168,487)	\$ (255)	\$ (168,233)	\$ -	\$ 125,693	\$ (293,926)		
																	SWE Over/(Under)		\$	9,055
																	Total Over/(Under)		\$	372,375

Responses to the Questions in 52 Pa. Code, Section 53.52(a)**(a)(1) The specific reason for each change**

PECO is proposing to revise its Electric Service Tariff to implement its Phase V Energy Efficiency and Conservation Plan (EE&C) Plan, as required by the Commission's Implementation Order at Docket No. M-2025-3052826.

(a)(2) The total number of customers served by the utility.

As of September 30, 2025, PECO Energy served 1,709,970 electric customers.

(a)(3) A calculation of the number of customers, by tariff subdivision, whose bills will be affected by the change.

The bills of 1,709,970 of PECO customers will be affected by the tariff revisions proposed in connection with the implementation of PECO's Phase V EE&C Plan. By rate class, the number of affected customers breaks down as follows:

Residential:	1,539,345
Commercial:	157,128
Industrial:	3,159
Lighting:	10,338

(a)(4) The effect of the change on the utility's customers.

The applicable variable distribution charges of residential customers (which currently contain the energy efficiency charge), the existing, separately stated energy efficiency charges for small commercial and industrial customers, and the applicable distribution charges for lighting customers will be revised to reflect Phase V EE&C Plan costs consistent with the terms of the Company's Phase V Provision for Recovery of Energy Efficiency and Conservation Program Costs (EEPC) established under Section 1307 of the Public Utility Code and the revisions to the EEPC proposed in this filing.

(a)(5) The effect, whether direct or indirect, of the proposed change on the utility's revenue and expenses.

PECO will incur additional, incremental administrative and infrastructure costs and operating expenses associated with developing and implementing its Phase V EE&C Plan. Revenues are projected to decrease over the five-year term of the Phase V Plan (June 1, 2026 through May 31, 2031) due to decreased demand and energy sales.

(a)(6) The effect of the change on the service rendered by the utility.

None.

(a)(7) A list of factors considered by the utility in its determination to make a change. The list shall include a comprehensive statement as to why these factors were chosen

and the relative importance of each. This subsection does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa. CS 1308.

PECO is required to submit a Phase V EE&C by the Commission's Implementation Order entered at Docket No. M-2025-3052826.

- (a)(8) Studies undertaken by the utility in order to draft its proposed change. This paragraph does not apply to a portion of the tariff change seeking a general rate increase as defined in 66 Pa. C.S. 1308.**

PECO did not perform any studies in order to develop the proposed Phase V EE&C Plan. Instead, PECO challenged the Conservation Service Providers bidding under PECO's Act 129 RFP to leverage their market expertise in the design and delivery of programs to achieve the energy savings and peak demand reduction goals while delivering a premium customer and market participant experience.

- (a)(9) Customer polls taken and other documents, which indicate customer acceptance and desire for the proposed change. If the poll or other documents reveal discernable public opposition, an explanation of why the change is in the public interest shall be provided.**

See the above response to (a)(8).

- (a)(10) Plans the utility has for introducing or implementing the changes with respect to ratepayers.**

PECO plans to communicate to customers in a multi-faceted way. PECO will issue a press release explaining that it has filed its Phase V Plan for PUC approval. The current PECO Ways to Save campaign will be amended to include information about the enhanced features of PECO's existing EE&C programs and to introduce the new programs in PECO's Phase V Plan. In addition, the Company will continue to maintain robust relationships with contractors, retailers, design firms, and distributors across the energy efficiency value chain. PECO will expand and innovate its grassroots customer education and enrollment efforts to inform customers about how the programs in its Phase V Plan can help them save money by reducing their energy use. PECO will use a multi-channeled approach to communicate existing program changes well in advance of implementing those changes in order to avoid customer confusion and to promote customer satisfaction. The communication channels will vary by program and may include, but not be limited to, print and digital formats.

(a)(11) F.C.C., FERC, or Commission orders or ruling applicable to the filing.

The following Act 129 Phase V orders at Docket M-2025-3052826 are applicable to the filing:

- Energy Efficiency and Conservation (EEC) Program Implementation Order
- Final EE&C Plan Template and Tables Workbook Secretarial Letter

The following orders are also applicable:

- Docket No. M-2025-3052827 Data Sharing Working Group
- Docket No. M-2024-3048998 – 2026 Total Resource Cost Final Order
- Docket No. M-2023-3044491– 2026 Technical Reference Manual Final Order
- Docket No. M-2023-3044490 – SWE Baseline Studies
- Docket No. M-2020-3020830 – Opinion and Order of Petition of PECO Energy Company for Approval of Changes to its Act 129 Phase IV Energy Efficiency and Conservation Plan
- Docket No. M-2008-2074154 – Final Order - Registry of Conservation Service Providers

PECO Program Years 18 to 22

Act 129 – Phase V Energy Efficiency and Conservation Plan

Submitted to:



Pennsylvania Public Utility Commission

Submitted by:



December 1, 2025

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Table of Acronyms

AEPS	Alternative Energy Portfolio Standards
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BOC	Building Operator Certification
BPI	Building Performance Institute
BYOB	Bring-Your-Own-Battery
C&I	Commercial and Industrial
CAP-PIPP	Customer Assistance Program-Percentage of Income Payment Program
CHP	Combined Heat and Power
CRM	Customer Relationship Management
CSP	Conservation Service Provider
PA DEP	Pennsylvania Department of Environmental Protection
DERs	Distributed Energy Resources
DLS	Daily Load Shifting
EE&C	Energy Efficiency and Conservation
EEPC	Energy Efficiency & Conservation Program Charge
EGS	Electric Generation Supplier
EM&V	Evaluation, Measurement, and Verification
E&O	Education and Outreach
EV	Electric Vehicle
FTE	Full-Time Equivalent
HER	Home Energy Report
IRA	Inflation Reduction Act
LCI	Large Commercial and Industrial
LI	Low-Income
LIURP	Low-Income Usage Reduction Program
MBCx	Monitoring-Based Commissioning
MW	Megawatt
MWh	Megawatt-hour
NTGR	Net-to-Gross Ratio
O&M	Operations and Maintenance
PII	Personal Identifiable Information
PUC	Public Utility Commission
PY	Program Year
QA	Quality Assurance
QC	Quality Control
RCx	Retro-Commissioning

RFI	Request for Information
RFP	Request for Proposal
SCI	Small Commercial and Industrial
SEM	Strategic Energy Management
SWE	Statewide Evaluator
TOU	Time-of-Use
TRC	Total Resource Cost
TRM	Technical Reference Manual
VCx	Virtual Commissioning

Mapping of Program Years to Dates

Program Year	Start Date	End Date
PY18	6/1/2026	5/31/2027
PY19	6/1/2027	5/31/2028
PY20	6/1/2028	5/31/2029
PY21	6/1/2029	5/31/2030
PY22	6/1/2030	5/31/2031

1. Overview of Plan

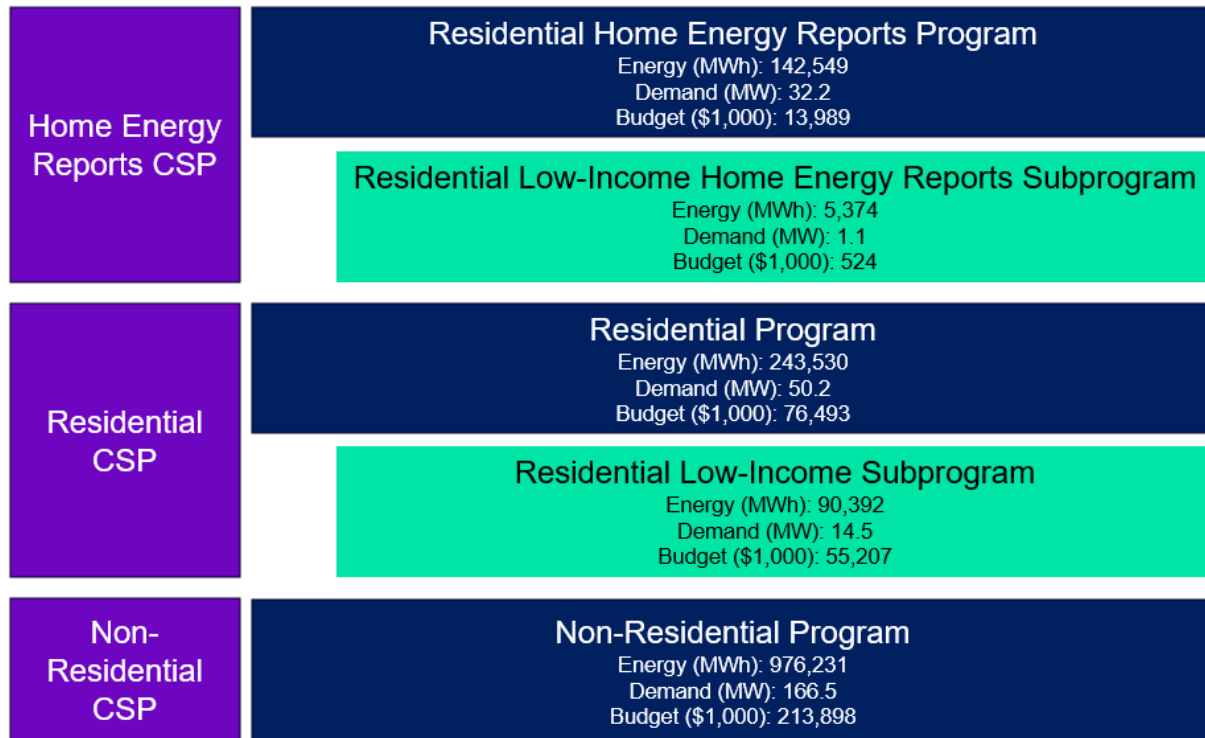
PECO Energy Company's ("PECO's") Phase V Energy Efficiency and Conservation Plan (the "EE&C Plan" or the "Plan") is a customer-centric portfolio of offerings to meet PECO's customers' energy-saving needs, regardless of customer class. PECO's Plan has three comprehensive customer programs:

1. Residential;
2. Residential Home Energy Reports ("HER"); and
3. Non-Residential.

PECO is competitively contracting with Conservation Service Providers ("CSPs") to implement the Phase V programs. A CSP for each program will manage a team of subcontractors to implement various subprograms and program components. Additionally, PECO will hire an independent evaluation contractor to evaluate all of PECO's Phase V programs.

The Plan includes three programs: (1) Residential; (2) Residential Home Energy Reports; (3) Non-Residential. The Residential program includes the Residential Low-Income subprogram. The Residential Home Energy Reports program includes the Residential Low-Income Home Energy Reports subprogram. Each program and subprogram contain program components. Figure 1 summarizes the program and subprogram structure for PECO's Phase V portfolio.

Figure 1. PECO's Phase V Program Structure, Savings, and Budget¹



1.1 Summary Description of Plan, Objectives, and Overall Strategy

Phase V covers five program years, starting June 1, 2026, and ending on May 31, 2031:

- Program Year ("PY") 18: June 1, 2026 – May 31, 2027
- PY 19: June 1, 2027 – May 31, 2028
- PY 20: June 1, 2028 – May 31, 2029
- PY 21: June 1, 2029 – May 31, 2030
- PY 22: June 1, 2030 – May 31, 2031

The savings achieved under this Plan will meet the energy and demand savings compliance targets specified in the Public Utility Commission ("PUC" or "the Commission") Phase V Final Implementation Order (the "Phase V Final Order"). From June 1, 2026, through May 31, 2031, PECO shall achieve the compliance target of at least 1,111,685 MWh of energy savings and 194.8 MW of peak demand reduction with a budget of \$427.4 million. These goals are all-

¹ The Residential program is primarily funded by the residential sector, except for the multifamily component, which receives funding from the Small Commercial and Industrial ("SCI"), Large Commercial and Industrial ("LCI"), and Residential sectors. The Non-Residential program is funded by the SCI, LCI, and Municipal Lighting sectors. The Residential Low-Income subprogram and Residential Low-Income Home Energy Reports subprogram contribute to the low-income savings carve-out.

inclusive of the residential, low-income, and commercial sectors. The Plan is designed to achieve a minimum of 15% of its total Phase V savings compliance targets each year.

The EE&C Plan objectives include:

- Delivering required energy savings and peak demand reduction with the broadest mix of cost-effective technologies;
- Generating energy savings through streamlined processes that make participation easy for customers and market actors, continuously striving to provide customers with a positive experience and help them save energy in their homes and businesses;
- Meeting data and documentation needs of evaluators and regulators; and
- Responsibly using Act 129 dollars on behalf of PECO customers.

PECO developed its program portfolio to offer a holistic, easy customer experience across its service territory.

Key features of PECO's Plan include:

- **Program Components:** Programs tailor service delivery to the needs of each customer class through program components. Section 3 details each program's components.
- **Customer and Market Actor Engagement:** The Residential and Non-Residential programs will each use a customer relationship management ("CRM") system to document customer interactions and experience with Act 129 programs. The CRM system will contain all interactions that CSPs and subcontractors have with customers. In addition, CSPs will provide support for when a customer, at any point in their energy efficiency journey, requires assistance to participate. Assistance includes scheduling an appointment, checking application status, determining rebate status, completing an application, and responding to questions on eligibility. CSPs will provide customer assistance through outreach methods such as a call center, online chat, email, social media, texting, and apps.
- **Education and Outreach ("E&O"):** PECO will educate customers on energy efficiency by conducting outreach to school districts and educational networks, speaking with local nonprofits and community groups, hosting tables at events, and reaching diverse communities. PECO will send customers emails, distribute program materials, and canvas neighborhoods. Additionally, PECO will leverage its strong relationships with community organizations to help increase awareness about energy efficiency.
- **Measure Mix:** PECO's goal is to achieve compliance targets with the broadest measure mix possible and with processes that make participation easy for customers and market actors. When CSPs review all the technologies and occupant behaviors in a home or building, they arrive at the most comprehensive treatments or plans to adjust the behavior of occupants to use less energy.
- **Incentive Structure:** Per the Phase V Final Order, a minimum of 50% of the total phase budget is allocated to customer incentives (including direct-installation measure costs and labor). The incentive budget includes funds that will be distributed to program participants, including incentives, the cost of kit and direct install measures, health and

safety, the cost of labor associated with directly installing measures, and the cost of interest buy down associated with offering 0% financing.

1.2 Summary Description of the Process Used to Develop the Phase V Plan

PECO adopted an iterative approach to develop the Phase V Plan informed by experience from Phase IV, regulatory guidance, and engagement with the market through a request for information (“RFI”), and subsequently a request for proposal (“RFP”). During Phase IV, PECO implemented a comprehensive process to monitor program and portfolio performance, document lessons learned, and make targeted adjustments to improve program outcomes. These insights, combined with a deep understanding of Pennsylvania’s regulatory environment, provided the foundation for the Phase V Plan.

The following steps outline an overview of the Phase V Plan development process:

1. **Program Structure and CSP Framework:** PECO first established the overall program architecture, including defining the payment structure for CSPs and outlining expectations for program development, implementation, and performance metric tracking. This framework allowed for consistency across delivery channels while allowing flexibility for CSP innovation.
2. **Integration of Regulatory and Market Data:** To inform program budgets, plan savings targets, and design parameters, PECO referenced the 2026 TRM to inform savings calculations,² the Pennsylvania Statewide Evaluator (“SWE”) Baseline³ and Potential Studies⁴ to determine plan savings targets and budget by program, the Phase V Tentative⁵ and Final⁶ Implementation Orders to identify specific regulatory requirements to incorporate into the Scope of Work, and the lessons learned from the Phase IV evaluation and research to address customer needs and improve program effectiveness.
3. **Scope of Work and Competitive Bidding:** PECO issued an RFI on March 5, 2025, to engage the market and to identify innovative implementation approaches. PECO developed a detailed scope of work to specify program design elements, performance requirements, and compliance obligations. PECO then initiated a competitive RFP process,⁷ inviting CSPs to submit proposals that met these criteria and aligned with Phase V objectives.

² Pennsylvania Statewide Act 129 2026 TRM, September 2024, [2026 Technical Reference Manual Final Order](#).

³ 2023 Pennsylvania Statewide Act 129 Residential Baseline Study, February 2023, [2023 Residential Baseline Study](#), 2023 Non-Residential Baseline Study, February 2023, [2023 Non-Residential Baseline Study](#).

⁴ Pennsylvania Act 129 - Phase V Energy Efficiency and Peak Demand Reduction Market Potential Study Report, February 2023, [Phase V Energy Efficiency and Peak Demand Reduction Potential Study Report](#) Phase V Demand Response Potential Study, February 2025, [Phase V Demand Response Potential Study Report](#).

⁵ [Phase V Tentative Implementation Order](#) – The Act 129 Phase V EE&C Program Tentative Implementation Order, From the Public Meeting of February 2025, Docket No. M-2025-3052826.

⁶ [Phase V Final Implementation Order](#) – The Act 129 Phase V EE&C Program Implementation Order, From the Public Meeting of June 2025, Docket No. M-2025-3052826.

⁷ The RFP for the Residential HER Program was issued by Exelon for support to all Exelon Operating Companies.

Key elements of the CSP Scope of Work include:

- **Program savings and budget targets are established using multiple data sources to develop optimal allocation across programs:** To design and define the appropriate savings and budgets by program to meet compliance targets established in the Phase V Final Order, PECO employed a comprehensive process using multiple inputs. Key inputs included the SWE Phase V Potential Studies for energy efficiency and demand response, benchmarking against similar utility portfolios, and modeling to evaluate various allocation scenarios; and
- **Program details are defined by the market:** PECO released the CSP RFPs in August 2025, consistent with the company's PUC-approved Phase V RFP process. This RFP timeline was designed to allow CSPs sufficient lead time to prepare for Phase V implementation beginning in early 2026, providing for a smooth transition from Phase IV to Phase V program activities.

Through the RFP process, CSPs contributed to the Plan design. Each CSP developed comprehensive proposals that included:

Budget development: CSPs defined total program component budgets, given the constraints outlined from PECO's modeling efforts, specifying allocations between customer incentives and CSP delivery costs. PECO emphasized maximizing incentive budgets to drive participation and deliver greater benefits to ratepayers;

Program implementation plans: PECO required CSPs to adopt a rigorous approach informed by regulatory and market data. CSPs reviewed the Phase V Final Order and the SWE Potential Studies to align program strategies with statewide objectives;

Program structure and delivery components: CSPs proposed detailed program architecture, delivery mechanisms, and eligible measure portfolios that leverage historical PECO participation and savings data, evaluation reports from prior years, and direct input from market actors; and

Savings calibration and forecasting: CSPs calibrated savings estimates to the 2026 Technical Reference Manual ("TRM") and developed forward-looking adoption forecasts for each measure through 2031.

This process led to a Phase V program design that reflects both regulatory requirements and real-world market dynamics while incorporating CSP expertise to optimize program performance and customer engagement.

- **The CSP payment structure is a blended delivery and pay-for-savings model:** PECO must meet energy and peak demand reduction goals. As part of the CSP procurement process, PECO established a minimum pay-for-savings threshold (60% of total CSP payment) and required vendors to specify how their compensation would be divided between program delivery and performance-based payments.
- **CSPs are responsible for program-level marketing:** Implementation CSPs are expected to develop and implement a customer-focused marketing strategy for the Phase V programs. Marketing efforts must be tailored to different customer segments, leverage both existing and innovative communication channels, and be tracked through detailed lead lifecycle metrics, with regular reporting and continuous improvement based on feedback. All marketing materials must be PECO-approved, accessible, and

designed to maximize program participation, drive energy and demand savings, and support customers throughout their engagement with the programs.

PECO prioritized transparency and collaboration throughout the development of the Phase V Plan. PECO engaged stakeholders and incorporated their recommendations, for example the CSP payment structure and CSP responsibility for program-level marketing, so that the Plan reflects diverse perspectives and meets the needs of all customers.

1.3 Summary Tables of Portfolio Savings Goals, Budget, and Cost-Effectiveness

PECO will invest up to \$427.4 million in energy efficiency and peak demand reduction programs over a five-year program period (PY18 through PY22). The plan target Plan outlined in this document aims to achieve approximately 131% of the energy compliance savings target established in the Phase V Final Order. Consistent with Phase V requirements, PECO developed this Plan to meet or exceed the required 6.3% of the overall compliance energy savings target from the low-income sector. PECO plans to achieve approximately 136% of the PY18–PY22 compliance peak demand reduction target of 194.8 MW.

Figure 1 presents the Phase V portfolio structure. Section 3 provides full descriptions of each program. Table 1 through

Table 4 summarizes PECO's lifetime costs and benefits of energy efficiency measures, portfolio energy and demand savings by program year, and portfolio costs by program year. Note these tables provide data at the sector level, and sector-level breakouts do not directly map to programs. Therefore, these tables should not be directly compared with Figure 1.

Table 1. Summary of PECO's Phase V Plan: Portfolio Lifetime Costs and Benefits⁸

Sector	Total Discounted Lifetime Costs (\$000) ⁹	Total Discounted Lifetime Benefits (\$000)	Present Value of Net Benefits (\$000)	Benefit-Cost Ratio (TRC Ratio)
Market Rate Residential (exclusive of Low-Income)	\$344,312	\$314,199	-\$30,113	0.9
Residential Low-Income	\$62,503	\$78,938	\$16,435	1.3
Small Commercial & Industrial	\$316,367	\$449,338	\$132,972	1.4
Large Commercial & Industrial	\$375,196	\$534,973	\$159,777	1.4
Total Portfolio	\$1,098,378	\$1,377,448	\$279,070	1.3

Table 2 summarizes portfolio energy savings using Act 129 accounting conventions. Reported values reflect incremental annual savings achieved within the program year, which are weather

⁸ In this and subsequent tables, unless otherwise noted, SCI and LCI totals include the Municipal Lighting sector

⁹ Lifetime costs and benefits have all been discounted to PY18

normalized to account for variations in heating and cooling loads. Savings are presented at both the meter level, representing customer-side impacts, and the system level, which adjusts for transmission and distribution losses.

Additionally, results are shown as gross savings prior to adjustments for free ridership and spillover. These distinctions support consistency with Act 129 protocols and provide a transparent basis for compliance and cost-effectiveness evaluation.

Table 2. Summary of PECO's Phase V Plan: Summary of Portfolio Energy Savings¹⁰

MWh Saved for Consumption Reductions (Meter-Level)	PY18		PY19		PY20		PY21		PY22		Total	
	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh
Baseline	39,386,000		39,386,000		39,386,000		39,386,000		39,386,000		39,386,000	
Market Rate Residential Sector (exclusive of Low-Income) – Projected Incremental Savings	72,625	645,554	84,856	699,524	75,370	667,805	76,894	676,575	74,823	670,992	384,569	3,360,450
Residential Low-Income Sub-Sector – Projected Incremental Savings	16,025	104,292	15,352	101,968	15,870	104,793	16,223	106,967	14,104	95,121	77,574	513,140
SCI Sector – Projected Incremental Savings	74,481	1,102,097	95,968	1,420,464	100,064	1,479,581	111,167	1,350,560	70,952	1,046,703	452,631	6,399,405
LCI Sector – Projected Incremental Savings	75,055	1,111,847	100,758	1,496,526	120,436	1,790,188	144,407	1,853,365	102,645	1,525,485	543,301	7,777,411
EE&C Plan Total – Projected Incremental Savings	238,186	2,963,790	296,934	3,718,483	311,740	4,042,366	348,691	3,987,467	262,524	3,338,300	1,458,076	18,050,406
EE&C Plan Total – Projected Cumulative Savings	238,186	2,963,790	535,120	6,682,273	846,860	10,724,639	1,195,552	14,712,106	1,458,076	18,050,406	1,458,076	18,050,406
EE&C Plan Total – Percentage of Target to be Met ²	21%		48%		76%		108%		131%		131%	
Estimated Phase IV Carryover Savings ¹¹											171,867	
Total Cumulative Projected Savings Phase V + Estimated Phase IV Carryover Savings	410,053		706,987		1,018,727		1,367,419		1,629,943		1,629,943	

¹⁰ SCI Sector and LCI Sector totals include street lighting measures which may be a part of the Municipal Lighting sector

¹¹ Phase IV carryover savings were estimated using the phase-to-date verified totals from the PY16 SWE Report and PECO's PY17 Q1 reported savings values extrapolated over a full program year.

MWh Saved for Consumption Reductions (Meter-Level)	PY18		PY19		PY20		PY21		PY22		Total	
	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh	1st-Year MWh	Lifetime MWh
Cumulative Percent Reduction from Baseline	1%		1%		2%		3%		4%		4%	
Commission-Identified Goal											1,111,685	

Table 3 and

Table 4 present the key peak demand accounting elements for Phase V as outlined in the Phase V Final Order. Table 3 summarizes overall demand savings requirements and compliance metrics, providing a consolidated view of total plan peak demand reduction targets across the program portfolio.

Table 4 complements this summary by detailing seasonal demand savings, distinguishing between summer and winter performance. Together, these tables provide peak demand reduction savings for demand impacts aligning TRM methodologies for accurate evaluation.

Table 3. Summary of PECO's Phase V Plan: Summary of Portfolio Demand Savings

System-Level MW Savings (Average of Summer and Winter)	PY18	PY19	PY20	PY21	PY22	Total
	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW
Baseline	7,899	7,899	7,899	7,899	7,899	7,899
Market Rate Residential Sector (<i>exclusive of Low-Income</i>) – Projected Incremental Annual Savings	11.9	17.4	15.2	14.4	13.4	72.2
Residential Low-Income Sub-Sector – Projected Incremental Annual Savings	2.6	2.5	2.6	2.6	2.3	12.6
SCI Sector – Projected Incremental Annual Savings	11.9	15.3	16.3	17.0	11.1	71.6
LCI Sector – Projected Incremental Annual Savings	14.0	18.1	21.1	24.6	19.4	97.1
Coincident Demand Reduction from EE Subtotal	40.4	53.2	55.2	58.6	46.1	253.6

System-Level MW Savings (Average of Summer and Winter)	PY18	PY19	PY20	PY21	PY22	Total
	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW
Residential Load Shifting - Projected MW Savings	8.7	9.4	10.3	11.3	12.4	10.4
SCI Sector Load Shifting – Projected MW Savings	0.1	0.1	0.1	0.1	0.1	0.1
LCI Sector Load Shifting – Projected MW Savings	0.1	0.3	0.4	0.5	0.5	0.4
Daily Load Shifting Subtotal	8.9	9.9	10.9	11.9	13.0	10.9
Cumulative Projected Compliance Savings	42.2	97.4	154.8	215.8	264.5	264.5
Cumulative EE&C Plan Total – Percentage of Target to be Met	22%	50%	79%	111%	136%	136%
Estimated Phase IV Carryover Savings						7.2
Total Cumulative Projected Savings Phase V + Estimated Phase IV Carryover Savings	49.4	104.6	162.0	223.0	271.7	271.7
Cumulative Percent Reduction from Baseline	0.53%	1.23%	1.96%	2.73%	3.35%	3.35%
Commission-Identified Goal						194.8

Table 4. Summary of Seasonal Demand Savings

Component MW Savings (System-Level)	PY18		PY19		PY20		PY21		PY22		Total	
	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW
Coincident Reduction from EE - Residential	17.4	11.6	23.7	16.1	21.3	14.3	20.1	13.9	19.0	12.3	101.5	68.2
Coincident Reduction from EE - Non-Residential	28.3	23.4	36.1	30.6	40.4	34.5	43.4	39.9	31.3	29.6	179.5	157.9
Daily Load Shifting - Residential	6.1	11.2	6.7	12.2	7.4	13.3	8.2	14.4	9.0	15.7	7.5	13.4
Daily Load Shifting - Non-Residential	0.2	0.2	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5
Total											289.0	240.0

Phase V Peak Demand Reduction Target											194.8	
Percentage of Goal in Season											148%	123%

Table 5 provides a summary of the portfolio costs by sector.

Table 5. Summary of Portfolio Costs¹²

Sector	PY18		PY19		PY20		PY21		PY22		Phase V	
	\$000	%	\$000	%	\$000	%	\$000	%	\$000	%	\$000	%
Residential Market Rate	\$16,888	22%	\$18,461	22%	\$17,756	20%	\$18,161	19%	\$18,247	22%	\$89,513	21%
Residential Low-Income	\$9,358	12%	\$9,401	11%	\$9,712	11%	\$10,002	11%	\$8,675	11%	\$47,147	11%
SCI	\$18,521	24%	\$21,852	26%	\$23,545	26%	\$24,629	26%	\$18,775	23%	\$107,323	25%
LCI	\$17,537	23%	\$21,963	26%	\$25,626	28%	\$28,414	30%	\$22,588	28%	\$116,127	27%
Common Costs	\$13,455	18%	\$13,455	16%	\$13,455	15%	\$13,455	14%	\$13,455	16%	\$67,275	16%
Total Portfolio Budget	\$75,759	100%	\$85,132	100%	\$90,094	100%	\$94,661	100%	\$81,740	100%	\$427,386	
SWE Cost	\$0		\$0		\$0		\$0		\$0		\$0	

¹² SCI and LCI Totals are inclusive of Municipal Lighting

1.4 Summary of Program Implementation

Program implementation from Phase IV to Phase V will be as seamless as possible based on PECO's planning for Phase V. Data tracking and evaluation, measurement, and verification ("EM&V") startup activities will begin in January 2026. In March 2026, PECO and program implementation CSPs will begin the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems and marketing and outreach are in place. The programs will launch on June 1, 2026, and implementation will occur from June 1, 2026, through May 31, 2031.

1.5 Summary Description of PECO's Strategy to Acquire at Least 15% of Its Consumption Reduction and Peak Demand Reduction Target Each Year

PECO's program portfolio is designed to produce significant savings in each of the five program years. As indicated in Table 2 and Table 3, PECO projects that no less than 15% of the five-year savings and peak demand reduction compliance targets will be achieved in each program year.

1.6 Summary Description of PECO's Implementation Strategy to Acquire at Least 75% of the Portfolio Megawatt Compliance Target in Each Season

PECO's program portfolio is structured to achieve at least 75% of the seasonal megawatt (MW) plan target in each program cycle. Throughout Phase V, PECO will collaborate closely with CSPs to monitor performance and confirm that progress toward this target is consistently tracked and maintained, enabling timely adjustments and successful compliance across the phase. Seasonal PDRs in compliance with the portfolio megawatt plan target are detailed in Table 4.

1.7 Summary Descriptions of PECO's Implementation Strategy to Manage the EE&C Portfolio and Engage Customers and Trade Allies

PECO will take several steps to confirm the effective Act 129-compliant implementation of this EE&C Plan. These steps include:

- **Close Coordination Between PECO and the CSPs:** PECO will oversee the performance and service obligations of CSPs and make sure the CSPs' delivery is aligned with the approved EE&C Plan.
- **Coordination with Non-Act 129 Programs:** In addition to programs implemented under Act 129, PECO is exploring collaborations with other initiatives in its service territory in an effort to maximize savings and improve customer experience. This includes, but is not limited to, exploring aligning PECO's electric energy efficiency programs with PECO's natural gas efficiency offerings, braiding funding with the Pennsylvania

Department of Environmental Protection (“PA DEP”), administration of Inflation Reduction Act (IRA) home energy rebate programs, and exploring collaboration with the City of Philadelphia’s housing programs, such as the Basic Systems Repair Program.¹³ Low-income subprogram components may coordinate with PECO’s Low-Income Usage Reduction Program (“LIURP”),¹⁴ the Low Income Home Energy Assistance Program (“LIHEAP”),¹⁵ and the Weatherization Assistance Program (“WAP”),¹⁶ where appropriate. These partnerships aim to expand program reach, integrate resources, and deliver additional energy savings for customers. Additionally, PECO is exploring opportunities to collaborate with the City of Philadelphia’s HOME Plan, which includes multiple programs focused on improving home condition and implementing health and safety upgrades.

- **Customer and Market Actor Experience:** A positive customer and market actor experience is essential. CSPs will work closely with customers throughout Phase V to help incorporate energy efficiency into their long-term planning projects. Customers will be offered innovative options to engage with the program and market actors will be supported for their program participation.
- **Trade Ally Engagement:** PECO’s programs will use a collaborative approach to engage a diverse network of trade allies including contractors, distributors, and other market actors who are essential to delivering Act 129 programs. Engagement strategies include targeted recruitment, inclusive outreach, structured onboarding, and ongoing training, supported by clear guidelines, user-friendly portals, and regular communication. Trade allies will receive technical assistance, marketing resources, and streamlined processes to reduce administrative burdens while supporting quality installations and customer satisfaction.
- **E&O:** PECO will have an E&O CSP responsible for educating residential, low-income, and multifamily customers about energy efficiency programs, generating qualified leads, and managing outreach activities. The E&O CSP will deliver accessible, innovative, and measurable outreach; collaborate with PECO and community partners; and provide regular reports on the impact of E&O activities. E&O CSP activities may include but are not limited to:
 - Engage and educate customers (residential, low-income, and multifamily) about energy efficiency through events, materials, and presentations.
 - Generate and track qualified leads for PECO’s Act 129 programs, focusing on measurable outcomes.
 - Host or attend community events to educate and generate leads.
 - Manage the Energy Force Ambassador program, which empowers people with disabilities to become energy efficiency educators and ambassadors in the greater Philadelphia region.
 - Implement accessible and equitable outreach, targeting underserved communities and using multilingual and accessible strategies.

¹³ PHDC, [Basic Systems Repair Program](#).

¹⁴ PECO, [Low-Income Usage Reduction Program \(LIURP\)](#).

¹⁵ PECO, [Low-Income Home Energy Assistance Program \(LIHEAP\)](#).

¹⁶ Pennsylvania Department of Community & Economic Development, [Weatherization Assistance Program \(WAP\)](#).

- Report regularly to PECO on activities, lead generated, and event metrics.
- Collaborate with PECO teams, external partners, and community organizations.
- Continuously improve outreach and education tactics based on feedback and performance data.
- **Data Tracking System:** A third-party database vendor will maintain PECO's tracking database. Database protocols support accurate data entry through proper field definitions and input validations. Program activity tracking queries facilitate program tracking and reporting for PECO and the PUC. The implementation CSPs upload program data into the database at defined intervals and according to the data protocols. The independent evaluation contractor can access the information in the database.
- **Pre-Launch Period:** The implementation schedule for each program includes a pre-launch period to properly prepare for the program launch. This time will be used to refine the program, develop protocols and training materials, recruit trade allies, conduct educational activities, and develop and print incentive applications. The elements will be in place prior to full program operation. They will also be reviewed during process evaluations so that improvements may be incorporated during this plan cycle.
- **Continuous Improvement:** PECO and its independent evaluation contractor will regularly review program protocols, procedures, participant and market actor satisfaction, savings, and spending to identify and address issues that arise during program operation and to facilitate ongoing program improvement.

1.8 Summary Description of PECO's Data Management, Quality Assurance, and Evaluation Processes

PECO's data tracking system collects and stores program and invoice data from CSPs. CSPs will input projects and determine incentives. The data management system will track metrics that facilitate effective project tracking and regulatory reporting. This data will support PECO's quality assurance (QA) process and EM&V requirements. PECO will use evaluation findings to prioritize the implementation of high-value measures.

1.9 Summary Description of the Cost Recovery Mechanism

As Act 129 requires, PECO's EE&C Plan costs are recoverable through a 66 Pa. C.S. § 1307 cost-recovery mechanism. In its Phase V Final Order, the PUC provided direction on the cost recovery tariff mechanism. The Commission described a Phase V mechanism like the Phase I through Phase IV mechanisms. The mechanism will be designed to recover (on a full and current basis, without interest, from each customer class) all prudent and reasonable EE&C Plan costs assigned to each class. In addition, the PUC required that the mechanism be reconciled annually with revised rates effective June 1 of each program year. PECO proposes to use a cost recovery mechanism like those used in prior phases but modified to meet the additional Phase V requirements.

As with Phase I through Phase IV, PECO's proposed Phase V cost recovery mechanism includes four separate recovery charges, one for the Residential rate class (which includes low-income customers), one for the Small Commercial and Industrial (SCI) rate class, one for the Large Commercial and Industrial (LCI) rate class, and one for the Municipal Lighting rate class

(streetlights, and alley lights).¹⁷ For the government, nonprofit, and institutional (GNI) customers defined in Act 129, PECO does not have a separate recovery mechanism because its electric accounts are included in the SCI and LCI rate classes. Four separate charges were developed to confirm that the rate classes financing the measures are those receiving the direct energy and conservation benefits. Section 7 includes a detailed description of and estimated values for the cost recovery mechanisms.

¹⁷ For Municipal Lighting, charges were developed in accordance with the Opinion and Order of Petition of PECO Energy Company for Approval of Changes to its Act 129 Phase IV Energy Efficiency and Conservation Plan, at Docket No. M-2020-3020830, adopted on May 23, 2024.

2. Energy-Efficiency Portfolio/Program Summary Tables and Charts

Section 2 of PECO's EE&C Plan provides a comprehensive quantitative overview of the five-year phase period. Section 2.1 describes the portfolio of programs and summarizes total energy savings. Section 2.2 offers a deeper analysis of the portfolio, including cost-effectiveness results, annual energy savings, and peak demand reductions broken down by year and seasonal trends. Section 2.3 presents the budget framework and parity analysis, comparing program expenditures with the overall EE&C budget as well as PECO's total revenue and sales.

2.1 Market Rate Residential, Residential Low-Income, SCI, and LCI Sector Summaries

Table 6 provides brief summaries, as well as the energy and peak demand reductions for each program.

Table 6. Program Summaries¹

	Program Name	Program Market	Program Summary	Program Years Operated	Compliance MWh-year	Lifetime MWh Savings	Compliance MW-year	Percentage of Portfolio Resource Savings (MWh% and MW%)	
Residential Program	Residential Energy Efficiency	Residential	The program goal is to increase the energy efficiency and peak demand reduction in residential spaces through a variety of incentive mechanisms, home assessments, and appliance recycling.	PY18-22	242,020	2,790,254	50.0	17%	19%
	Residential Home Energy Reports	Residential	The program involves regularly delivering direct mail or digital HERs that motivate customers to act through contextualized energy-use information, personal and neighborhood comparisons, and energy savings recommendations.	PY18-22	142,549	570,196	32.2	10%	12%
	Totals for Residential Sector				384,569	3,360,450	82.2	26%	31%
Residential Program	Low-Income Energy Efficiency	Low-Income	The program goal is to improve the energy efficiency and peak demand reduction for low-income customers to help make their homes more affordable.	PY18-22	72,200	491,644	12.0	6%	5%
	Low-Income Home Energy Reports	Low-Income	The program involves regularly delivering direct mail or digital HERs that motivate customers to act through contextualized energy-use information, personal and neighborhood comparisons, and	PY18-22	5,374	21,496	1.1	0%	0%

	Program Name	Program Market	Program Summary	Program Years Operated	Compliance MWh-year	Lifetime MWh Savings	Compliance MW-year	Percentage of Portfolio Resource Savings (MWh% and MW%)	
			energy savings recommendations.						
	Totals for Low-Income Sector				77,574	513,140	13.1	7%	6%
SCI Programs	Non-Residential Energy Efficiency	Small Commercial	The program offers a comprehensive and cross-cutting array of opportunities so small commercial non-residential customers can reduce their energy consumption and costs.	PY18-22	442,780	6,313,633	70.3	30%	27%
	Residential Energy Efficiency	Multifamily	The program goal is to increase the energy efficiency and peak demand reduction in the common areas of multifamily buildings and the residential spaces of master-metered multifamily buildings.	PY18-22	755	6,737	0.1	0%	0%
	Low-Income Energy Efficiency	Multifamily	The program goal is to increase the energy efficiency and peak demand reduction in the common areas of low-income multifamily buildings and the residential spaces of master-metered low-income multifamily buildings.	PY18-22	9,096	79,035	1.3	1%	0%
	Totals for SCI Sector				442,582	6,310,664	70.3	452,631	6,399,405
	LCI Programs	Non-Residential Energy Efficiency	Large Commercial	The program offers a comprehensive and cross-cutting array of opportunities so large commercial non-residential customers can reduce their energy consumption and costs.	PY18-22	533,450	7,691,639	96.2	37%
Residential Energy Efficiency		Multifamily	The program goal is to increase the energy efficiency and peak demand reduction in the common areas of multifamily buildings and the residential spaces of master-metered multifamily buildings.	PY18-22	755	6,737	0.1	0%	0%
Low-Income Energy Efficiency		Multifamily	The program goal is to increase the energy efficiency and peak demand reduction in the common areas of low-income multifamily buildings and the residential spaces of master-metered low-income multifamily buildings.	PY18-22	9,096	79,035	1.3	1%	0%
Totals for LCI Sector				533,648	7,694,608	96.2	543,301	7,777,411	
Totals for Plan				1,458,076	18,050,406	264.5	100%	1,458,076	

¹ Municipal Lighting measures are included in both the SCI and the LCI sectors within the Non-Residential Program.

2.2 Plan Data: Costs, Cost-Effectiveness, and Savings by Program, Sector, and Portfolio

Various sections of this report contain the following data tables, as required by the PUC's Plan V template:

Section 1.3: Table 1. Portfolio Summary of Lifetime Costs and Benefits of Energy Efficiency Measures

Section 1.3: Table 2. Portfolio Summary of Energy and Demand Savings

Section 1.3: Table 3. Summary of Portfolio Energy and Demand Savings

- Section 1.3:
- Table 4. Summary of Seasonal Demand Savings

Section 1.3: Table 5. Summary of Portfolio Costs. Summary of Portfolio Costs

Section 2.1: Table 6. Program Summaries

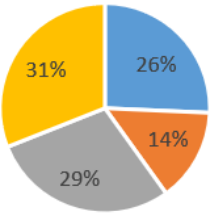
2.3 Budget and Parity Analysis

Table 7 presents the Budget and Parity Analysis, illustrating how program expenditures compare with PECO's total annual revenue and MWh sales by customer sector. Calculations are based on calendar year 2024 data, inclusive of collections for Electric Generation Suppliers, and include both bundled and delivery-only sales.

Table 7. Budget and Parity Analysis Summary

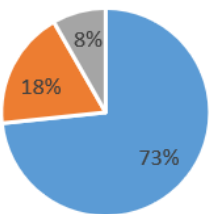
Customer Sector	Phase V EE&C Budget (inclusive of allocated common cost)	% of Total EDC EE&C Budget	% of EDC Total Annual Revenue ¹	% of EDC Total MWh Sales
Residential Sector (<i>exclusive of Low-Income</i>)	\$109,815,107	26%	73%	40%
Residential Low-Income Sub-Sector	\$61,436,925	14%		
Residential Subtotal	\$171,252,032	40%	73%	40%
SCI Sector	\$123,627,960	29%	18%	22%
LCI Sector	\$132,505,839	31%	8%	39%
Non-Residential Subtotal	\$256,133,799	60%	27%	60%
EDC TOTAL	\$427,385,831	100%	100%	100%
EDC TOTAL as Share of Budget Ceiling	100.0%			

% Budget by Customer Sector



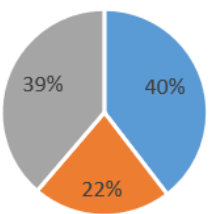
- Residential Sector (*exclusive of Low-Income*)
- Residential Low Income Sub-Sector
- Small C&I Sector
- Large C&I Sector

% Revenue by Customer Sector



- Residential Subtotal
- Small C&I Sector
- Large C&I Sector

% MWh Sales by Customer Sector



- Residential Subtotal
- Small C&I Sector
- Large C&I Sector

3. Program Descriptions

The objective of this section is to provide detailed descriptions of each proposed program, explain PECO's selection process, and demonstrate how these programs form balanced and integrated portfolios. Section 3.1 outlines the criteria and processes used for program selection. Section 3.2.0 focuses on residential sector programs, including Section 3.2.1, which addresses low-income sub-sector initiatives. Sections 3.3 and 3.4 detail offerings in the combined non-residential program for SCI and LCI customers, while Section 3.5 describes PECO's strategy for engaging and integrating the government/nonprofit/institutional sector (GNI) into its non-residential Act 129 program initiatives.

3.1 Discussion of Criteria and Process Used for Selection of Programs

This section contains portfolio objectives and metrics, the process for program development, how measures were included, and a discussion of the meaning of comprehensive programs in the context of the Plan.

3.1.1 Portfolio Objectives and Metrics that Define Program Success

PECO's portfolio objectives are to achieve the requirements set forth in the Phase V Final Order. The Plan will be implemented by delivering the required energy savings and peak demand reductions in a cost-effective manner, on pace, and with a reasonable mix of cost-effective technologies. Figure 2 outlines PECO's Phase V budget and savings compliance targets. These metrics will define Phase V's success.

Figure 2. PECO's Phase V Budget and Savings Targets

Overall Budget	Regulatory Energy Savings Target	Energy Savings Carve-Outs	Pace of Savings	Peak Demand Reduction Target
The total Phase V budget is not to exceed \$427.4 million. The total annual average budget will be \$85.5 million.	The Phase V MWh savings target is 1,111,685 MWh over 5 years, averaging 222,337 MWh/year (2.8% of 2009/2010 annual sales).	Low-income carve-out as defined in the Phase V Final Implementation Order ($\leq 150\%$ FPL): 74,456 MWh for Phase V 14,891 average annual MWh/year	The portfolio must plan to achieve at least 15% of MWh savings target each year (166,753 MWh).	The Phase V peak demand target is 194.8 MW. The portfolio must reduce at least 15% of this target each year and achieve at least 75% of the portfolio compliance target (146.1 MW) each season.

PECO will monitor portfolio performance and make mid-course corrections as necessary to:

- Generate energy savings through streamlined processes that make participation easy for customers and market actors;
- Monitor the marketplace for additional measures and solutions that could be offered in the future;
- Maintain a comprehensive set of energy solution offerings across all end uses to all customers;
- Present a comprehensive and appropriate set of participation channels (e.g., retail versus contractor) through which customers can access energy efficiency solutions; and
- Reallocate program funds among components based on market participant response.

3.1.2 Process for Program Development

PECO's detailed and collaborative program development process resulted in a Phase V Plan with three programs (Residential,¹⁸ Non-Residential, and HER¹⁹). PECO took the following steps to develop the program structure:

Reviewed Phase IV Learnings: PECO analyzed evaluation findings, research reports, and stakeholder feedback from Phase IV to identify opportunities for improvement and strategies to enhance performance in Phase V.

Assessed Market Potential: PECO reviewed the SWE Phase V Potential Studies to determine achievable savings by customers segment and measure category to inform an innovative and achievable program design.

Evaluated Potential Program Structures: PECO identified multiple program and subcomponent designed structures and evaluated them against design principles focused on flexibility, customer accessibility and experience, and operational efficiency.

Prioritized and Selected Preferred EE Design Elements: For the non-behavioral programs, PECO developed preferred design elements for an ideal program structure and selected the program structure that met most of the design elements, resulting in a program structure that:

- Provides a single CSP for the residential customer program and a single CSP for the non-residential program
- Allows for flexibility to respond to market demands for measures and services
- Offers consistent measures across residential and non-residential programs and provides mechanisms for customers to pursue comprehensive energy efficiency upgrades
- Provides program-specific residential and non-residential call centers for individualized customer support

Defined Program Components: PECO identified program components based on historical programs in PECO's territory, market research, best practices from other jurisdictions, and market factors in PECO's territory. Through the competitive RFP process, CSPs were

¹⁸ The Residential program includes program components for both market-rate and low-income customers.

¹⁹ The HER program includes HERs for market-rate and low-income customers.

responsible for developing comprehensive implementation strategies aligned with the scope of work and regulatory requirements.

This comprehensive approach reflects PECO's commitment to continuous improvement, stakeholder engagement, and market-driven design to allow Phase V programs to deliver energy savings and enhance customer experience.

3.1.3 How Energy Efficiency, Combined Heat and Power, Renewables, Load-Shifting, and Other Measures Were Included in the Portfolio

Per Section 1.2, bidding CSPs recommended program designs based on PECO's program design criteria and chose measures to include in the programs. CSPs used a data-driven approach and model to estimate the measures, participation levels, and incentive ranges using PECO's design workbook provided as part of the RFP process. Data inputs included the following:

- 2026 TRM;
- SWE IMC Database;
- Phase IV Act 129 Findings;
- Measure Modeling Efforts; and
- Benchmarking with Other Utility Energy Efficiency Portfolios.

Phase V places greater emphasis on peak demand reductions through energy efficiency and daily load shifting ("DLS"). PECO's program design reflects that DLS has significantly higher potential in the residential sector compared with non-residential. As DLS is a new offering for full-scale implementation, PECO will include all residential DLS measures within a dedicated DLS program component to isolate and monitor budgets, savings, and participation. For non-residential programs, PECO will implement DLS measures within the building optimization program component. These measures will be implemented alongside energy efficiency measures. Refer to Section 3.4 for additional details.

In the residential program, solar measures will be included in the Rebates program component alongside other energy efficiency offerings; refer to Section 3.2 for additional details. In the non-residential program, CHP and solar measures will be implemented through the Distributed Energy Resources program component; refer to Section 3.4 for additional details.

3.1.4 Fuel Switching Measures Proposed Minimum Standard and Justification for Threshold to Receive Program Support

As part of PECO's Act 129 initiative, the non-residential program will incorporate CHP projects. In alignment with the 2026 TRM, this measure will be assessed using a custom baseline informed by site-specific historical trend data.

3.1.5 PECO Program Delivery Alignment with Non-Act 129 Programs

Please reference Section 1.7 for details surrounding coordination with non-Act 129 programs.

3.1.6 Front-of-the Meter Measures Included and Expected Contribution

The Phase V portfolio does not include front-of-the-meter measures.

3.1.7 How PECO Defines Comprehensive in the Context of Plan Design and Delivery

PECO's measure mix aims to prioritize comprehensive measures. PECO will use the Commission's definition of a comprehensive measure as outlined in the Table 8 Addendum tab of the template tables. This includes measures that are defined as comprehensive on their own, such as heat pumps and insulation, as well as measures that are considered comprehensive only when paired with the installation of another comprehensive measure.

Residential Program: The comprehensive components in the Residential program include the Market Rate Single Family and Income-Eligible Single Family components.

In addition to offering comprehensive measures, as defined by the Commission, the Residential program is designed to have a comprehensive approach to implementation. The Residential program's comprehensive implementation approach includes delivering components that address a broader customer journey and the whole home by layering multiple measures, incentive streams, and customer support channels to maximize verified savings, affordability, and equity.

Non-Residential Program: The Existing Buildings component is the comprehensive component of the Non-Residential program.

In addition to offering comprehensive measures, the Non-Residential program is designed to have a comprehensive approach to implementation. The Non-Residential program's comprehensive approach includes a diverse mix of measures and services across multiple components, enabling customers to pursue energy efficiency through various pathways tailored to their needs. This approach integrates multiple components to facilitate broad accessibility to allow customers to claim incentives on deep energy savings.

3.1.8 TOU Contributions to Portfolio

PECO recognizes the potential of TOU rates to deliver measurable load shifting benefits and contribute to overall portfolio savings. Consistent with the Commission's guidance, PECO will not claim inherent load shifting benefits from TOU enrollment alone. Instead, PECO will leverage its EE&C Plan to drive customer adoption and maximize impacts through targeted engagement strategies including:

- **Customer Education:** Develop and deploy educational campaigns that explain TOU rate structures, benefits, and practical strategies for shifting usage to lower-cost periods. These campaigns will utilize multiple channels, including digital platforms, bill inserts, and community outreach.
- **Behavioral Programming:** Incorporate behavioral demand response elements that encourage customers to adjust consumption patterns in response to TOU signals. This

may include personalized usage reports, alerts, and tips tailored to individual consumption profiles.

- **Incentives:** Offer financial incentives to accelerate TOU enrollment and encourage sustained participation. Incentives may include enrollment bonuses, bill credits, or rebates tied to verified load shifting performance.

By combining education, behavioral programming, and incentives, PECO aims to bolster the load impacts of TOU adoption and help these measures contribute meaningfully to Phase V objectives. PECO will track enrollment, engagement, and performance metrics to evaluate the effectiveness of these strategies and adjust program delivery as needed.

3.2 Residential Sector

The residential sector, including both market rate and low-income customer populations, is served by two programs: the Residential program and the Residential HER program. Both programs have subprograms dedicated to serving low-income customers. Market rate customers are served through the Residential program and Residential HER program (described in this section) and low-income customers are served through the Residential Low-Income subprogram and the Residential Low-Income HER subprogram (described in Section 3.2.1).

Residential Program (2026-2031)

Objective

The Residential program objective is to increase energy efficiency in single family homes and individual units and common areas of multifamily buildings. PECO will meet this objective by:

- Providing incentives for customer purchases of efficient lighting, appliances, HVAC upgrades, solar, energy-savings devices, and other energy-savings technologies.
- Removing old, inefficient refrigerators, freezers, dehumidifiers, and room AC units from the PECO service area through responsible recycling.
- Driving the construction of energy-efficient homes and demonstrate their value to builders and homebuyers.
- Delivering no-cost and low-cost in-home energy assessments and direct-install measures to help customers identify and implement energy savings opportunities.
- Supporting DLS and peak demand reduction by encouraging adoption of smart devices.

Target Market

The eligible population and target market for the Residential program includes existing residential single family, or new construction, and multifamily customers. At the time of this Plan development, the Residential market size includes approximately 1,400,000 customers:

- **Residential Single Family:** Includes PECO residential electric customers that are individually metered and do not qualify as low-income. Due to the long history of PECO's service territory, the residential housing stock is diverse in age and structure.
 - **Owner-Occupied:** Marketing and outreach will emphasize building performance, bill savings, and comfort improvements. The CSP will leverage successful marketing channels to promote upgrades such as weatherization, HVAC replacement, and smart controls. The CSP will provide owners with clear return-on-investment messaging and guidance through financing or rebate enrollment.
 - **Renter-Occupied:** Engagement will be focused on direct benefits (comfort, energy savings, safety) while coordinating with landlords for approval for comprehensive upgrades, when appropriate. The CSP will use simplified landlord permission forms, text-based communication options, and targeted digital campaigns within rental listings and community networks for customer acquisition.
- **Multifamily:** Includes PECO residential customers who reside in buildings that have more than one unit. This includes the following types of customers:
 - **Building Owners and Property Managers:** The CSP will conduct proactive outreach through property-management associations, housing authorities, and other stakeholders. PECO and the CSP recognize the need to address the split incentive for property owners, managers, and tenants and will position energy upgrades as financial tools that enhance asset value and tenant retention.
 - **Renters and Tenants:** Multilingual and demographically targeted outreach will be deployed through community partners, onsite events, and resident engagement that emphasizes tenant comfort, safety, and ease of participation. Trained energy advisors will coordinate access and scheduling to minimize disruption.

Program Description

The Residential program offers residential customers in single family and multifamily buildings opportunities to save energy across all of their electric end-uses. This customer-friendly approach will enable participants to make comprehensive energy efficiency upgrades to a variety of equipment types while working with a single PECO program, leading to deeper retrofits. For additional detail concerning the program's comprehensive design and delivery please see Section 3.1.7. The following section describes program components.

Program Components

The Residential program contains the following market-rate program components:²⁰

- **In-Home Assessments:** Offers in-home or virtual assessments that include a home inspection, energy usage analysis, direct-install measures, and an energy education session, followed by a custom report to identify larger energy efficiency opportunities (e.g., insulation and air sealing), and encourage participation in other Residential programs, including programs not managed by PECO, when the customer is believed to

²⁰ Residential Low-Income subprogram components are discussed in Section 3.2.1

qualify. BPI-certified Energy Advisors will perform these assessments when possible. Units in individually metered multifamily buildings are served through this component as well.

- **Appliance Recycling:** Offers responsible recycling of refrigerators, freezers, dehumidifiers, and room AC units via drop-off locations/events or pick-ups. Encourages participation in other programs.
- **Rebates:** Provides rebates for energy efficient measures through several channels, including downstream applications; trade ally and distributor networks that apply on behalf of customers or offer incentives directly on invoices; and point-of-purchase discounts at retail locations.
- **Online Marketplace:** Provides a one-stop shopping experience for instant rebates on efficient products with the opportunity to increase customer awareness of products and components.
- **New Construction:** Promotes building homes that are more comfortable, durable, and energy efficient than those built to code. Home Energy Rating System (HERS) raters collaborate with builders during the design and construction phases to achieve greater energy efficiency.
- **DLS:** Delivers peak demand reduction on non-holiday weekdays in summer (June through August) and winter (January and February) by shifting load from on-peak to off-peak hours. This component may incorporate controllable loads (e.g., smart thermostats, electric vehicle [EV] managed charging, battery storage, water heaters) and behavioral measures.
- **Multifamily:** Provides in-unit and common area upgrades in multifamily buildings that are master metered, and common areas in individually metered multifamily buildings.

Coordination of Participation in other Act 129 programs

The CSP will cross-promote other Act 129 program offerings to customers through a variety of methods including:

- Sharing program information in new mover kits
- Promoting other offerings in emails, web content, and Home Energy Reports
- Sharing information about other Act 129 offerings during in-home energy assessments
- Providing customers with informational materials during appliances recycling drop-off events

Implementation Strategy

The Residential program will be administered by a CSP and a team of partners with a proven record of providing the services offered in this program.

The implementation strategy will vary by program component:

- **In-Home Assessments:** The CSP will offer two appointment types for customers:
 - **Energy Assessment** will provide customers with an in-depth walkthrough of their home, recommendations for whole-house improvements, and recommendations for other ways to save within the PECO portfolio of energy efficiency components and installation of energy savings products.
 - **Energy Assessment Plus** will be performed in accordance with BPI standards. Comprehensive audits will provide the same services as the Energy Assessment appointment and add depth and detail by using a variety of diagnostic equipment and inspection techniques such as building tightness testing and infrared thermography. Customers will receive more specific information to help them move forward with recommendations, including any applicable available incentives. At the completion of the assessment, customers will receive a detailed summary report outlining findings, recommended improvements, and available program offerings to help guide next steps.
- **Appliance Recycling:** The CSP will offer appliance drop off events at locations designated by local townships for compact refrigerators, room air conditioners, and dehumidifiers. An additional option will be available for customers to drop off regular household sized refrigerators and freezers at a designated location.
- **Rebates:** Rebates are available for eligible PECO customers on eligible HVAC equipment, appliances, water heating, and other energy saving measures. Customers may apply for rebates, or HVAC contractors may apply on a customer's behalf. The component also includes an instant markdown channel designed to deliver immediate savings to customers at the point of sale.
- **Online Marketplace:** A convenient platform where customers can purchase energy-efficiency products, including smart thermostats, air purifiers, dehumidifiers, and advanced power strips. The marketplace will offer exclusive seasonal manufacturer discounts and instant PECO rebates, making it easier for customers to upgrade to more energy efficient equipment.
- **New Construction:** The new construction component will be implemented similar to Phase IV, working through new home builders and Home Energy Raters.
- **DLS:** The CSP will offer three participation channels to customers. Customers are eligible to enroll devices in one or multiple channels:
 - **Managed EV Charging** to shift residential EV charging to off-peak periods. The CSP will leverage a network of OEM partner integrations to recruit and enroll customers in this offering.
 - **Thermostat Optimization** to enable ongoing remote adjustment of smart thermostat to reduce HVAC use during demand windows. The CSP will leverage partnerships with device manufacturers and service providers to target potential participants. Enrolled customers will have the option to opt out of load shifting events at any time.
 - **A Bring-Your-Own-Battery (BYOB)** offering that will discharge batteries to lower grid demand during peak periods. The offerings will enroll existing residential battery systems to leverage existing infrastructure rather than providing incentives for new battery installation.

- **Multifamily:** The CSP will engage property managers and tenants to perform both in unit and common area upgrades in multifamily buildings. The CSP will provide free assessments, direct-install measures, and training to facility staff about the process and measures to be installed in the building. The CSP will help building owners and operators understand the impacts of proposed measures, including demand, energy use, and non-energy benefits.

Program Issues and Risks and Risk Mitigation

The Residential program will manage risks by implementing a continuous improvement process such that PECO closely monitors program results and adjusts implementation tactics (including marketing approaches, participation guidelines, incentives, and program resource allocation) to meet the portfolio level targets.

One risk is the transition from Phase IV to Phase V. Part of this risk will be mitigated by the continuity in implementation CSP from Phase IV to Phase V. The CSP has extensive regulatory and market knowledge in Pennsylvania and prior extensive experience with PECO's energy efficiency programs.

An additional risk is market factors that are not controlled by PECO including changing federal and state guidelines and regulations, such as possible changes to the federal ENERGY STAR® program that is currently used to prescribe equipment eligibility in the 2026 TRM. If the ENERGY STAR program were to no longer exist, PECO would consider alternative options such as equipment verification through databases like DOE's Compliance Certification and Management System (CCMS). As additional guidelines and risks present themselves, PECO will adjust its planning and portfolio design as needed.

Another potential risk to program design stems from external economic factors that could significantly increase incremental costs, such as substantial tariff impacts or prolonged periods of high inflation. Should these challenges arise and create prohibitive conditions during Phase V, PECO will proactively collaborate with stakeholders and the Commission to identify solutions.

As additional guidelines and risks present themselves PECO will adjust its planning and portfolio design as needed.

Anticipated Costs to Participating Customers

Customers participating in the Residential program are projected to incur costs of \$270,251,892 for Phase V after PECO incentives. These costs are calculated by subtracting incentives from incremental costs, representing the anticipated direct expenses for participating customers.

Ramp-Up Strategy

Minimal ramp-up will be needed for the In-Home Assessments, Rebates, Marketplace, Appliance Recycling, Multifamily, and New Construction components because similar components are already operating in Phase IV.

For the DLS component, PECO and the CSP will work to enroll customers with existing measures in the program to claim savings for the peak summer demand period that begins

shortly after the start of Phase V. These efforts will include reaching out to individuals who have previously received potential load shifting measures, such as connected smart thermostats.

Marketing Strategy

The CSP will be responsible for program marketing, coordinating with PECO's Marketing and Promotions team, E&O CSP, and the Exelon Energy Efficiency Marketing Agency for messaging design and consistency. Marketing strategies will vary by component. In addition to the strategies listed below, the CSP will implement cross-promotion of components to increase customer participation across PECO's Residential program components.

- **In-Home Assessments:** Personalized email outreach; new mover kits; social media; targeted digital ads; community engagement through homeowner associations, newsletters, and events.
- **Appliance Recycling:** Emails; bill inserts; social media; cross-promotions with municipal recycling events.
- **Rebates:** In-store point-of-purchase signage; direct outreach from contractors; targeted emails; digital ads; social media.
- **Online Marketplace:** Website banners; digital ads; emails; social media.
- **New Construction:** Direct builder outreach; education events and partnerships with trusted associations (i.e., Home Building Associations, housing authorities, community developers); technical assistance, case studies, and collaboration with manufacturers.
- **DLS:** Co-branded marketing (i.e., thermostats and EV batteries) with device manufacturers featuring email, web, and in-app messaging; bill inserts; newsletters.
- **Multifamily:** Outreach to property managers and tenants through case studies, testimonials, and industry events; digital advertising.

Eligible Measures and Incentive Strategy

The measure mix is listed in Table 8 and includes a comprehensive mix of end-use technologies such as lighting, HVAC, appliances, shell, water heating, and plug loads. Incentives are based on previous experience and knowledge of the market in PECO's territory.

Table 8. Residential Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
Dehumidifier Retirement	per dehumidifier	No	Yes	Phase V TRM	\$10.00	4	\$0.00 - \$10.00
Low-Capacity Refrigerator / Freezer Recycling without Replacement	per refrigerator/freezer	No	Yes	Phase V TRM	\$50.00	5	\$0.00 - \$50.00
Refrigerator / Freezer Recycling with and without Replacement	per refrigerator	No	Yes	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Room AC (RAC) Retirement	per room A/C	No	Yes	Phase V TRM	\$10.00	3	\$0.00 - \$10.00
Low-Flow Faucet Aerators: Kit	per aerator	No	Yes	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Kit	per showerhead	No	Yes	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
WH > 10% UBC \$0.30/kWh	per home	No	Yes	Phase V TRM	\$2,133.95	15	\$0.00 - \$2,133.95
WH > 10% UBC HPWH \$0.60/kWh	per home	No	Yes	Phase V TRM	\$3,053.95	15	\$0.00 - \$3,053.95
ENERGY STAR Certified Connected Thermostats	per thermostat	No	Yes	Phase V TRM	\$168.42	9	\$0.00 - \$168.42
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)	per fixture	No	Yes	Phase V TRM	\$4.40	2	\$0.00 - \$4.40
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g., candelabra))	per fixture	No	Yes	Phase V TRM	\$6.41	2	\$0.00 - \$6.41
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)	per fixture	No	Yes	Phase V TRM	\$7.08	2	\$0.00 - \$7.08
LED and Electroluminescent Nightlights	per nightlight	No	Yes	Phase V TRM	\$3.25	8	\$0.00 - \$3.25

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
Low-Flow Faucet Aerators: Direct install	per aerator	No	Yes	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Direct install	per showerhead	No	Yes	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
Thermostatic Shower Restriction Valves	per water heater	No	Yes	Phase V TRM	\$42.00	15	\$0.00 - \$42.00
Water Heater Tank Wrap	per tank	No	Yes	Phase V TRM	\$89.14	7	\$0.00 - \$89.14
Water Heater Temperature Setback	per water heater	No	Yes	Phase V TRM	\$22.47	2	\$0.00 - \$22.47
Advanced Power Strips	per advanced power strip	No	Yes	Phase V TRM	\$60.00	5	\$0.00 - \$60.00
ENERGY STAR Air Purifiers - Direct Install LI & MF	per air purifier	No	Yes	Phase V TRM	\$300.00	9	\$0.00 - \$300.00
LED Exit Signs	per sign	No	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
Lighting Retrofits - Other Interior Fixtures	per fixture	No	No	Phase V TRM	\$80.00	15	\$0.00 - \$80.00
Lighting Retrofits - Outdoor floods	per fixture	No	No	Phase V TRM	\$123.81	15	\$0.00 - \$123.81
Lighting Retrofits - Parking Garage	per fixture	No	No	Phase V TRM	\$120.00	15	\$0.00 - \$120.00
Lighting Retrofits - Parking Lot	per fixture	No	No	Phase V TRM	\$129.00	15	\$0.00 - \$129.00
Lighting: Permanent Fixture Removal	per fixture	No	No	Phase V TRM	\$60.00	11	\$0.00 - \$60.00
Linear LED: Lamp Replacement	per lamp	No	No	Phase V TRM	\$15.00	15	\$0.00 - \$15.00
Linear LED: Retrofit Fixture, surface mount	per fixture	No	No	Phase V TRM	\$150.00	15	\$0.00 - \$150.00
Linear LED: Retrofit Fixture, troffer	per fixture	No	No	Phase V TRM	\$250.00	15	\$0.00 - \$250.00
Occupancy Sensor	per sensor	No	No	Phase V TRM	\$55.00	8	\$0.00 - \$55.00
HVAC Systems: PTAC	per PTAC	No	Yes	Phase V TRM	\$1,600.00	15	\$0.00 - \$1,600.00
HVAC Systems: PTHP	per PTHP	No	Yes	Phase V TRM	\$2,100.00	15	\$0.00 - \$2,100.00
Advanced Power Strips: Kit	per advanced power strip	No	Yes	Phase V TRM	\$40.07	5	\$0.00 - \$40.07
Connected Smart Thermostat	per unit	No	No	Phase V TRM	\$23.06	1	\$0.00 - \$23.06

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
Electric Vehicle Managed Charging (Actively Managed)	per unit	No	No	Phase V TRM	\$144.00	1	\$0.00 - \$144.00
Behind the Meter Battery Storage (Bring Your Own)	per unit	No	No	Phase V TRM	\$858.00	1	\$0.00 - \$858.00
Water Heater Pipe Insulation	per water heater	No	Yes	Phase V TRM	\$59.80	11	\$0.00 - \$59.80
Smart Water Heater Controls	per water heater controller	No	Yes	Phase V TRM	\$155.99	11	\$0.00 - \$155.99
Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket	per gasket	No	Yes	Phase V TRM	\$35.84	15	\$0.00 - \$35.84
Advanced Power Strips: Tier 1	per advanced power strip	No	Yes	Phase V TRM	\$30.00	5	\$0.00 - \$30.00
Advanced Power Strips: Tier 2	per advanced power strip	No	Yes	Phase V TRM	\$75.00	5	\$0.00 - \$75.00
ENERGY STAR Certified Connected Thermostats: ASHP	per thermostat	No	Yes	Phase V TRM	\$190.00	9	\$0.00 - \$190.00
ENERGY STAR Certified Connected Thermostats: CAC-Only	per thermostat	No	Yes	Phase V TRM	\$190.00	9	\$0.00 - \$190.00
ENERGY STAR Air Purifiers	per air purifier	No	Yes	Phase V TRM	\$168.75	9	\$0.00 - \$168.75
High Efficiency Equipment: ASHP	per unit	No	Yes	Phase V TRM	\$2,192.34	15	\$0.00 - \$2,192.34
High Efficiency Equipment: CAC	per unit	No	Yes	Phase V TRM	\$2,192.34	15	\$0.00 - \$2,192.34
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump	per heat pump	No	Yes	Phase V TRM	\$378.96	15	\$0.00 - \$378.96
ECM Circulation Fans	per fan	No	Yes	Phase V TRM	\$352.79	5	\$0.00 - \$352.79

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
Air Conditioner & Heat Pump Maintenance	per unit	No	Yes	Phase V TRM	\$141.40	3	\$0.00 - \$141.40
Duct Sealing & Duct Insulation	per home	No	Yes	Phase V TRM	\$280.65	15	\$0.00 - \$280.65
Furnace Maintenance	per furnace	No	Yes	Phase V TRM	\$141.40	3	\$0.00 - \$141.40
ENERGY STAR Bathroom Exhaust Fan	per exhaust fan unit	No	Yes	Phase V TRM	\$208.00	15	\$0.00 - \$208.00
Heat Pump Water Heaters	per water heater	No	Yes	Phase V TRM	\$920.44	10	\$0.00 - \$920.44
Residential Air Sealing	per home	No	Yes	Phase V TRM	\$449.64	15	\$0.00 - \$449.64
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Ceiling/Attic	per home	No	Yes	Phase V TRM	\$857.72	15	\$0.00 - \$857.72
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Wall Insulation	per home	No	Yes	Phase V TRM	\$300.00	15	\$0.00 - \$300.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Floor Insulation	per home	No	Yes	Phase V TRM	\$203.21	15	\$0.00 - \$203.21
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: RJI Insulation	per home	No	Yes	Phase V TRM	\$500.00	15	\$0.00 - \$500.00
Basement or Crawl Space Wall Insulation	per home	No	Yes	Phase V TRM	\$155.63	15	\$0.00 - \$155.63
ENERGY STAR Windows	per window area	No	Yes	Phase V TRM	\$952.20	15	\$0.00 - \$952.20
Water Heater Pipe Insulation: Kit	per water heater	No	Yes	Phase V TRM	\$3.00	11	\$0.00 - \$3.00
Room Air Conditioners	per room A/C	No	Yes	Phase V TRM	\$95.08	9	\$0.00 - \$95.08
Window Heat Pump	per window heat pump	No	Yes	Phase V TRM	\$2,574.50	9	\$0.00 - \$2,574.50
ENERGY STAR Refrigerators	per refrigerator	No	Yes	Phase V TRM	\$128.41	14	\$0.00 - \$128.41
ENERGY STAR Clothes Washers	per washer	No	Yes	Phase V TRM	\$35.72	14	\$0.00 - \$35.72

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
ENERGY STAR Clothes Dryers	per dryer	No	Yes	Phase V TRM	\$206.34	14	\$0.00 - \$206.34
ENERGY STAR Dehumidifiers	per dehumidifier	No	Yes	Phase V TRM	\$25.00	12	\$0.00 - \$25.00
Photovoltaic (PV) Solar Generation	per PV array	No	Yes	Phase V TRM	\$15,232.00	15	\$0.00 - \$15,232.00
Water Heater Pipe Insulation - Instant Markdown	per water heater	No	Yes	Phase V TRM	\$6.00	11	\$0.00 - \$6.00
Residential Occupancy Sensors	per sensor	No	Yes	Phase V TRM	\$65.90	8	\$0.00 - \$65.90
Holiday Lights	per one strand of holiday lights	No	Yes	Phase V TRM	\$0.67	10	\$0.00 - \$0.67
High Efficiency Equipment for Midstream Delivery: ASHP, CAC, PTAC, PTHP	per unit	No	Yes	Phase V TRM	\$2,192.37	15	\$0.00 - \$2,192.37
GSHP Desuperheaters	per desuperheater	No	Yes	Phase V TRM	\$2,260.05	15	\$0.00 - \$2,260.05
Air Handler Filter Whistles	per filter whistle	No	Yes	Phase V TRM	\$5.19	5	\$0.00 - \$5.19
Solar Water Heaters	per water heater	No	Yes	Phase V TRM	\$1,111.33	15	\$0.00 - \$1,111.33
Drain Water Heat Recovery Units	per unit	No	Yes	Phase V TRM	\$734.58	15	\$0.00 - \$734.58
ENERGY STAR Freezers	per freezer	No	Yes	Phase V TRM	\$38.93	11	\$0.00 - \$38.93
ENERGY STAR Coolers	per cooler	No	Yes	Phase V TRM	\$281.84	14	\$0.00 - \$281.84
Cooler Recycling with and without Replacement	per cooler	No	Yes	Phase V TRM	\$281.84	9	\$0.00 - \$281.84
Residential Induction Cooktop	per induction cooktop	No	Yes	Phase V TRM	\$1,087.38	15	\$0.00 - \$1,087.38
ENERGY STAR Dishwashers	per dishwasher	No	Yes	Phase V TRM	\$79.45	10	\$0.00 - \$79.45
ENERGY STAR Ceiling Fans	per ceiling fan	No	Yes	Phase V TRM	\$252.74	10	\$0.00 - \$252.74
ENERGY STAR Pool Pumps	per pool pump	No	Yes	Phase V TRM	\$145.38	10	\$0.00 - \$145.38

Measure	Unit	Low-Income Measure (Yes/No) ¹	Comprehensive Measure (Yes/No) ^{2,3}	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Range (\$/unit)
Single Speed Pool Pump Replacement	per VFD pool pump	No	Yes	Phase V TRM	\$986.77	3.3	\$0.00 - \$986.77
Time of Use (TOU) Rates	per household	No	No	Phase V TRM	\$0.00	1	\$0.00 - \$25.00

To maximize opportunities for customer energy savings, PECO reserves the right to include in the program and offer an incentive of up to the incremental measure costs²¹ for any measure that is not listed in Table 8 but identified in the TRM or approved as an interim measure protocol.

²¹ The incremental measure costs is determined through Exhibit 5: 2026 Incremental Measure Cost Database issued by the PUC found here [Total Resource Cost Test | PA PUC](#)

Basis for the Proposed Incentive Levels

Incentives are based on previous experience and knowledge of the market in PECO's territory. The incentives may be per unit, or per kWh, per kW saved, or any other suitable structure to drive participation.

Maximum Deadlines for Rebates

PECO requires 180 days as a maximum length of time for an application to be submitted. Any longer may affect reporting and reconciliation timeframes.

Key Schedule Milestones

The planned implementation schedule is as follows:

March 2026: PECO and the CSPs will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems and marketing and outreach is in place.

June 1, 2026: The programs will launch with some components on a ramp-up period for the first 6 months.

June 2026–May 2031: Programs will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.

May 31, 2031: Last day of the Phase V programs.

Assumed EM&V

The Residential program's proposed evaluation methodology and data collection are consistent with current EM&V practices for PECO's Phase IV programs. The EM&V requirements for this program conform to all applicable state protocols, including the SWE Evaluation Framework and the Pennsylvania TRM. PECO will follow the SWE's Evaluation Framework, utilize a SWE-approved Phase V evaluation plan, and utilize an independent evaluator to verify all Plan-related savings and confirm that there is no double-counting of savings for programs that leverage outside funding. Metrics for monitoring program success include, but are not limited to:

- Customer satisfaction with the program and participation trends
- Energy savings and peak demand reductions associated with installed efficient equipment or removed equipment
- Program implementation costs and program cost-effectiveness
- Data for evaluating the program will come from some of the following sources:
 - Tracking system data
 - Engineering or TRM estimates of measure savings
 - Follow-up surveys of customers, retailers, trade allies, and service providers who participate in the program
 - Program implementer and PECO staff surveys or interviews

- Evaluation of billing data
- Local weather data

Program impacts will be determined using a variety of data sources and tested techniques. These strategies may include:

- Field and phone verification, review of program records and incentive applications
- Project reviews referencing per-unit deemed or default energy savings
- Billing analysis
- Installation follow-up phone interviews with program participants to identify: Rebated measures installed and persistence (e.g., are the measures still installed?), and other changes to the business that affect energy usage, such as changes in occupancy or changes in building size
- Evaluating program process success and efficiency across program delivery, administration, implementation, and customer response includes the following strategies:
 - Assess marketing and promotional efforts
 - Monitor contractor data-tracking system and implementation procedures to confirm that the program is being implemented as designed
 - Interview utility staff, contractors, equipment vendors, and customers
 - Survey program participants
 - Assess customer understanding, satisfaction, and attitudes about the program

See Section 6 for more details about market and process evaluations.

Administrative Requirements

PECO will administer the Residential program through a CSP. PECO will confirm that major milestones are met and that the program is delivered according to the program design. Requested external staffing levels will be provided upon the completion of the CSP selection and contracting process. PECO will have six full-time equivalent (FTE) staff dedicated to the residential sector.

Savings Projections

Table 9. Residential Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Dehumidifier Retirement</i>	2.4.12	Energy Savings (MWh) ²	955	979	1,028	1,077	857	4,897
		Summer Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	956	980	1,029	1,078	857	4,900
<i>Low-Capacity Refrigerator / Freezer Recycling without Replacement</i>	2.4.4	Energy Savings (MWh) ²	85	87	92	96	78	438
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	286	293	308	322	261	1,470
<i>Refrigerator / Freezer Recycling with and without Replacement</i>	2.4.3	Energy Savings (MWh) ²	19	20	20	22	17	98
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	24	25	26	28	22	125
<i>Room AC (RAC) Retirement</i>	2.2.8	Energy Savings (MWh) ²	51	52	54	57	45	260
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	390	400	420	440	350	2,000
<i>Low-Flow Faucet Aerators: Kit</i>	2.3.6	Energy Savings (MWh) ²	459	459	459	459	459	2,295
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.2	1.0
		Projected Participation ³	29,162	29,162	29,162	29,162	29,162	145,810
	2.3.7	Energy Savings (MWh) ²	1,022	1,022	1,022	1,022	1,022	5,108

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Low-Flow Showerheads: Kit		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Winter Demand Reduction (MW)	0.2	0.3	0.3	0.3	0.3	1.3
		Projected Participation ³	60,662	60,662	60,662	60,662	60,662	303,310
WH > 10% UBC \$0.30/kWh	2.7.1	Energy Savings (MWh) ²	3,200	3,170	3,192	3,216	3,246	16,024
		Summer Demand Reduction (MW)	1.1	1.1	1.1	1.1	1.1	5.5
		Winter Demand Reduction (MW)	0.7	0.7	0.7	0.7	0.7	3.3
		Projected Participation ³	1,600	1,585	1,596	1,608	1,623	8,012
WH > 10% UBC HPWH \$0.60/kWh	2.7.1	Energy Savings (MWh) ²	390	585	780	975	1,170	3,900
		Summer Demand Reduction (MW)	0.1	0.1	0.2	0.2	0.3	0.9
		Winter Demand Reduction (MW)	0.1	0.1	0.2	0.2	0.3	0.9
		Projected Participation ³	100	150	200	250	300	1,000
ENERGY STAR Certified Connected Thermostats	2.2.12	Energy Savings (MWh) ²	2,910	2,910	2,910	2,910	2,910	14,551
		Summer Demand Reduction (MW)	0.4	0.4	0.4	0.4	0.4	2.1
		Winter Demand Reduction (MW)	0.6	0.6	0.6	0.6	0.6	3.0
		Projected Participation ³	7,906	7,906	7,906	7,906	7,906	39,530
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)	2.1.1	Energy Savings (MWh) ²	556	534	491	454	400	2,435
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.1	0.5	0.5	0.6	0.4	2.1
		Projected Participation ³	13,395	12,853	11,831	10,919	9,626	58,625
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g., candelabra))	2.1.1	Energy Savings (MWh) ²	545	517	466	419	377	2,324
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.2	0.9
		Projected Participation ³	16,712	15,877	14,290	12,862	11,576	71,317
	2.1.1	Energy Savings (MWh) ²	362	344	311	280	252	1,549

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)</i>		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	8,233	7,828	7,060	6,370	5,722	35,213
<i>LED and Electroluminescent Nightlights</i>	2.1.3	Energy Savings (MWh) ²	3	3	2	2	2	12
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	774	666	577	500	422	2,940
<i>Low-Flow Faucet Aerators: Direct install</i>	2.3.6	Energy Savings (MWh) ²	5	5	5	5	4	25
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.3
		Projected Participation ³	85	87	91	95	78	436
<i>Low-Flow Showerheads: Direct install</i>	2.3.7	Energy Savings (MWh) ²	7	6	5	5	4	27
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	102	90	83	75	62	413
<i>Thermostatic Shower Restriction Valves</i>	2.3.8	Energy Savings (MWh) ²	0	0	0	0	0	1
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	6	6	7	7	6	32
<i>Water Heater Tank Wrap</i>	2.3.3	Energy Savings (MWh) ²	0	0	0	0	0	1
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
	2.3.4	Energy Savings (MWh) ²	1	1	1	1	1	5

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Water Heater Temperature Setback</i>		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	13	13	13	13	13	65
<i>Advanced Power Strips</i>	2.5.1	Energy Savings (MWh) ²	4,756	4,580	4,404	4,404	4,404	22,549
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.8
		Projected Participation ³	54,135	52,135	50,136	50,136	50,134	256,676
<i>ENERGY STAR Air Purifiers - Direct Install LI & MF</i>	2.4.14	Energy Savings (MWh) ²	24	24	26	27	21	121
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.3	0.3	0.4	0.3	1.3
		Projected Participation ³	82	83	88	92	73	418
<i>LED Exit Signs</i>	3.1.4	Energy Savings (MWh) ²	3	4	4	4	3	18
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	12	13	13	14	11	63
<i>Lighting Retrofits - Other Interior Fixtures</i>	3.1.1	Energy Savings (MWh) ²	4	4	5	5	4	22
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	3.1	3.4	3.1	2.6	12.1
		Projected Participation ³	20	20	21	22	18	101
<i>Lighting Retrofits - Outdoor floods</i>	3.1.1	Energy Savings (MWh) ²	15	15	16	17	13	76
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	1.6	0.9	0.9	0.9	4.4
		Projected Participation ³	25	25	27	28	22	127
	3.1.1	Energy Savings (MWh) ²	6	6	6	7	5	29

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Lighting Retrofits - Parking Garage</i>		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	8	8	8	9	7	40
<i>Lighting Retrofits - Parking Lot</i>	3.1.1	Energy Savings (MWh) ²	16	16	17	18	14	82
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.1	0.0	0.2
		Projected Participation ³	25	25	27	28	22	127
<i>Lighting: Permanent Fixture Removal</i>	3.1.1	Energy Savings (MWh) ²	87	89	93	98	78	444
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.2	0.1	0.6
		Projected Participation ³	244	250	263	275	219	1,251
<i>Linear LED: Lamp Replacement</i>	3.1.1	Energy Savings (MWh) ²	12	12	13	14	11	62
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	366	375	394	413	328	1,876
<i>Linear LED: Retrofit Fixture, surface mount</i>	3.1.1	Energy Savings (MWh) ²	4	4	5	5	4	22
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	25	25	27	28	22	127
<i>Linear LED: Retrofit Fixture, troffer</i>	3.1.1	Energy Savings (MWh) ²	6	6	7	7	6	33
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	25	25	27	28	22	127
<i>Occupancy Sensor</i>	3.1.3	Energy Savings (MWh) ²	1	1	1	1	1	4

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	6	7	7	7	6	33
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	3,144	3,150	3,163	3,175	3,119	15,751
HVAC Systems: PTAC	2.2.1	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
HVAC Systems: PTHP	2.2.1	Energy Savings (MWh) ²	14	14	14	14	14	70
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	4	4	4	4	4	20
Advanced Power Strips: Kit	2.5.1	Energy Savings (MWh) ²	1,488	1,488	1,488	1,488	1,488	7,440
		Summer Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Winter Demand Reduction (MW)	0.2	0.5	0.5	0.5	0.5	2.3
		Projected Participation ³	20,001	20,001	20,001	20,001	20,001	100,005
Connected Smart Thermostat	LS002	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.8	0.8	0.9	0.9	1.0	4.5
		Winter Demand Reduction (MW)	1.7	2.0	2.1	2.2	2.4	10.5
		Projected Participation ³	17,955	19,209	20,539	21,983	23,522	103,208
Electric Vehicle Managed Charging (Actively Managed)	LS006	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.1	0.1	0.2	0.2	0.2	0.8

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.1	0.1	0.2	0.2	0.2	0.8
		Projected Participation ³	1,200	1,440	1,728	2,074	2,488	8,930
<i>Behind the Meter Battery Storage (Bring Your Own)</i>	LS012	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.3	0.3	0.4	0.4	0.5	1.9
		Winter Demand Reduction (MW)	0.3	0.3	0.4	0.4	0.5	1.9
		Projected Participation ³	500	575	661	760	875	3,371
<i>Water Heater Pipe Insulation</i>	2.3.5	Energy Savings (MWh) ²	47	47	47	47	47	237
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.2	0.2	0.2	0.2	0.7
		Projected Participation ³	112	112	112	112	112	560
<i>Smart Water Heater Controls</i>	2.3.10	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket</i>	2.6.2	Energy Savings (MWh) ²	133	133	133	133	133	666
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	21,940	21,940	21,940	21,940	21,940	109,700
<i>Advanced Power Strips: Tier 1</i>	2.5.1	Energy Savings (MWh) ²	59	59	59	59	59	293
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	822	822	822	822	822	4,110
<i>Advanced Power Strips: Tier 2</i>	2.5.1	Energy Savings (MWh) ²	64	64	64	64	64	320
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	466	466	466	466	466	2,330
<i>ENERGY STAR Certified Connected Thermostats: ASHP</i>	2.2.12	Energy Savings (MWh) ²	14	28	43	43	43	170
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	20	40	60	60	60	240
<i>ENERGY STAR Certified Connected Thermostats: CAC-Only</i>	2.2.12	Energy Savings (MWh) ²	5	18	18	18	18	79
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	20	80	80	80	80	340
<i>ENERGY STAR Air Purifiers</i>	2.4.14	Energy Savings (MWh) ²	351	351	351	351	351	1,756
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Projected Participation ³	1,985	1,985	1,985	1,985	1,985	9,925
<i>High Efficiency Equipment: ASHP</i>	2.2.1	Energy Savings (MWh) ²	2,760	2,767	2,828	2,828	2,828	14,011
		Summer Demand Reduction (MW)	0.3	0.3	0.3	0.3	0.3	1.6
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.7
		Projected Participation ³	2,256	2,262	2,312	2,312	2,312	11,454
<i>High Efficiency Equipment: CAC</i>	2.2.1	Energy Savings (MWh) ²	757	759	759	759	759	3,793
		Summer Demand Reduction (MW)	2.3	2.3	2.3	2.3	2.3	11.6
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	2,812	2,818	2,818	2,818	2,818	14,084
<i>High Efficiency Equipment: ENERGY STAR Most Efficient</i>	2.2.3	Energy Savings (MWh) ²	1,820	1,823	1,823	1,823	1,823	9,114
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Ductless Mini-Split Heat Pump		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	1.0
		Projected Participation ³	3,012	3,018	3,018	3,018	3,018	15,084
ECM Circulation Fans	2.2.4	Energy Savings (MWh) ²	961	962	962	962	962	4,811
		Summer Demand Reduction (MW)	0.3	0.3	0.3	0.3	0.3	1.5
		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Projected Participation ³	5,010	5,016	5,016	5,016	5,016	25,074
Air Conditioner & Heat Pump Maintenance	2.2.6	Energy Savings (MWh) ²	332	332	332	332	332	1,662
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	1,057	1,057	1,057	1,057	1,057	5,285
Duct Sealing & Duct Insulation	2.2.10	Energy Savings (MWh) ²	42	42	42	42	42	209
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	146	146	146	146	146	730
Furnace Maintenance	2.2.13	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	11	11	11	11	11	55
ENERGY STAR Bathroom Exhaust Fan	2.2.14	Energy Savings (MWh) ²	15	15	15	15	15	73
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	212	212	212	212	212	1,060
Heat Pump Water Heaters	2.3.1	Energy Savings (MWh) ²	542	553	560	560	560	2,777
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.1	0.3	0.3	0.3	0.3	1.1
		Projected Participation ³	302	308	312	312	312	1,546
Residential Air Sealing	2.6.1	Energy Savings (MWh) ²	45	45	45	45	45	227
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	82	82	82	82	82	410
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Ceiling/Attic	2.6.3	Energy Savings (MWh) ²	109	109	109	109	109	544
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.2	0.2	0.2	0.2	0.8
		Projected Participation ³	61	61	61	61	61	305
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Wall Insulation	2.6.3	Energy Savings (MWh) ²	15	15	15	15	15	74
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	80	80	80	80	80	400
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Floor Insulation	2.6.3	Energy Savings (MWh) ²	22	22	22	22	22	110
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	20	20	20	20	20	100
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: RJI Insulation	2.6.3	Energy Savings (MWh) ²	34	34	34	34	34	172
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	93	93	93	93	93	465
Basement or Crawl Space Wall Insulation	2.6.4	Energy Savings (MWh) ²	3	3	3	3	3	17
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	4	4	4	4	4	19
ENERGY STAR Windows	2.6.5	Energy Savings (MWh) ²	3	6	12	15	17	53
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	10	20	40	48	58	176
Water Heater Pipe Insulation: Kit	2.3.5	Energy Savings (MWh) ²	412	412	412	412	412	2,060
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Projected Participation ³	20,000	20,000	20,000	20,000	20,000	100,000
Room Air Conditioners	2.2.7	Energy Savings (MWh) ²	36	36	36	36	36	179
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1,420	1,420	1,420	1,420	1,420	7,100
Window Heat Pump	2.2.9	Energy Savings (MWh) ²	94	94	94	94	94	469
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.4	0.4	0.4	0.4	0.4	2.0
		Projected Participation ³	150	150	150	150	150	750
ENERGY STAR Refrigerators	2.4.1	Energy Savings (MWh) ²	656	800	944	944	944	4,286
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	9,100	11,100	13,100	13,100	13,100	59,500
ENERGY STAR Clothes Washers	2.4.8	Energy Savings (MWh) ²	310	371	433	433	433	1,981
		Summer Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.3
		Projected Participation ³	5,000	6,000	7,000	7,000	7,000	32,000
ENERGY STAR Clothes Dryers	2.4.9	Energy Savings (MWh) ²	364	448	532	532	532	2,407
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Projected Participation ³	4,350	5,350	6,350	6,350	6,350	28,750
ENERGY STAR Dehumidifiers	2.4.11	Energy Savings (MWh) ²	1,763	1,763	1,763	1,763	1,763	8,816
		Summer Demand Reduction (MW)	0.4	0.4	0.4	0.4	0.4	1.8
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	7,100	7,100	7,100	7,100	7,100	35,500
Photovoltaic (PV) Solar Generation	2.8.3	Energy Savings (MWh) ²	13,601	13,601	13,601	13,601	13,601	68,003
		Summer Demand Reduction (MW)	3.3	3.3	3.3	3.3	3.3	16.6
		Winter Demand Reduction (MW)	0.4	0.4	0.4	0.4	0.4	1.9
		Projected Participation ³	1,500	1,500	1,500	1,500	1,500	7,500
Water Heater Pipe Insulation - Instant Markdown	2.3.5	Energy Savings (MWh) ²	5,591	5,591	5,591	5,591	5,591	27,956
		Summer Demand Reduction (MW)	0.6	0.6	0.6	0.6	0.6	3.2
		Winter Demand Reduction (MW)	1.1	1.1	1.1	1.1	1.1	5.3
		Projected Participation ³	75,040	75,040	75,040	75,040	75,040	375,200
Residential Occupancy Sensors	2.1.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
Holiday Lights	2.1.4	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	-	-	-	-	-	-

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
<i>High Efficiency Equipment for Midstream Delivery: ASHP, CAC, PTAC, PTHP</i>	2.2.2	Energy Savings (MWh) ²	1	1	1	1	1	4
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>GSHP Desuperheaters</i>	2.2.5	Energy Savings (MWh) ²	1	1	1	1	1	3
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
<i>Air Handler Filter Whistles</i>	2.2.11	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Solar Water Heaters</i>	2.3.2	Energy Savings (MWh) ²	2	2	2	2	2	9
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Drain Water Heat Recovery Units</i>	2.3.9	Energy Savings (MWh) ²	0	0	0	0	0	1
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>ENERGY STAR Freezers</i>	2.4.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
ENERGY STAR Coolers	2.4.5	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
Cooler Recycling with and without Replacement	2.4.6	Energy Savings (MWh) ²	0	0	0	0	0	1
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
Residential Induction Cooktop	2.4.7	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
ENERGY STAR Dishwashers	2.4.10	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
ENERGY STAR Ceiling Fans	2.4.13	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
ENERGY STAR Pool Pumps	2.8.1	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
Single Speed Pool Pump Replacement	2.8.2	Energy Savings (MWh) ²	1	1	1	1	1	4
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5

Estimated Program Budget (Total) by Year

Table 10. Residential Program Budget

Program Name: ¹		Residential					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$14,738	\$15,015	\$15,321	\$15,580	\$15,840	\$76,493
Incentives (\$000)	Rebates	\$4,976	\$5,199	\$5,467	\$5,741	\$6,037	\$27,419
	Upstream/Midstream Buydown	\$1,787	\$1,837	\$1,887	\$1,887	\$1,887	\$9,285
	Kits	\$758	\$758	\$758	\$758	\$758	\$3,791
	Direct-Install Materials & Labor	\$567	\$572	\$559	\$544	\$510	\$2,753
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$8,089	\$8,366	\$8,671	\$8,929	\$9,192	\$43,248
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$5,046	\$5,161	\$5,016	\$4,920	\$4,769	\$24,912

	Marketing	\$1,603	\$1,488	\$1,634	\$1,730	\$1,878	\$8,333
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$6,649	\$6,649	\$6,650	\$6,650	\$6,647	\$33,245
Percent Incentives		55%	56%	57%	57%	58%	57%

Estimated Percentage of Sector Budget Attributed to the Program

The Residential program offers incentives to customers in the residential, SCI, and LCI sectors. The Residential program accounts for 55.3% of the residential sector, 0.05% of the SCI sector, and 0.04% of the LCI sector spending exclusive of common cost allocation. SCI and LCI spending are attributed to measures rebated through the Residential program to master metered multifamily buildings.

Table 11. Residential Summary of EE&C Costs

Sector	EE&C Subprogram	Cost Elements (\$)									Total Cost	Expected Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Expected Acquisition Cost (\$/MW)
		Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM & V	AEPS Registration Support	Other (Describe)				
Residential	Residential Energy Efficiency	\$42,841,347	\$0	\$0	\$0	\$24,490,397	\$8,191,911	\$0	\$0	\$0	\$75,523,655	\$312	\$163	\$1,510,591
SCI	Residential Energy Efficiency	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
LCI	Residential Energy Efficiency	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
Sector Total	Residential Energy Efficiency	\$43,248,212	\$0	\$0	\$0	\$24,911,942	\$8,332,915	\$0	\$0	\$0	\$76,493,069	\$315	\$162	\$1,539,774

Cost Effectiveness

Table 12. Residential TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
			Gross TRC ¹	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits ⁴	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
	Program Year ²	NTGR		Paid by EDC	Paid by Participants							
<i>Residential</i>	<i>PY18</i>	<i>1.00</i>	<i>0.93</i>	<i>\$8,089</i>	<i>\$47,656</i>	<i>\$6,649</i>	<i>\$62,393</i>	<i>\$15,882</i>	<i>\$31,653</i>	<i>\$10,180</i>	<i>\$0</i>	<i>\$57,715</i>
<i>Residential</i>	<i>PY19</i>	<i>1.00</i>	<i>0.91</i>	<i>\$8,366</i>	<i>\$48,063</i>	<i>\$6,649</i>	<i>\$63,078</i>	<i>\$15,383</i>	<i>\$31,552</i>	<i>\$10,422</i>	<i>\$0</i>	<i>\$57,357</i>
<i>Residential</i>	<i>PY20</i>	<i>1.00</i>	<i>0.77</i>	<i>\$8,671</i>	<i>\$58,374</i>	<i>\$6,650</i>	<i>\$73,695</i>	<i>\$15,376</i>	<i>\$30,815</i>	<i>\$10,777</i>	<i>\$0</i>	<i>\$56,968</i>
<i>Residential</i>	<i>PY21</i>	<i>1.00</i>	<i>0.75</i>	<i>\$8,929</i>	<i>\$58,413</i>	<i>\$6,650</i>	<i>\$73,992</i>	<i>\$15,267</i>	<i>\$29,260</i>	<i>\$11,003</i>	<i>\$0</i>	<i>\$55,531</i>
<i>Residential</i>	<i>PY22</i>	<i>1.00</i>	<i>0.74</i>	<i>\$9,192</i>	<i>\$58,452</i>	<i>\$6,647</i>	<i>\$74,292</i>	<i>\$14,917</i>	<i>\$29,034</i>	<i>\$11,269</i>	<i>\$0</i>	<i>\$55,220</i>
<i>Residential Total</i>		<i>1.00</i>		<i>\$43,248</i>	<i>\$270,957</i>	<i>\$33,245</i>	<i>\$347,450</i>	<i>\$76,825</i>	<i>\$152,315</i>	<i>\$53,652</i>	<i>\$0</i>	<i>\$282,792</i>

Table 13. Residential TRC Benefits (Net)

Portfolio	NTGR & TRC Ratio			TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)				
Subprogram	Program Year ²	NTGR	Gross TRC ¹	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits ⁴	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Residential	PY18	0.655	0.88	\$8,089	\$28,435	\$6,649	\$43,173	\$10,406	\$20,739	\$6,670	\$0	\$37,815
Residential	PY19	0.655	0.86	\$8,366	\$28,606	\$6,649	\$43,621	\$10,079	\$20,673	\$6,829	\$0	\$37,580
Residential	PY20	0.655	0.74	\$8,671	\$35,257	\$6,650	\$50,577	\$10,074	\$20,190	\$7,061	\$0	\$37,325
Residential	PY21	0.655	0.72	\$8,929	\$35,193	\$6,650	\$50,773	\$10,003	\$19,171	\$7,209	\$0	\$36,384
Residential	PY22	0.655	0.71	\$9,192	\$35,128	\$6,647	\$50,968	\$9,774	\$19,023	\$7,383	\$0	\$36,180
Residential Total		0.655		\$43,248	\$162,619	\$33,245	\$239,112	\$50,336	\$99,797	\$35,153	\$0	\$185,285

Summary of Benchmarking Results

As part of its Phase V program design, PECO conducted benchmarking against comparable utilities to validate its program allocation strategy. This process helped determine that the budget distribution between residential and non-residential sectors, as well as the contribution of each sector toward overall savings, was both practical and aligned with achieving mandated targets.

Engagement of Different Housing and Ownership Types

PECO's Phase V strategy includes targeted outreach and tailored program design to engage diverse housing and ownership types, including multifamily properties and rental units. PECO and its CSPs will leverage partnerships with property managers, landlords, and community organizations to overcome common participation barriers and facilitate equitable access to energy efficiency offerings.

Other Information Deemed Appropriate

Refer to Section 9.1.4 for information about the hybrid heat pump load shifting pilot that will be implemented through the residential CSP.

Residential HER Program (2026-2031)

The Residential HER program is divided into two subprograms, one for market-rate customers and one for low-income customers. This section describes the Residential (market rate) HER subprogram, while Section 3.2.1 describes the Low-Income HER subprogram.

Objectives

The Residential HER program's objective is to reduce a home's energy use through HERs and access to online tools where customers can view various aspects of their energy use over time. This program leverages the power of social norms and education "coaching" to drive persistent energy savings through smart energy practices.

Target Market

The eligible population and target market include PECO residential electric customers that do not qualify as low-income. At the time of this Plan development, the Residential market size includes approximately 1,400,000 customers.

Program Description

The Residential HER program involves regularly delivering direct mail or emailed HERs that motivate customers to act through contextualized energy-usage information, personal and neighborhood comparisons, and energy savings recommendations based on customers' specific energy-usage patterns and characteristics. HERs will include marketing opportunities for cross-selling other Phase V energy efficiency programs.

In addition to the information presented on the mailed or emailed HERs, all customers can log onto PECO's website to view their energy usage (energy costs, energy use, neighbor

comparison). The website will also help customers determine what technologies use the most energy in their homes, provide information on how to save energy, and enable sign up for energy usage alerts and notifications. The purpose of the website is to encourage customers to learn more about PECO's energy efficiency programs and help them take action to save energy.

The Residential HER program may also include the following enhanced offerings:

- **Peak Demand Reduction Education:** The CSP would provide weekly emails to a sample of customers detailing how to shift their energy usage to off-peak times (and why it matters). Communications would include an initial welcome email, weekly emails to compare performance against the previous week, post-bill reports, and seasonal change information.
- **Rate Education:** For eligible non-TOU customers, the CSP would promote the adoption of the TOU rates by educating customers about their rate options, providing personalized estimated monthly and annual costs on each rate option, and helping them understand the benefits of TOU rates.

Program Components

The Residential HER program does not contain any components.

Coordination of Participation in other Act 129 programs

HERs will include marketing opportunities for cross-promoting other PECO Phase V Act 129 programs.

Implementation Strategy

The Residential HER program will be implemented by a CSP. The CSP will deliver and manage the website platform and direct mail or digital HERs to customers. HER program participants are grouped in waves, or cohorts. The CSP will launch new waves in addition to maintaining the legacy waves launched prior to Phase V. In Phase V, HER waves will have a multi-year measure life after the first year of deployment for energy and coincident peak demand savings. Savings will persist with a prescribed decay rate during the second year of deployment or later. The CSP will manage participation waves throughout Phase V to address measure life and persistence in accordance with the multiyear measure life framework and PECO's goals.

Program Issues and Risks and Risk Mitigation

The Residential HER program will manage risks by implementing a continuous improvement process such that PECO closely monitors program results and adjusts implementation tactics (including marketing approaches, participation guidelines, and program resource allocation) to meet the portfolio level targets. As additional guidelines and risks present themselves, PECO will adjust its planning and portfolio design as needed.

Anticipated Costs to Participating Customers

Customers participating in the Residential HER program have anticipated costs of \$0 for Phase V.

Ramp-Up Strategy

A minimal ramp up will be needed for the Residential HER program because this program is already operating in Phase IV. A longer ramp-up would be needed for the Peak Demand and Rate Education pieces, as they are new customer experiences.

Marketing Strategy

The Residential HER program participants are selected by PECO; customers cannot subscribe themselves. Therefore, there is no marketing of the program to encourage participation.

Eligible Measures and Incentive Strategy

The program measure is the delivery of direct mail or digital HERs to customers. Customers are selected for the program and can choose to opt-out at any time. No incentives are paid to the customers.

Table 14. HER Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Home Energy Reports	per home	No	Yes	Phase V TRM	-	4 ²²	-

²² HER savings experience 31.3% annual decay as outlined in the 2026 TRM and calculated from the [Addendum to Act 129 Home Energy Report Persistence Study](#) - Dated November 2018.

Basis for the Proposed Incentive Levels

Rebates are not applicable to the Residential HER program.

Maximum Deadlines for Rebates

Rebates are not applicable to the Residential HER program.

Key Schedule Milestones

The planned implementation schedule follows:

March 2026: PECO and the CSP will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems are in place, and that the randomization of new customers has been reviewed .

- **June 1, 2026:** The program will launch.
- **June 2026–May 2031:** Program will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.
- **May 31, 2026:** Last day of the Phase V program.

Assumed EM&V

The evaluation methodology and data collection proposed for the program are consistent with current EM&V practices for PECO's Phase IV programs. The EM&V requirements for this program conform to all applicable state protocols, including the SWE Evaluation Framework and the Pennsylvania TRM. PECO follow the SWE's Evaluation Framework, utilize a SWE-approved Phase V evaluation plan, and utilize an independent evaluator to verify all Plan-related savings and confirm that there is no double-counting of savings for programs that leverage outside funding. Metrics for monitoring program success include, but are not limited to:

- Customer satisfaction with the program
- Energy savings associated with customer behavior change
- Program implementation costs
- Data for evaluating the program will come from the following sources:
 - Tracking system data
 - TRM estimates of measure savings persistence
 - Surveys of customers who participate in the program
 - Program implementer and PECO staff surveys or interviews
 - Evaluation of billing data
 - Program impacts will be determined using a customer billing data and billing regression analysis.

Evaluating program process success and efficiency across program delivery, administration, implementation, and customer response, includes the following strategies:

- Interviews with utility staff, implementation staff, and customers
- Survey of program participants
- Assess customer understanding, satisfaction, and attitudes about the program

See Section 6 for more details about market and process evaluations.

Administrative Requirements

PECO will administer the program through a CSP. PECO will confirm major milestones are met and that the program is delivered according to the program design. Requested external staffing levels will be provided upon the completion of the CSP selection and contracting process. PECO will have six FTEs dedicated to the residential sector.

Savings Projections and Estimated Participation

Table 15. HER Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Home Energy Reports</i>	2.7.3	Energy Savings (MWh)	24,698	36,636	26,807	28,172	26,236	142,549
		Summer Demand Reduction (MW)	4.2	10.5	7.9	6.7	5.9	35.3
		Winter Demand Reduction (MW)	3.8	8.3	6.4	5.9	4.7	29.1
		Projected Participation	456,000	389,100	401,000	383,400	469,900	469,900

Estimated Program Budget (Total) by Year

Table 16. HER Program Budget

Subprogram Name:		HER					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
Incentives (\$000)	Rebates	\$0	\$0	\$0	\$0	\$0	\$0
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct-Install Materials & Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
	Marketing	\$0	\$0	\$0	\$0	\$0	\$0
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
Percent Incentives		0%	0%	0%	0%	0%	0%

Estimated Percentage of Sector Budget Attributed to the Program

The Residential HER program participates in the residential sector. The Residential HER program accounts for 10.2% of residential sector spending exclusive of common cost allocation.

Table 17. HER Summary of EE&C Costs

Sector	EE&C Program	Cost Elements (\$)									Total Cost	Expected Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Expected Acquisition Cost (\$/MW)
		Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	AEPS Registration Support	Other (Description)				
Residential Portfolio	HER	\$0	\$0	\$0	\$0	\$13,989,327	\$0	\$0	\$0	\$0	\$13,989,327	\$98	\$26	\$434,512

Cost Effectiveness

Table 18. HER TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
Subprogram	Program Year ²	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
HER	PY18	1.00	4.96	\$0	\$0	\$2,342	\$2,342	\$3,400	\$8,222	\$0	\$0	\$11,622
HER	PY19	1.00	5.14	\$0	\$0	\$3,639	\$3,639	\$7,135	\$11,557	\$0	\$0	\$18,692
HER	PY20	1.00	4.80	\$0	\$0	\$2,634	\$2,634	\$5,028	\$7,602	\$0	\$0	\$12,631
HER	PY21	1.00	3.88	\$0	\$0	\$2,783	\$2,783	\$4,006	\$6,795	\$0	\$0	\$10,801
HER	PY22	1.00	3.52	\$0	\$0	\$2,590	\$2,590	\$3,115	\$6,000	\$0	\$0	\$9,116
HER Total		1.00		\$0	\$0	\$13,989	\$13,989	\$22,684	\$40,177	\$0	\$0	\$62,862

Table 19. HER TRC Benefits (Net)

Portfolio		NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)				
Subprogram	Program Year ²	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
HER	PY18	1.000	4.96	\$0	\$0	\$2,342	\$2,342	\$3,400	\$8,222	\$0	\$0	\$11,622
HER	PY19	1.000	5.14	\$0	\$0	\$3,639	\$3,639	\$7,135	\$11,557	\$0	\$0	\$18,692
HER	PY20	1.000	4.80	\$0	\$0	\$2,634	\$2,634	\$5,028	\$7,602	\$0	\$0	\$12,631
HER	PY21	1.000	3.88	\$0	\$0	\$2,783	\$2,783	\$4,006	\$6,795	\$0	\$0	\$10,801
HER	PY22	1.000	3.52	\$0	\$0	\$2,590	\$2,590	\$3,115	\$6,000	\$0	\$0	\$9,116
HER Total		1.000		\$0	\$0	\$13,989	\$13,989	\$22,684	\$40,177	\$0	\$0	\$62,862

Summary of Benchmarking Results

As mentioned earlier in this section, PECO conducted benchmarking against similar utilities to inform its budget and savings split in Phase V.

Engagement of Different Housing and Ownership Types

For the Residential HER program, PECO will continue to engage existing customers and build on the program success achieved in Phase IV.

Other Information Deemed Appropriate

Not applicable.

3.2.1 Residential Low-Income Sub-Sector Programs

The Residential program and Residential HER program both include low-income subprograms. These subprograms are described below.

Residential Low-Income Subprogram Components (2026-2031)

Objectives

All Residential customers, including Residential Low-Income customers, will have access to all components included in the Residential Program described in Section 3.2.

The objective of the Residential Low-Income subprogram is to increase energy efficiency and address health and safety barriers for low-income customers in single family homes. The subprogram will also serve low-income customers in multifamily buildings in which 66% of occupants have a household income of less than or equal to 150% of the federal poverty level. PECO will meet this objective by:

Aiming to reduce household energy costs for residential customers with a household income less than or equal to 150% of federal poverty level.

Delivering no-cost in-home energy assessments and direct-install measures to help customers identify and implement energy savings opportunities.

Targeting high-impact, low-income multifamily sites for complementary direct-install projects and comprehensive retrofits with more favorable incentives.

Addressing health and safety barriers in single family low-income homes to enable installation of energy efficiency measures and improve overall comfort and well-being. PECO has allocated \$3,000,000 for health and safety measures for low-income customers.

Target Market

- **Low-Income Single Family:** Includes PECO residential electric customers that are individually metered, regardless of building type, with a household income of less than or equal to 150% of the federal poverty level. This customer population includes low-income customers living in single family housing or low-income customers living in multifamily housing that are individually metered. While these customers have similar

usage patterns to non-low-income customers, homes may be more likely to need health and safety improvements prior to energy efficiency measure installation. When implementing components for low-income customers, the CSP will incorporate health and safety measures into the component offerings.

- **Owner-Occupied:** Marketing and outreach will emphasize building performance, bill savings, and comfort improvements. The CSP will leverage successful marketing channels to promote upgrades such as weatherization, HVAC replacement, and smart controls.
 - **Renter-Occupied:** Engagement will be focused on direct benefits (comfort, energy savings, safety) while coordinating with landlords for approval of comprehensive upgrades, when appropriate. The CSP will use simplified landlord permission forms, text-based communication options, and targeted digital campaigns within rental listings and community networks for customer acquisition.
- **Low-Income Multifamily:** Includes PECO residential customers who reside in buildings that have more than one unit and at least 66% of the occupants have a household income of less than or equal to 150% of the federal poverty level. This includes the following types of customers:
 - **Building Owners and Property Managers:** The CSP will conduct proactive outreach through property-management associations, housing authorities, and other stakeholders. PECO and the CSP recognize the need to address the split incentive for property owners, managers, and tenants and will position energy upgrades as financial tools that enhance asset value and tenant retention.
 - **Renters and Tenants:** Multilingual and demographically targeted outreach will be deployed through community partners, onsite events, and resident engagement that emphasizes tenant comfort, safety, and ease of participation. Trained energy advisors will coordinate access and scheduling to minimize disruption.

Program Description

The Residential Low-Income subprogram components are designed to offer PECO's low-income customers meaningful opportunities to save energy. For additional detail concerning the program's comprehensive design and delivery, please see Section 3.1.7.

The following section contains detailed descriptions of program components.

Program Components

The Residential Low-Income subprogram components include:

- **Low-Income Single Family:** Enhances energy efficiency in single family homes for eligible customers, reducing electric bills and increasing comfort. All measures are fully subsidized. Offers free energy checkups, either in person or virtual, that include a home inspection, energy usage analysis, direct-install measures, and an energy education session, followed by a custom report. Also provides free electric heating assessments, which add air flow diagnostics, infrared testing, building analysis, and combustion safety

checks when appropriate. Units in individually metered multifamily buildings are served through this component as well.

- **Appliance Recycling:** Offers responsible recycling of refrigerators, freezers, dehumidifiers, and room AC units via drop-off locations/events or pick-ups. Encourages participation in other Residential programs.
- **New Construction:** Promotes building affordable housing that is more comfortable, durable, and energy efficient than those built to code. Collaborates with HERS raters and builders during the design and construction phases to achieve greater energy efficiency.
- **DLS:** Delivers peak demand reduction on non-holiday weekdays in summer (June through August) and winter (January and February) by shifting load from on-peak to off-peak hours. This component may incorporate controllable loads (e.g., smart thermostats, EV managed charging, battery storage, water heaters) and behavioral measures, which may include TOU rates for eligible PECO customers.
- **Multifamily:** Provides in-unit and common area upgrades in multifamily buildings that are master metered, and common areas in individually metered multifamily buildings.

Coordination of Participation in other Act 129 programs

See Section 3.2.

Implementation Strategy

The Residential CSP will administer the Residential Low-Income subprogram components with a team of partners that have a proven record of providing the services offered in this program. The implementation strategy will vary by program component:

Low-Income Single Family: The CSP will offer two appointment types for customers:

- **Free Energy Checkups** include an in-depth inspection of the home, energy use analysis and recommendations, direct-install measures, and an energy education session followed by a customer report and education materials.
- **Free Energy Check Up Plus Assessments** will include all elements of the Free Energy Checkup and will incorporate an in-depth building science approach that mirrors PECO LIURP and meets BPI standards. The assessment will include air flow diagnostics, infrared testing, building analysis, and combustion safety checks when appropriate.

Appliance Recycling: The CSP will offer appliance drop off events at locations designated by local townships for compact refrigerators, room air conditioners, and dehumidifiers. An additional option will be available for customers to drop off regular household sized refrigerators and freezers at a designated location.

- **New Construction:** The new construction component will be implemented similar to Phase IV, working through new home builders and Home Energy Raters. The CSP will target outreach within low-income communities by partnering with affordable housing developers, community-based organizations, and local stakeholders.

DLS: The CSP will offer three participation channels to customers. Customers are eligible to enroll devices in one or multiple channels:

Managed EV Charging to shift residential EV charging to off-peak periods. The CSP will leverage a network of OEM partner integrations to recruit and enroll customers in this offering.

Thermostat Optimization to enable ongoing remote adjustment of smart thermostat to reduce HVAC use during demand windows. The CSP will leverage partnerships with device manufacturers and service providers to target potential participants. Enrolled customers will have the option to opt out of load shifting events at any time.

- A BYO offering that will discharge batteries to lower grid demand during peak periods. The offerings will enroll existing residential battery systems to leverage existing infrastructure rather than providing incentives for new battery installation.
- **Multifamily:** The CSP will engage property managers and tenants to perform both in unit and common area upgrades in multifamily buildings. The CSP will provide free assessments, direct-install measures, and training to facility staff about the process and measures to be installed in the building. The CSP will help building owners and operators understand the impacts of proposed measures, including demand, energy use, and non-energy benefits.

Program Issues and Risks and Risk Mitigation

In addition to the program issues and risks and risk mitigation described in Section 3.2, PECO anticipates potential risks concerning changes to federal program funding for low-income programs including LIHEAP and WAP. As additional guidelines and risks present themselves, PECO will adjust its planning and portfolio design as needed.

Anticipated Costs to Participating Customers

Customers participating in the Residential Low-Income subprogram have anticipated costs of \$0 for Phase V after incentives.

Ramp-Up Strategy

Minimal ramp up will be needed for the Residential Low-Income subprogram components because the Single Family, New Construction, and Appliance Recycling components are already operating in Phase IV.

For the DLS component, PECO and the CSP will work to enroll customers with existing measures in the program to claim savings for the peak summer demand period that begins shortly after the start of Phase V. These efforts will include reaching out to individuals who have previously received load shifting measures, such as connected smart thermostats.

Marketing Strategy

The CSP will be responsible for program marketing, coordinating with PECO's Marketing and Promotions team, E&O CSP, and the Exelon Energy Efficiency Marketing Agency for messaging design and consistency. Marketing strategies will vary by component. In addition to the strategies listed below, the CSP will implement cross-promotion of components to increase customer participation across PECO's Residential Low-Income subprogram components.

Low-Income Single Family: Emails, direct mail, outbound calls, social media and digital ads, direct engagement at food banks, social service centers, and community events

Appliance Recycling: Emails, bill inserts, social media, cross-promotions with municipal recycling events

New Construction: Direct builder outreach, education events and partnerships with trusted associations (i.e., home building associations, housing authorities, community developers), and technical assistance, case studies, and collaboration with manufacturers

DLS: Co-branded marketing (i.e., thermostats and EV batteries) with device manufacturers featuring email, web, and in-app messaging; bill inserts; and newsletters

Eligible Measures and Incentive Strategy

The measure mix includes a comprehensive mix of end-use technologies such as lighting, HVAC (heat pump, ductless mini-splits, central ACs), appliances, shell (attic insulation, air sealing), duct sealing and insulation, water heating (heat pump water heaters), and plug loads. All measures will be 100% subsidized and offered to homeowners and tenants with landlord approval. All direct installation measures are at no cost for Low-Income multifamily and confirmed Low-Income Multifamily buildings are eligible to receive more favorable incentives for comprehensive projects.

Table 20. Residential Low-Income Subprogram Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Dehumidifier Retirement	per dehumidifier	Yes	Yes	Phase V TRM	\$10.00	4	\$0.00 - \$10.00
Low-Capacity Refrigerator / Freezer Recycling without Replacement	per refrigerator/freezer	Yes	Yes	Phase V TRM	\$50.00	5	\$0.00 - \$50.00
Refrigerator / Freezer Recycling with and without Replacement	per refrigerator	Yes	Yes	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Room AC (RAC) Retirement	per room A/C	Yes	Yes	Phase V TRM	\$10.00	3	\$0.00 - \$10.00
Low-Flow Faucet Aerators: Kit	per aerator	Yes	Yes	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Kit	per showerhead	Yes	Yes	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
Refrigerator / Freezer Recycling - LIURP & WRx	per refrigerator	Yes	Yes	Phase V TRM	\$170.00	6	\$0.00 - \$170.00
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)	per fixture	Yes	Yes	Phase V TRM	\$4.40	2	\$0.00 - \$4.40
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g., candelabra))	per fixture	Yes	Yes	Phase V TRM	\$6.41	2	\$0.00 - \$6.41
Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)	per fixture	Yes	Yes	Phase V TRM	\$7.08	2	\$0.00 - \$7.08
LED and Electroluminescent Nightlights	per nightlight	Yes	Yes	Phase V TRM	\$3.25	8	\$0.00 - \$3.25
Low-Flow Faucet Aerators: Direct install	per aerator	Yes	Yes	Phase V TRM	\$23.98	10	\$0.00 - \$23.98
Low-Flow Showerheads: Direct install	per showerhead	Yes	Yes	Phase V TRM	\$65.37	10	\$0.00 - \$65.37
Thermostatic Shower Restriction Valves	per water heater	Yes	Yes	Phase V TRM	\$42.00	15	\$0.00 - \$42.00
Water Heater Pipe Insulation	per water heater	Yes	Yes	Phase V TRM	\$59.80	11	\$0.00 - \$59.80

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Water Heater Tank Wrap	per tank	Yes	Yes	Phase V TRM	\$89.14	7	\$0.00 - \$89.14
Water Heater Temperature Setback	per water heater	Yes	Yes	Phase V TRM	\$22.47	2	\$0.00 - \$22.47
Advanced Power Strips	per advanced power strip	Yes	Yes	Phase V TRM	\$60.00	5	\$0.00 - \$60.00
ENERGY STAR Certified Connected Thermostats	per thermostat	Yes	Yes	Phase V TRM	\$300.00	9	\$0.00 - \$300.00
High Efficiency Equipment: ASHP	per unit	Yes	Yes	Phase V TRM	\$16,000.00	15	\$0.00 - \$16,000.00
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump - IE Direct Install	per heat pump	Yes	Yes	Phase V TRM	\$10,000.00	15	\$0.00 - \$10,000.00
Room Air Conditioners	per room A/C	Yes	Yes	Phase V TRM	\$600.00	9	\$0.00 - \$600.00
Air Conditioner & Heat Pump Maintenance	per unit	Yes	Yes	Phase V TRM	\$350.00	3	\$0.00 - \$350.00
Duct Sealing & Duct Insulation	per home	Yes	Yes	Phase V TRM	\$600.00	15	\$0.00 - \$600.00
Residential Air Sealing	per home	Yes	Yes	Phase V TRM	\$449.64	15	\$0.00 - \$449.64
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Ceiling/Attic	per home	Yes	Yes	Phase V TRM	\$1,800.00	15	\$0.00 - \$1,800.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Floor Insulation	per home	Yes	Yes	Phase V TRM	\$660.00	15	\$0.00 - \$660.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Rim Joist Insulation	per home	Yes	Yes	Phase V TRM	\$700.00	15	\$0.00 - \$700.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Wall Insulation	per home	Yes	Yes	Phase V TRM	\$1,800.00	15	\$0.00 - \$1,800.00
Basement or Crawl Space Wall Insulation	per home	Yes	Yes	Phase V TRM	\$550.00	15	\$0.00 - \$550.00

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
ENERGY STAR Air Purifiers - Direct Install LI & MF	per air purifier	Yes	Yes	Phase V TRM	\$300.00	9	\$0.00 - \$300.00
Heat Pump Water Heaters	per water heater	Yes	Yes	Phase V TRM	\$3,600.00	10	\$0.00 - \$3,600.00
Health & Safety	per audit	Yes	No	Phase V TRM	\$1,000.00	1	\$0.00 - \$1,000.00
Health & Safety - Devices	per audit	Yes	No	Phase V TRM	\$50.00	1	\$0.00 - \$50.00
Advanced Power Strips: Kit	per advanced power strip	Yes	Yes	Phase V TRM	\$40.07	5	\$0.00 - \$40.07
Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket: Kit	per gasket	Yes	Yes	Phase V TRM	\$3.58	15	\$0.00 - \$3.58
Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep: Kit	per door	Yes	Yes	Phase V TRM	\$26.00	15	\$0.00 - \$26.00
Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping: Kit	per door	Yes	Yes	Phase V TRM	\$56.00	15	\$0.00 - \$56.00
Smart Water Heater Controls	per water heater controller	Yes	Yes	Phase V TRM	\$155.99	11	\$0.00 - \$155.99
ENERGY STAR Air Purifiers	per air purifier	Yes	Yes	Phase V TRM	\$66.03	9	\$0.00 - \$66.03
ECM Circulation Fans	per fan	Yes	Yes	Phase V TRM	\$352.79	5	\$0.00 - \$352.79
High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump	per heat pump	Yes	Yes	Phase V TRM	\$378.96	15	\$0.00 - \$378.96
Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket	per gasket	Yes	Yes	Phase V TRM	\$35.84	15	\$0.00 - \$35.84
Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep - LIURP & WRx	per door	Yes	Yes	Phase V TRM	\$26.00	15	\$0.00 - \$26.00

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping - LIURP & WRx	per door	Yes	Yes	Phase V TRM	\$56.00	15	\$0.00 - \$56.00
WH LI > 10% UBC \$0.40/kWh	per home	Yes	Yes	Phase V TRM	\$1,100.00	15	\$0.00 - \$1,100.00
LED Exit Signs	per sign	Yes	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
Lighting Retrofits - Other Interior Fixtures	per fixture	Yes	No	Phase V TRM	\$80.00	15	\$0.00 - \$80.00
Lighting Retrofits - Outdoor floods	per fixture	Yes	No	Phase V TRM	\$123.81	15	\$0.00 - \$123.81
Lighting Retrofits - Parking Garage	per fixture	Yes	No	Phase V TRM	\$120.00	15	\$0.00 - \$120.00
Lighting Retrofits - Parking Lot	per fixture	Yes	No	Phase V TRM	\$129.00	15	\$0.00 - \$129.00
Lighting: Permanent Fixture Removal	per fixture	Yes	No	Phase V TRM	\$60.00	11	\$0.00 - \$60.00
Linear LED: Lamp Replacement	per lamp	Yes	No	Phase V TRM	\$15.00	15	\$0.00 - \$15.00
Linear LED: Retrofit Fixture, surface mount	per fixture	Yes	No	Phase V TRM	\$150.00	15	\$0.00 - \$150.00
Linear LED: Retrofit Fixture, troffer	per fixture	Yes	No	Phase V TRM	\$250.00	15	\$0.00 - \$250.00
Linear LED: Retrofit Fixture, troffer	per fixture	Yes	No	Phase V TRM	\$55.00	15	\$0.00 - \$55.00
Occupancy Sensor	per sensor	Yes	No	Phase V TRM	\$1,571.00	8	\$0.00 - \$1,571.00
HVAC Systems: PTAC	per PTAC	Yes	Yes	Phase V TRM	\$2,094.00	15	\$0.00 - \$2,094.00
HVAC Systems: PTHP	per PTHP	Yes	Yes	Phase V TRM	\$23.06	15	\$0.00 - \$23.06
Connected Smart Thermostat	per unit	Yes	No	Phase V TRM	\$50.00	1	\$0.00 - \$50.00
Bring Your Own Thermostat (Enrollment Incentive)	per unit	Yes	No	Phase V TRM	\$35.50	1	\$0.00 - \$35.50
Bring Your Own Thermostat	per unit	Yes	No	Phase V TRM	\$4,792.32	1	\$0.00 - \$4,792.32
ASHRAE Level 2 Audit	per audit	Yes	No	Phase V TRM	\$11.20	1	\$0.00 - \$11.20

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam	per can	Yes	Yes	Phase V TRM	\$2,133.95	15	\$0.00 - \$2,133.95
Residential New Construction	per home	Yes	Yes	Phase V TRM	\$1,984.87	15	\$0.00 - \$1,984.87
ENERGY STAR Manufactured Homes	per home	Yes	Yes	Phase V TRM	\$11.20	15	\$0.00 - \$11.20
Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam: Kit	per can	Yes	Yes	Phase V TRM	\$350.00	15	\$0.00 - \$350.00
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Kneewall Insulation	per home	Yes	Yes	Phase V TRM	\$42.88	15	\$0.00 - \$42.88
Lighting Retrofits - Low Bays	per fixture	Yes	No	Phase V TRM	\$31.94	15	\$0.00 - \$31.94
Lighting Retrofits - High Bays	per fixture	Yes	No	Phase V TRM	\$10.00	15	\$0.00 - \$10.00
Time of Use (TOU) Rates	per household	No	No	Phase V TRM	\$0.00	1	\$0.00 - \$25.00

To maximize opportunities for customer energy savings, PECO reserves the right to offer no-cost installation of additional measures that are not listed Table 20 but are identified in the TRM.

Basis for the Proposed Incentive Levels

All measures will be 100% subsidized and offered to homeowners and tenants with landlord approval. All direct installation measures are at no cost for Low-Income multifamily and confirmed Low-Income Multifamily buildings are eligible to receive more favorable incentives for comprehensive projects.

Maximum Deadlines for Rebates

As Residential Low-Income subprogram direct-installation measures are provided at no charge, an application deadline is not applicable to this subprogram.

Key Schedule Milestones

The planned implementation schedule is as follows:

- **March 2026:** PECO and the CSPs will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems and marketing and outreach is in place.
- **June 1, 2026:** The programs will launch with some components on a ramp-up period for the first 6 months.
- **June 2026–May 2031:** Programs will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.
- **May 31, 2031:** Last day of the Phase V programs.

If PECO meets the low-income carve-out before the end of the phase, PECO will continue to implement the Residential Low-Income subprogram components after meeting its low-income carve-out subject to the Commission-approved budget for the program.

Assumed EM&V

See Residential Program Assumed EM&V in Section 3.2.

Administrative Requirements

PECO will administer the Residential Low-Income subprogram components through a CSP. PECO will confirm major milestones are met and that the program is delivered according to the program design. Requested external staffing levels will be provided upon the completion of the CSP selection and contracting process. PECO will have six FTEs dedicated to the residential sector.

Savings Projections

Table 21. Residential Low-Income Subprogram Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Dehumidifier Retirement</i>	2.4.12	Energy Savings (MWh) ²	20	20	21	22	17	100
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	20	20	21	22	17	100
<i>Low-Capacity Refrigerator / Freezer Recycling without Replacement</i>	2.4.4	Energy Savings (MWh) ²	2	2	2	2	1	9
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	6	6	6	7	5	30
<i>Refrigerator / Freezer Recycling with and without Replacement</i>	2.4.3	Energy Savings (MWh) ²	210	216	227	238	188	1,079
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	268	275	289	303	240	1,375
<i>Room AC (RAC) Retirement</i>	2.2.8	Energy Savings (MWh) ²	76	78	82	86	68	389
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.7
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	585	600	630	660	525	3,000
<i>Low-Flow Faucet Aerators: Kit</i>	2.3.6	Energy Savings (MWh) ²	755	755	755	755	755	3,777
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.2	1.1
		Projected Participation ³	48,002	48,002	48,002	48,002	48,002	240,010
<i>Low-Flow Showerheads: Kit</i>	2.3.7	Energy Savings (MWh) ²	404	404	404	404	404	2,021
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.1	0.3	0.3	0.3	0.3	1.2

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	24,002	24,002	24,002	24,002	24,002	120,010
<i>Refrigerator / Freezer Recycling - LIURP & WRx</i>	2.4.3	Energy Savings (MWh) ²	314	314	314	314	314	1,570
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	400	400	400	400	400	2,000
<i>Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)</i>	2.1.1	Energy Savings (MWh) ²	4,103	4,208	4,418	4,628	3,682	21,038
		Summer Demand Reduction (MW)	0.6	0.6	0.6	0.6	0.5	2.9
		Winter Demand Reduction (MW)	0.4	0.5	0.5	0.6	0.4	2.5
		Projected Participation ³	98,754	101,285	106,350	111,414	88,625	506,428
<i>Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Decorative: non-globe (e.g., candelabra))</i>	2.1.1	Energy Savings (MWh) ²	638	654	687	719	572	3,269
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.2	1.0
		Projected Participation ³	19,566	20,068	21,072	22,075	17,559	100,340
<i>Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Directional/Reflector)</i>	2.1.1	Energy Savings (MWh) ²	475	487	512	536	426	2,436
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	10,802	11,078	11,632	12,186	9,694	55,392
<i>LED and Electroluminescent Nightlights</i>	2.1.3	Energy Savings (MWh) ²	5	5	6	6	5	27
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1,306	1,339	1,407	1,473	1,172	6,697
<i>Low-Flow Faucet Aerators: Direct install</i>	2.3.6	Energy Savings (MWh) ²	319	327	342	357	290	1,634
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	5,682	5,816	6,081	6,347	5,152	29,078
<i>Low-Flow Showerheads: Direct install</i>	2.3.7	Energy Savings (MWh) ²	225	229	238	246	208	1,147
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	3,476	3,540	3,674	3,805	3,211	17,706
<i>Thermostatic Shower Restriction Valves</i>	2.3.8	Energy Savings (MWh) ²	15	15	16	16	13	75
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	504	516	541	565	456	2,582
<i>Water Heater Pipe Insulation</i>	2.3.5	Energy Savings (MWh) ²	887	908	948	989	806	4,538
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Projected Participation ³	2,092	2,140	2,236	2,332	1,900	10,700
<i>Water Heater Tank Wrap</i>	2.3.3	Energy Savings (MWh) ²	0	0	0	0	0	1
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	2	2	2	2	2	10
<i>Water Heater Temperature Setback</i>	2.3.4	Energy Savings (MWh) ²	28	29	30	32	25	144
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	391	401	421	441	351	2,005
<i>Advanced Power Strips</i>	2.5.1	Energy Savings (MWh) ²	52	54	57	59	47	269
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.2	0.2	0.2	0.2	0.6

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	597	612	644	673	536	3,062
<i>ENERGY STAR Certified Connected Thermostats</i>	2.2.12	Energy Savings (MWh) ²	119	121	125	128	112	606
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.6	0.6	0.6	0.6	2.4
		Projected Participation ³	324	329	339	348	305	1,645
<i>High Efficiency Equipment: ASHP</i>	2.2.1	Energy Savings (MWh) ²	104	105	111	116	93	530
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.6
		Projected Participation ³	85	86	91	95	76	433
<i>High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump - IE Direct Install</i>	2.2.3	Energy Savings (MWh) ²	36	37	39	41	33	185
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	42	43	45	48	38	216
<i>Room Air Conditioners</i>	2.2.7	Energy Savings (MWh) ²	28	28	28	28	28	139
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1,101	1,101	1,101	1,101	1,101	5,505
<i>Air Conditioner & Heat Pump Maintenance</i>	2.2.6	Energy Savings (MWh) ²	114	115	117	120	108	574
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.4
		Projected Participation ³	361	365	373	381	345	1,825
<i>Duct Sealing & Duct Insulation</i>	2.2.10	Energy Savings (MWh) ²	2	2	2	2	2	11
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	8	8	8	8	7	39
Residential Air Sealing	2.6.1	Energy Savings (MWh) ²	659	663	670	679	643	3,313
		Summer Demand Reduction (MW)	0.3	0.3	0.3	0.3	0.3	1.5
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Projected Participation ³	1,191	1,198	1,212	1,227	1,162	5,990
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Ceiling/Attic	2.6.3	Energy Savings (MWh) ²	381	390	408	424	348	1,951
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.2	0.9
		Projected Participation ³	214	219	229	238	195	1,095
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Floor Insulation	2.6.3	Energy Savings (MWh) ²	68	71	74	78	62	353
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	62	64	67	71	56	320
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Rim Joist Insulation	2.6.3	Energy Savings (MWh) ²	32	33	34	37	29	165
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	62	64	67	71	56	320
Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Wall Insulation	2.6.3	Energy Savings (MWh) ²	11	12	12	13	10	57
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	12	13	13	14	11	63
Basement or Crawl Space Wall Insulation	2.6.4	Energy Savings (MWh) ²	1	1	1	1	1	5
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	1	1	1	1	1	5
<i>ENERGY STAR Air Purifiers - Direct Install LI & MF</i>	2.4.14	Energy Savings (MWh) ²	2,021	2,073	2,177	2,281	1,814	10,367
		Summer Demand Reduction (MW)	0.2	0.3	0.3	0.3	0.2	1.3
		Winter Demand Reduction (MW)	0.3	0.3	0.3	0.4	0.3	1.7
		Projected Participation ³	6,964	7,142	7,500	7,858	6,250	35,714
<i>Heat Pump Water Heaters</i>	2.3.1	Energy Savings (MWh) ²	780	783	792	801	762	3,918
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Winter Demand Reduction (MW)	0.1	0.3	0.3	0.3	0.3	1.2
		Projected Participation ³	434	436	441	446	424	2,181
<i>Health & Safety</i>	Audit02	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	390	400	420	440	350	2,000
<i>Health & Safety - Devices</i>	Audit02	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	3,900	4,000	4,200	4,400	3,500	20,000
<i>Advanced Power Strips: Kit</i>	2.5.1	Energy Savings (MWh) ²	1,786	1,786	1,786	1,786	1,786	8,928
		Summer Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	1.0
		Winter Demand Reduction (MW)	0.3	0.5	0.5	0.5	0.5	2.4
		Projected Participation ³	24,001	24,001	24,001	24,001	24,001	120,005
<i>Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket: Kit</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	1	1	1	1	1	5
<i>Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep: Kit</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping: Kit</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Smart Water Heater Controls</i>	2.3.10	Energy Savings (MWh) ²	5	5	5	5	5	27
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	151	151	151	151	151	755
<i>ENERGY STAR Air Purifiers</i>	2.4.14	Energy Savings (MWh) ²	34	34	34	34	34	170
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.2
		Projected Participation ³	192	192	192	192	192	960
<i>ECM Circulation Fans</i>	2.2.4	Energy Savings (MWh) ²	2	2	2	2	2	11
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.2	0.2	0.2	0.2	0.8
		Projected Participation ³	11	11	11	11	11	55
<i>High Efficiency Equipment: ENERGY STAR Most Efficient Ductless Mini-Split Heat Pump</i>	2.2.3	Energy Savings (MWh) ²	124	124	124	124	124	622
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.2	0.2	0.2	0.2	0.8

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	206	206	206	206	206	1,030
<i>Weather Stripping, Caulking, and Outlet Gaskets: Outlet Gasket</i>	2.6.2	Energy Savings (MWh) ²	7	7	7	7	7	33
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	1,100	1,100	1,100	1,100	1,100	5,500
<i>Weather Stripping, Caulking, and Outlet Gaskets: Door Sweep - LIURP & WRx</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	200	200	200	200	200	1,000
<i>Weather Stripping, Caulking, and Outlet Gaskets: Door Weatherstripping - LIURP & WRx</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	53	53	53	53	53	265
<i>WH LI > 10% UBC \$0.40/kWh</i>	2.7.1	Energy Savings (MWh) ²	300	300	300	300	300	1,500
		Summer Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	1.2
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.7
		Projected Participation ³	400	400	400	400	400	2,000
<i>LED Exit Signs</i>	3.1.4	Energy Savings (MWh) ²	38	39	41	43	34	194
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	131	135	142	149	118	675
<i>Lighting Retrofits - Other Interior Fixtures</i>	3.1.1	Energy Savings (MWh) ²	46	47	50	52	42	237
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	3.1	3.4	3.1	2.6	12.1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	211	216	227	238	189	1,081
<i>Lighting Retrofits - Outdoor floods</i>	3.1.1	Energy Savings (MWh) ²	158	162	170	178	142	809
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	1.6	0.9	0.9	0.9	4.4
		Projected Participation ³	264	270	284	297	237	1,352
<i>Lighting Retrofits - Parking Garage</i>	3.1.1	Energy Savings (MWh) ²	57	59	62	65	52	295
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	79	81	85	90	72	407
<i>Lighting Retrofits - Parking Lot</i>	3.1.1	Energy Savings (MWh) ²	170	174	183	192	153	873
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.1	0.0	0.2
		Projected Participation ³	264	270	284	297	237	1,352
<i>Lighting: Permanent Fixture Removal</i>	3.1.1	Energy Savings (MWh) ²	933	957	1,005	1,053	837	4,786
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.7
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.2	0.1	0.7
		Projected Participation ³	2,628	2,695	2,830	2,965	2,358	13,476
<i>Linear LED: Lamp Replacement</i>	3.1.1	Energy Savings (MWh) ²	130	133	140	147	117	666
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	3,942	4,043	4,245	4,447	3,538	20,215
<i>Linear LED: Retrofit Fixture, surface mount</i>	3.1.1	Energy Savings (MWh) ²	47	48	50	53	42	239
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	264	270	284	297	237	1,352
<i>Linear LED: Retrofit Fixture, troffer</i>	3.1.1	Energy Savings (MWh) ²	68	70	74	77	61	351
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	264	270	284	297	237	1,352
<i>Occupancy Sensor</i>	3.1.3	Energy Savings (MWh) ²	8	8	9	9	7	42
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	66	68	72	75	59	340
<i>HVAC Systems: PTAC</i>	2.2.1	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	1	1	1	1	1	5
<i>HVAC Systems: PTHP</i>	2.2.1	Energy Savings (MWh) ²	116	123	123	123	116	600
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.2
		Projected Participation ³	33	35	35	35	33	171
<i>Connected Smart Thermostat</i>	LS002	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.1	0.2
		Winter Demand Reduction (MW)	0.1	2.0	2.1	2.2	2.4	8.8
		Projected Participation ³	945	1,011	1,081	1,157	1,238	5,432
<i>Bring Your Own Thermostat (Enrollment Incentive)</i>	LS001	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	100	-	-	-	-	100
<i>Bring Your Own Thermostat</i>	LS002	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	100	100	100	100	100	500
<i>ASHRAE Level 2 Audit</i>	Audit01	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	4	4	4	4	4	20
<i>Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Residential New Construction</i>	2.7.1	Energy Savings (MWh) ²	2	2	2	2	2	10
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>ENERGY STAR Manufactured Homes</i>	2.7.2	Energy Savings (MWh) ²	2	2	2	2	2	10
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Weather Stripping, Caulking, and Outlet Gaskets: Spray Foam: Kit</i>	2.6.2	Energy Savings (MWh) ²	0	0	0	0	0	0
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	1	1	1	1	1	5
<i>Ceiling/Attic, Wall, Floor and Rim Joist Insulation: Kneewall Insulation</i>	2.6.3	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Lighting Retrofits - Low Bays</i>	3.1.1	Energy Savings (MWh) ²	1	1	1	1	1	3
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	1	1	1	1	1	5
<i>Lighting Retrofits - High Bays</i>	3.1.1	Energy Savings (MWh) ²	1	1	1	1	1	3
		Summer Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Winter Demand Reduction (MW)	0.0	5.3	5.5	4.8	4.4	20.0
		Projected Participation ³	1	1	1	1	1	5

Estimated Program Budget (Total) by Year

Table 22. Residential Low-Income Subprogram Budget

Program Name:		Residential Low-Income					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$10,870	\$11,028	\$11,394	\$11,754	\$10,160	\$55,207
Incentives (\$000)	Rebates	\$534	\$532	\$535	\$538	\$533	\$2,672
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$855	\$855	\$855	\$855	\$855	\$4,273
	Direct-Install Materials & Labor	\$6,442	\$6,589	\$6,926	\$7,256	\$5,787	\$33,000

	Braided Funding Support Labor	\$19	\$19	\$19	\$19	\$19	\$96
	Incentive Total	\$7,850	\$7,995	\$8,334	\$8,667	\$7,194	\$40,040
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$2,265	\$2,275	\$2,295	\$2,315	\$2,225	\$11,375
	Marketing	\$755	\$758	\$765	\$772	\$742	\$3,792
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$3,020	\$3,033	\$3,060	\$3,087	\$2,966	\$15,167
Percent Incentives		77%	72%	72%	73%	74%	71%

Estimated Percentage of Sector Budget Attributed to the Program

The Residential Low-Income subprogram components offer incentives to customers in the residential sector. The Residential Low-Income subprogram components account for 34.1% of residential sector spending, as well as 4.0% of SCI and 3.7% of LCI spending exclusive of common cost allocation

Table 23. Residential Low-Income Subprogram Summary of EE&C Costs

Sector	EE&C Subprogram	Cost Elements (\$)									Total Cost	Expected Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Expected Acquisition Cost (\$/MW)
		Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM & V	AEPS Registration Support	Other (Describe)				
Residential (incl. Low-Income)	Low-Income Energy Efficiency	\$34,330,888	\$0	\$0	\$0	\$9,219,672	\$3,073,224	\$0	\$0	\$0	\$46,623,784	\$646	\$157	\$3,886,241
SCI	Low-Income Energy Efficiency	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
LCI	Low-Income Energy Efficiency	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
Sector Totals	Low-Income Energy Efficiency	\$40,040,235	\$0	\$0	\$0	\$11,375,022	\$3,791,674	\$0	\$0	\$0	\$55,206,931	\$621	\$138	\$3,816,976

Cost-Effectiveness

Table 24. Residential Low-Income Subprogram TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
			Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
	Program Year ²	NTGR		Paid by EDC	Paid by Participants							
<i>Low-Income</i>	<i>PY18</i>	<i>1.00</i>	<i>1.37</i>	<i>\$7,850</i>	<i>\$3,176</i>	<i>\$3,020</i>	<i>\$14,047</i>	<i>\$3,467</i>	<i>\$13,312</i>	<i>\$2,477</i>	<i>\$0</i>	<i>\$19,257</i>
<i>Low-Income</i>	<i>PY19</i>	<i>1.00</i>	<i>1.37</i>	<i>\$7,995</i>	<i>\$3,174</i>	<i>\$3,033</i>	<i>\$14,202</i>	<i>\$3,292</i>	<i>\$13,638</i>	<i>\$2,530</i>	<i>\$0</i>	<i>\$19,460</i>
<i>Low-Income</i>	<i>PY20</i>	<i>1.00</i>	<i>1.36</i>	<i>\$8,334</i>	<i>\$3,124</i>	<i>\$3,060</i>	<i>\$14,519</i>	<i>\$3,301</i>	<i>\$13,777</i>	<i>\$2,612</i>	<i>\$0</i>	<i>\$19,691</i>
<i>Low-Income</i>	<i>PY21</i>	<i>1.00</i>	<i>1.31</i>	<i>\$8,667</i>	<i>\$3,080</i>	<i>\$3,087</i>	<i>\$14,834</i>	<i>\$3,254</i>	<i>\$13,550</i>	<i>\$2,699</i>	<i>\$0</i>	<i>\$19,503</i>
<i>Low-Income</i>	<i>PY22</i>	<i>1.00</i>	<i>1.27</i>	<i>\$7,194</i>	<i>\$3,261</i>	<i>\$2,966</i>	<i>\$13,421</i>	<i>\$2,748</i>	<i>\$11,787</i>	<i>\$2,548</i>	<i>\$0</i>	<i>\$17,083</i>
<i>Low-Income Total</i>		<i>1.00</i>		<i>\$40,040</i>	<i>\$15,816</i>	<i>\$15,167</i>	<i>\$71,023</i>	<i>\$16,063</i>	<i>\$66,064</i>	<i>\$12,867</i>	<i>\$0</i>	<i>\$94,994</i>

Table 25. Residential Low-Income Subprogram TRC Benefits (Net)

Portfolio	NTGR & TRC Ratio			TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)				
	Program Year ²	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
<i>Low-Income</i>	<i>PY18</i>	<i>1.000</i>	<i>1.37</i>	<i>\$7,850</i>	<i>\$3,176</i>	<i>\$3,020</i>	<i>\$14,047</i>	<i>\$3,467</i>	<i>\$13,312</i>	<i>\$2,477</i>	<i>\$0</i>	<i>\$19,257</i>
<i>Low-Income</i>	<i>PY19</i>	<i>1.000</i>	<i>1.37</i>	<i>\$7,995</i>	<i>\$3,174</i>	<i>\$3,033</i>	<i>\$14,202</i>	<i>\$3,292</i>	<i>\$13,638</i>	<i>\$2,530</i>	<i>\$0</i>	<i>\$19,460</i>
<i>Low-Income</i>	<i>PY20</i>	<i>1.000</i>	<i>1.36</i>	<i>\$8,334</i>	<i>\$3,124</i>	<i>\$3,060</i>	<i>\$14,519</i>	<i>\$3,301</i>	<i>\$13,777</i>	<i>\$2,612</i>	<i>\$0</i>	<i>\$19,691</i>
<i>Low-Income</i>	<i>PY21</i>	<i>1.000</i>	<i>1.31</i>	<i>\$8,667</i>	<i>\$3,080</i>	<i>\$3,087</i>	<i>\$14,834</i>	<i>\$3,254</i>	<i>\$13,550</i>	<i>\$2,699</i>	<i>\$0</i>	<i>\$19,503</i>
<i>Low-Income</i>	<i>PY22</i>	<i>1.000</i>	<i>1.27</i>	<i>\$7,194</i>	<i>\$3,261</i>	<i>\$2,966</i>	<i>\$13,421</i>	<i>\$2,748</i>	<i>\$11,787</i>	<i>\$2,548</i>	<i>\$0</i>	<i>\$17,083</i>
<i>Low-Income Total</i>		<i>1.000</i>		<i>\$40,040</i>	<i>\$15,816</i>	<i>\$15,167</i>	<i>\$71,023</i>	<i>\$16,063</i>	<i>\$66,064</i>	<i>\$12,867</i>	<i>\$0</i>	<i>\$94,994</i>

Summary of Benchmarking Results

As part of its Phase V program design, PECO conducted benchmarking against comparable utilities to validate its program allocation strategy. This process helped determine that the budget distribution between residential and non-residential sectors, as well as the contribution of each sector toward overall savings, was both practical and aligned with achieving mandated targets.

Engagement of Different Housing and Ownership Types

PECO's Phase V strategy includes targeted outreach and tailored program design to engage diverse housing and ownership types, including multifamily properties and rental units. PECO and its CSPs will leverage partnerships with property managers, landlords, and community organizations to overcome common participation barriers and facilitate equitable access to energy efficiency offerings. Additionally, PECO will implement focused marketing and incentive structures to reach historically underserved populations, aligning with Act 129 equity objectives and promoting broad participation across all customer segments.

Other Information Deemed Appropriate

Not applicable.

Residential Low-Income HER Subprogram (2026-2031)

The Residential HER Program includes a specified subprogram for low-income customers. Section 3.2 describes the Residential (market rate) HER program and the Low-Income HER subprogram is described below.

Objectives

The Low-Income HER subprogram objective is to reduce a home's energy use through HERs and online access where customers can view their home energy usage. This program leverages the power of social norming to drive persistent energy savings through smart energy practices.

Target Market

The eligible population and target market for the Low-Income HER subprogram includes all PECO residential electric customers with a household income of less than or equal to 150% of the federal poverty level.

Program Description

The Low-Income HER subprogram involves regularly delivering direct mail or digital HERs that motivate customers to act through contextualized energy-usage information, personal and neighborhood comparisons, and energy savings recommendations (including low- or no-cost tips) based on customers' specific energy-usage patterns and characteristics. HERs will include marketing opportunities for cross-selling other energy efficiency programs.

In addition to the information presented on the mailed or emailed HERs, customers can log onto PECO's website to view their energy usage (energy costs, energy use, neighbor comparison).

The website will also help customers determine what technologies use the most energy in their homes, provide information on how to save energy, and enable sign up for energy usage alerts and notifications. The website's purpose is to encourage customers to learn more about PECO's energy efficiency programs and help them take action to save energy.

The Low-Income HER subprogram will also include the following enhanced offerings:

- **Peak Demand Reduction Education:** The CSP will provide weekly emails to a sample of customers detailing how to shift their energy usage to off-peak times (any why it matters). Communications will include an initial welcome email, weekly emails to compare performance against the previous week, post-bill reports, and seasonal change information.
- **Rate Education:** For eligible non-TOU customers, the CSP will promote the adoption of the TOU rates by educating customers about their rate options, providing personalized estimated monthly and annual costs on each rate option, and helping them understand the benefits of TOU rates.

Program Components

The Low-Income HER subprogram does not contain any components.

Coordination of Participation in other Act 129 programs

See Section 3.2.

Implementation Strategy

A CSP will implement the Low-Income HER subprogram. The CSP will deliver direct mail or digital HERs to customers. It will also manage the website platform.

Program Issues and Risks and Risk Mitigation

The Low-Income HER subprogram will manage risks by implementing a continuous improvement process such that PECO closely monitors program results and adjusts implementation tactics (including marketing approaches, participation guidelines, and program resource allocation) to meet the portfolio level targets. As additional guidelines and risks present themselves PECO will adjust its planning and portfolio design as needed.

Anticipated Costs to Participating Customers

Customers participating in the Low-Income HER subprogram have anticipated costs of \$0 for Phase V.

Ramp-Up Strategy

Minimal ramp up will be needed for the Low-Income HER subprogram because this program is already operating in Phase IV.

Marketing Strategy

The Low-Income HER subprogram participants are selected by PECO; customers cannot subscribe themselves. Therefore, there is no marketing of the program to encourage participation.

Eligible Measures and Incentive Strategy

Table 26. Residential Low-Income HER Subprogram

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Low-Income Home Energy Reports	per home	Yes	Yes	Phase V TRM	-	4	-

Basis for the Proposed Incentive Levels

Rebates are not applicable to the Low-Income HER subprogram.

Maximum Deadlines for Rebates

Rebates are not applicable to the Low-Income HER subprogram.

Key Schedule Milestones

The planned implementation schedule is as follows:

- **March 2026:** PECO and the CSPs will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems and marketing and outreach is in place.
- **June 1, 2026:** The program will launch.
- **June 2026–May 2031:** Programs will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.
- **May 31, 2031:** Last day of the Phase V programs.

If PECO meets the low-income carve-out before the end of the phase, PECO will continue to implement the Low-Income HER subprogram after meeting its low-income carve-out subject to the Commission-approved budget for the Low-Income HER subprogram.

Assumed EM&V

See Residential HER Program Assumed EM&V in Section 3.2

Administrative Requirements

PECO will administer the Low-Income HER subprogram through a CSP. PECO will confirm major milestones are met and that the program is delivered according to the program design. Requested external staffing levels will be provided upon the completion of the CSP selection and contracting process. PECO will have six FTEs dedicated to the residential sector.

Savings Projections

Table 27. Residential Low-Income HER Subprogram Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Low-Income Home Energy Reports</i>	2.7.3	Energy Savings (MWh)	1,813	1,813	1,813	1,813	1,813	9,063
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Projected Participation	3,000	3,000	3,000	3,000	3,000	15,000

Estimated Program Budget (Total) by Year

Table 28. Residential Low-Income HER Subprogram Budget

Sub-Program Name:		Low-Income HER					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$172	\$91	\$95	\$85	\$81	\$524
Incentives (\$000)	Rebates	\$0	\$0	\$0	\$0	\$0	\$0
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct-Install Materials & Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$172	\$91	\$95	\$85	\$81	\$524
	Marketing	\$0	\$0	\$0	\$0	\$0	\$0
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$172	\$91	\$95	\$85	\$81	\$524
Percent Incentives		0%	0%	0%	0%	0%	0%

Estimated Percentage of Sector Budget Attributed to the Program

The Low-Income HER program participates in the residential sector. The Low-Income HER program accounts for 0.4% of residential sector spending exclusive of common cost allocation.

Table 29. Residential Low-Income HER Subprogram Budget

Sector	EE&C Program	Cost Elements (\$)									Total Cost	Expected Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Expected Acquisition Cost (\$/MW)
		Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	AEPS Registration Support	Other (Describe)				
Residential Portfolio (incl. Low-Income)	Low-Income Home Energy Reports	\$0	\$0	\$0	\$0	\$523,673	\$0	\$0	\$0	\$0	\$523,673	\$97	\$26	\$488,339

Cost-Effectiveness

Table 30. Residential Low-Income HER Subprogram TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
	Program Year	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
<i>Low-Income</i>	<i>PY18</i>	<i>1.00</i>	<i>7.78</i>	<i>\$0</i>	<i>\$0</i>	<i>\$172</i>	<i>\$172</i>	<i>\$299</i>	<i>\$1,041</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1,340</i>
<i>Low-Income</i>	<i>PY19</i>	<i>1.00</i>	<i>7.18</i>	<i>\$0</i>	<i>\$0</i>	<i>\$91</i>	<i>\$91</i>	<i>\$139</i>	<i>\$512</i>	<i>\$0</i>	<i>\$0</i>	<i>\$651</i>
<i>Low-Income</i>	<i>PY20</i>	<i>1.00</i>	<i>6.80</i>	<i>\$0</i>	<i>\$0</i>	<i>\$95</i>	<i>\$95</i>	<i>\$130</i>	<i>\$517</i>	<i>\$0</i>	<i>\$0</i>	<i>\$648</i>
<i>Low-Income</i>	<i>PY21</i>	<i>1.00</i>	<i>6.31</i>	<i>\$0</i>	<i>\$0</i>	<i>\$85</i>	<i>\$85</i>	<i>\$109</i>	<i>\$427</i>	<i>\$0</i>	<i>\$0</i>	<i>\$536</i>
<i>Low-Income</i>	<i>PY22</i>	<i>1.00</i>	<i>6.12</i>	<i>\$0</i>	<i>\$0</i>	<i>\$81</i>	<i>\$81</i>	<i>\$94</i>	<i>\$400</i>	<i>\$0</i>	<i>\$0</i>	<i>\$494</i>
<i>Low-Income Total</i>		<i>1.00</i>	<i>7.01</i>	<i>\$0</i>	<i>\$0</i>	<i>\$524</i>	<i>\$524</i>	<i>\$772</i>	<i>\$2,897</i>	<i>\$0</i>	<i>\$0</i>	<i>\$3,669</i>

Table 31. Residential Low-Income HER Subprogram TRC Benefits (Net)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
	Program Year	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits ⁴	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
Program				Paid by EDC	Paid by Participants							
<i>Low-Income HER</i>	<i>PY18</i>	<i>1.000</i>	<i>7.78</i>	<i>\$0</i>	<i>\$0</i>	<i>\$172</i>	<i>\$172</i>	<i>\$299</i>	<i>\$1,041</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1,340</i>
<i>Low-Income HER</i>	<i>PY19</i>	<i>1.000</i>	<i>7.18</i>	<i>\$0</i>	<i>\$0</i>	<i>\$91</i>	<i>\$91</i>	<i>\$139</i>	<i>\$512</i>	<i>\$0</i>	<i>\$0</i>	<i>\$651</i>
<i>Low-Income HER</i>	<i>PY20</i>	<i>1.000</i>	<i>6.80</i>	<i>\$0</i>	<i>\$0</i>	<i>\$95</i>	<i>\$95</i>	<i>\$130</i>	<i>\$517</i>	<i>\$0</i>	<i>\$0</i>	<i>\$648</i>
<i>Low-Income HER</i>	<i>PY21</i>	<i>1.000</i>	<i>6.31</i>	<i>\$0</i>	<i>\$0</i>	<i>\$85</i>	<i>\$85</i>	<i>\$109</i>	<i>\$427</i>	<i>\$0</i>	<i>\$0</i>	<i>\$536</i>
<i>Low-Income HER</i>	<i>PY22</i>	<i>1.000</i>	<i>6.12</i>	<i>\$0</i>	<i>\$0</i>	<i>\$81</i>	<i>\$81</i>	<i>\$94</i>	<i>\$400</i>	<i>\$0</i>	<i>\$0</i>	<i>\$494</i>
<i>Low-Income HER Total</i>		<i>1.000</i>	<i>7.01</i>	<i>\$0</i>	<i>\$0</i>	<i>\$524</i>	<i>\$524</i>	<i>\$772</i>	<i>\$2,897</i>	<i>\$0</i>	<i>\$0</i>	<i>\$3,669</i>

Summary of Benchmarking Results

As mentioned in Section 3.20 PECO conducted benchmarking against similar utilities to inform its budget and savings split in Phase V.

Engagement of Different Housing and Ownership Types

For the Low-Income HER subprogram, PECO will continue to engage existing customers, enroll additional interested customers, and build on the program success achieved in Phase IV.

Other Information Deemed Appropriate

Not applicable.

Plan to Meet Proportional Number of Measure Requirement

As part of Phase V program design, PECO confirmed that the Phase V Final Order requirement to set low-income measures at 8.8% was incorporated into its CSP plans. Throughout the program, PECO will actively monitor this metric to maintain compliance.

Confirmation That All Low-Income Compliance Savings Will Come From Specific Low-Income Programs or Low-Income Verified Participants in Multifamily Housing Programs

PECO confirms that its low-income compliance savings will either come from the multifamily component, dedicated program components exclusively for low-income customers, or from the Low-Income HER subprogram. PECO will coordinate closely with its Residential CSP to confirm that any low-income compliance savings from the multifamily program component are fully verified with participant eligibility confirmed.

Estimate of Applicable Low-Income Carryover Savings From Phase IV

PECO estimates that the low-income savings carryover is 22,295 MWh. The Phase IV compliance goal is 80,089 MWh, and with actual savings of 92,284 MWh with a remaining forecast of 10,780 MWh in PY17.

3.3 Commercial/Industrial Small Sector

While the SWE separated the C&I sector into small (Section 3.3) and large (Section 3.4) in the Plan template, PECO's Plan has one Non-Residential program in the C&I sector. The Non-Residential program serves both SCI and LCI customers. Section 3.4 includes formatted descriptions of the Non-Residential program components.

3.4 Commercial/Industrial Large Sector

Non-Residential Program (2026-2031)

Objectives

The Non-Residential program objective is to increase energy efficiency for its non-residential customers across the SCI, LCI, and Municipal Lighting²³ rate classes. The program uses the following approaches to achieve this objective including:

Providing customers with easy access to technical support, incentives, and concierge-style services to facilitate program participation and maximize program benefits

Allowing small businesses to realize the economic benefits of energy efficiency through comprehensive energy efficiency solutions

Encouraging Non-Residential program customers to make upgrades where they need them most by providing rebates for a wide range of measures

Target Market

PECO's non-residential electric customers include commercial, industrial, government, education, and nonprofit customers. Below are definitions of PECO's SCI and LCI rate classes. At the time of this Plan development, the SCI market size includes approximately 170,000 customers and the LCI market includes approximately 3,000 customers.

SCI rate classes include:

Rate GS (General Service)

LCI rate classes include:

Rate PD (Primary Distribution Power)

Rate HT (High Tension Power)

Rate EP (Electric Propulsion)

Municipal Lighting rate classes include:

- Rate SL-E (Street Lighting Customer-Owned Facilities)
- Rate SL-C (Smart Lighting Controls Customer-Owned Facilities)
- Rate AL (Alley Lighting in City of Philadelphia)

Program Description

²³ The municipal lighting rate class includes streetlighting measures such as pole/arm-mounted roadway or parking lot lighting measures. These measures may be offered to municipalities and homeowner's associations (HOAs) among others.

The Non-Residential program offers a comprehensive and cross-cutting array of opportunities so non-residential customers can reduce their energy consumption and costs. For additional detail concerning the program's comprehensive design and delivery please see Section 3.1.7.

The following section contains detailed descriptions of program components.

Program Components

- **Strategic Energy Management (SEM):** Implements practices, policies, and processes across an organization or facility that create persistent energy savings. Includes the implementation of employee training, new operational protocols, and other interventions that measurably reduce a facility's energy usage.
- **Existing Buildings:** Provides incentives to customers who install energy efficient equipment. Provides downstream and/or midstream incentives for a variety of equipment types including, but not limited to, lighting, HVAC, compressed air, motors and drives.
- **Building Optimization:** Includes assessments and implementing measures to optimize energy use in an existing building. Includes retrocommissioning (RCx), virtual commissioning (VCx), monitoring-based commissioning (MBCx), building tune-up, and Building Operator Certification (BOC) offerings. Additionally, through these assessments, the non-residential CSP will determine whether a customer could benefit from daily load shifting, and implement this savings pathway through the Building Optimization program component.
- **Distributed Energy Resources (DER):** Incentivizes the installation of energy generation and storage systems at customer sites, either behind the meter or with connection to the local grid. This includes, but is not limited to, solar (PV), combined heat and power (CHP), and fuel cell technologies.
- **Small Business Solutions:** Works with small businesses and trade allies to install a prescribed list of energy-saving measures at small business facilities. Includes trade allies who conduct any needed energy assessments and install the eligible measures at customer sites.
- **New Construction:** Partners with design firms and builders to facilitate construction projects (e.g., new facility builds, additions, significant remodels) that are designed, built, and operated at a high level of efficiency from the start. Offers reviews of design documents and onsite assessments for new construction projects, with the implementation of energy-saving measures based on the results.

Coordination of Participation in other Act 129 programs

The CSP will cross-promote and channel customers to other Non-Residential program components based on their facility needs and energy goals.

Implementation Strategy

The Non-Residential program will be administered by a CSP and a team of partners with a proven record of providing the services offered in this program.

The implementation strategy will vary by program component:

Strategic Energy Management (SEM): Delivered through a 12-month cohort model that fosters peer learning, energy awareness, and demand reduction strategies. The CSP will provide comprehensive support including SEM coaches, engineers, and energy modelers. Participants will work with coaches to achieve energy savings through operational and behavioral measures, with additional benefits such as improved safety, sustainability, and facility responsiveness. Participants will graduate out of the component after the first year into the alumni cohort to sustain and expand savings over time.

- **Virtual SEM (vSEM):** Leverages AMI interval data and analytics to identify savings opportunities remotely and integrate load-shifting strategies to meet peak demand goals.

Existing Buildings: Delivers a comprehensive portfolio of energy efficiency offerings through downstream (including prescriptive and custom offerings) and midstream channels.

- **Downstream:** focuses on direct customer engagement with technical and trade ally support to facilitate smooth project implementation and timely incentives. The prescriptive pathways will offer streamlined participation and incentives for standard measures, serving as an entry point for engagement. The custom pathway will target complex, site-specific projects including process improvements, chiller plant improvements, compressed air upgrades, load shifting, and more.
- **Midstream:** reduces barriers by providing instant incentives at the point of sale through distributor networks, expanding beyond lighting to HVAC, refrigeration, and other technologies.

Building Optimization: Delivers deep, persistent energy savings through technical rigor, customer empowerment, and strategic collaboration.

- **Engineering Support and Audits:** Provides customers with direct access to expert engineering support to help identify, evaluate, and implement energy savings opportunities. Includes ASHRAE Level 2 audits and leverages braided funding opportunities to minimize upfront costs and support customer participation.
- **BOC:** Delivered in partnership with Penn College of Technology, the BOC offering will provide structured Level I and Level II courses for customers to earn nationally recognized credentials and practical skills to manage building energy use. The CSP will conduct post-class facility assessment to reinforce course content and identify additional savings opportunities.
- **Building Commissioning (RCx, VCx, MBCx):** Identifies operational savings opportunities through an analysis of interval meter data and engages pre-qualified accounts. Participants will implement recommended measures independently, with no onsite support or financing incentives and the CSP will verify savings through meter-based measurement and verification.
- **Load Shifting:** Focuses on identifying customers who would benefit from a daily load shifting program outside of PECO's peak hours and engages them through additional outreach. Participating customers will realize savings by enrolling in the program, with performance verified through meter-based measurement and verification methods outlined by the SWE.

Distributed Energy Resources (DER): Focused primarily on solar PV and CHP projects, the CSP will work closely with solar contractors and PECO's interconnection team to implement

the component. The CSP will facilitate AEPS registration for eligible projects, provide guidance, and coordinate with PECO and the PA PUC as needed.

Small Business Solutions: Designed to maximize participation, streamline implementation, and deliver savings, this component will include a vetted trade ally network, direct discount services, localized outreach and engagement, streamlined participation tools, robust QA/quality control (QC), and braided funding. This component includes interest free financing to small and medium sized businesses.

New Construction: Embeds energy efficiency into the design and construction process to support new facility builds, additions, and major renovations across commercial, institutional, and industrial sectors. The CSP will provide design-build services, early engagement with design teams, and technical support such as energy modeling, document reviews, and site assessments.

Program Issues and Risks and Risk Mitigation

Program issues and risks as well as risk mitigation follow the topics outlined in Section 3.2. As additional guidelines and risks present themselves PECO will adjust its planning and portfolio design as needed.

Anticipated Costs to Participating Customers

Customers participating in the Non-Residential program have anticipated costs of \$497,226,292 for Phase V after PECO incentives.

Ramp-Up Strategy

The primary objective is to support a smooth, quick, and seamless transition from Phase IV to Phase V, especially from the perspective of customers and market actors. The CSP will align outreach staff with appropriate customer segments and will capitalize on existing relationships to build on success.

Marketing Strategy

The CSP will be responsible for program marketing, coordinating with PECO's Marketing and Promotions team, E&O CSP, and the Exelon Energy Efficiency Marketing Agency for messaging design and consistency. The CSP will employ a multi-channel strategy and use robust analytics to reach PECO's customer market segments and trade allies with services and measures to meet their specific needs. The CSP will leverage online ads, email, in-person events, existing communication channels, and case studies as some of the primary marketing tactics for the Non-Residential program. In addition to the strategies listed below, the CSP will implement cross-promotion of components to increase customer participation across PECO's Non-Residential program components.

Business Intelligence and Market Segmentation: Looking at past participation by measures and industry, the CSP will create and deploy targeted direct and digital marketing with measure-specific content to industries that have the greatest propensity to participate in PECO's program.

Large Business: The CSP will implement a data-informed marketing approach to engage large business customers by leveraging customer segmentation and behavioral insights to identify and prioritize large business accounts with the highest potential for impact. The CSP will customize messaging informed by large business customers' challenges and goals to increase participation.

Small Business: The CSP will implement a data-informed marketing strategy to engage small business customers by delivering clear, accessible messaging that highlights the value and ease of participation.

Hard-to-Reach and Disadvantaged Small Business Owners: The CSP will leverage localized, relationship-driven outreach to engage hard-to-reach and disadvantaged small business owners. Outreach will address key barriers including trust, language, awareness, and capacity. The CSP will prioritize direct, in-person engagement through on-site assessment and presence at local events and will collaborate with trusted community organizations and culturally competent trade allies and contractors to reach customers.

Trade Allies: The CSP will support trade allies with sales enablement materials that coordinate with measure-focused campaigns. The CSP will engage and support trade allies through coordinated sales enablement materials aligned with measure-focused campaigns. The CSP will actively recruit trade allies and provide scheduled training and ongoing support to ensure they have the skills and resources necessary to promote the Non-Residential program effectively. Trade allies will serve as key program ambassadors, educating customers on program benefits and driving participation. Continuous communication, mentorship, and field support will be provided to help trade allies enhance their capabilities, maintain high customer satisfaction, and maximize program participation.

Eligible Measures and Incentive Strategy

The measure mix includes a comprehensive mix of end-use technologies such as lighting, HVAC, water heating, plug load, refrigeration, motors, and others that span all customer classes and building types. Incentives are based on previous experience and knowledge of the market in PECO's territory.

Table 32. Non-Residential Eligible Measures

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Lighting Retrofits - Street lighting	per lighting equipment	No	No	Phase V TRM	\$276.15	15	\$0.00 - \$276.15
Lighting Retrofits - Outdoor floods	per lighting equipment	No	No	Phase V TRM	\$132.70	15	\$0.00 - \$132.70
Lighting Retrofits - High Bays	per lighting equipment	No	No	Phase V TRM	\$520.03	15	\$0.00 - \$520.03
Lighting Retrofits - Other Interior Fixtures	per lighting equipment	No	No	Phase V TRM	\$104.01	15	\$0.00 - \$104.01
Lighting Controls	per lighting equipment	No	No	Phase V TRM	\$52.67	8	\$0.00 - \$52.67
LED Exit Signs	per sign	No	No	Phase V TRM	\$68.67	15	\$0.00 - \$68.67
LED Refrigeration Display Case Lighting	per case	No	No	Phase V TRM	\$61.00	8	\$0.00 - \$61.00
HVAC Systems: Air Conditioner	per unit	No	No	Phase V TRM	\$6,186.04	15	\$0.00 - \$6,186.04
HVAC Systems: Heat Pump	per unit	No	No	Phase V TRM	\$5,255.65	15	\$0.00 - \$5,255.65
Electric Chillers	per chiller	No	No	Phase V TRM	\$209,116.51	15	\$0.00 - \$209,116.51
Groundwater Source and Ground Source Heat Pumps	per heat pump	No	No	Phase V TRM	\$65,910.57	15	\$0.00 - \$65,910.57
Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons	per heat pump	No	No	Phase V TRM	\$1,705.32	15	\$0.00 - \$1,705.32
Small C&I HVAC Refrigerant Charge Correction	per HVAC system	No	No	Phase V TRM	\$374.00	3	\$0.00 - \$374.00
HVAC Tune Up	per HVAC system	No	No	Phase V TRM	\$612.90	3	\$0.00 - \$612.90
Room Air Conditioner	per AC	No	No	Phase V TRM	\$408.37	9	\$0.00 - \$408.37
Controls: Guest Room Occupancy Sensor	per sensor	No	No	Phase V TRM	\$342.24	11	\$0.00 - \$342.24
Controls: Economizer	per economizer	No	No	Phase V TRM	\$2,027.00	3	\$0.00 - \$2,027.00
Computer Room Air Conditioner	per unit	No	No	Phase V TRM	\$350.00	15	\$0.00 - \$350.00

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Computer Room Air Conditioner/Handler Electronically Commutated Plug Fans	per unit	No	No	Phase V TRM	\$948.00	15	\$0.00 - \$948.00
Computer Room Air Conditioner/Handler VSD on AC Fan Motors	per HP	No	No	Phase V TRM	\$1,163.00	15	\$0.00 - \$1,163.00
Circulation Fan: High-Volume Low-Speed	per fan	No	No	Phase V TRM	\$4,073.80	15	\$0.00 - \$4,073.80
Demand Controlled Ventilation	per HVAC system	No	No	Phase V TRM	\$1,923.96	15	\$0.00 - \$1,923.96
Advanced Rooftop Controls: Demand Controlled Ventilation (DCV)	per HVAC system	No	No	Phase V TRM	\$1,923.96	10	\$0.00 - \$1,923.96
Advanced Rooftop Controls: DCV with two speed controls	per HVAC system	No	No	Phase V TRM	\$3,339.90	10	\$0.00 - \$3,339.90
Advanced Rooftop Controls: DCV with three speed controls or VFD	per HVAC system	No	No	Phase V TRM	\$3,884.48	10	\$0.00 - \$3,884.48
C&I ENERGY STAR Certified Connected Thermostats	per thermostat	No	No	Phase V TRM	\$168.42	11	\$0.00 - \$168.42
Duct Sealing and Insulation	per project	No	No	Phase V TRM	\$280.64	15	\$0.00 - \$280.64
Chilled Water Pipe Insulation	per insulation project	No	No	Phase V TRM	\$127.76	15	\$0.00 - \$127.76
Premium Efficiency Motors	per motor	No	No	Phase V TRM	\$1,034.00	15	\$0.00 - \$1,034.00
Variable Frequency Drive (VFD) Improvements	per drive	No	No	Phase V TRM	\$1,216.00	15	\$0.00 - \$1,216.00
ECM Circulating Fan	per fan	No	No	Phase V TRM	\$395.48	5	\$0.00 - \$395.48
VSD on Kitchen Exhaust Fan	per unit	No	No	Phase V TRM	\$533.66	15	\$0.00 - \$533.66
ECM Circulator Pump	per pump	No	No	Phase V TRM	\$402.69	15	\$0.00 - \$402.69
High Efficiency Pumps	per pump	No	No	Phase V TRM	\$2,534.53	13.3	\$0.00 - \$2,534.53

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Heat Pump Water Heaters	per water heater	No	No	Phase V TRM	\$1,279.29	10	\$0.00 - \$1,279.29
Low Flow Pre-Rinse Sprayers for Retrofit Programs and Time of Sale Programs	per sprayer	No	No	Phase V TRM	\$193.00	8	\$0.00 - \$193.00
Domestic Hot Water Pipe Insulation	per insulation project	No	No	Phase V TRM	\$63.00	15	\$0.00 - \$63.00
ENERGY STAR Refrigeration Cases	per case	No	No	Phase V TRM	\$549.40	12	\$0.00 - \$549.40
ENERGY STAR Freezer Cases	per case	No	No	Phase V TRM	\$620.67	12	\$0.00 - \$620.67
High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Cooler	per motor	No	No	Phase V TRM	\$501.84	15	\$0.00 - \$501.84
High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Freezer	per motor	No	No	Phase V TRM	\$353.45	15	\$0.00 - \$353.45
Controls: Evaporator Fan Controllers	per controller	No	No	Phase V TRM	\$766.60	15	\$0.00 - \$766.60
Controls: Floating Head Pressure Controls	per control	No	No	Phase V TRM	\$42,514.74	15	\$0.00 - \$42,514.74
Controls: Anti-Sweat Heater Controls	per door	No	No	Phase V TRM	\$1,119.27	12	\$0.00 - \$1,119.27
Controls: Evaporator Coil Defrost Control	per defrost control	No	No	Phase V TRM	\$1,275.66	10	\$0.00 - \$1,275.66
Variable Speed Refrigeration Compressor	per compressor	No	No	Phase V TRM	\$5,632.92	15	\$0.00 - \$5,632.92
Strip Curtains for Walk-In Freezers and Coolers	per door	No	No	Phase V TRM	\$220.33	4	\$0.00 - \$220.33
Night Covers for Display Cases	per case	No	No	Phase V TRM	\$793.14	5	\$0.00 - \$793.14
Auto Closers	per door	No	No	Phase V TRM	\$572.76	8	\$0.00 - \$572.76
Special Doors with Low or No Anti-Sweat Heat for Reach-In Freezers and Coolers	per door	No	No	Phase V TRM	\$2,394.08	12	\$0.00 - \$2,394.08

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Suction Pipe Insulation for Walk-In Coolers and Freezers	per insulation project	No	No	Phase V TRM	\$100.75	11	\$0.00 - \$100.75
Refrigerated Display Cases with Doors Replacing Open Cases	per case	No	No	Phase V TRM	\$2,288.38	12	\$0.00 - \$2,288.38
Adding Doors to Existing Refrigerated Display Cases	per case	No	No	Phase V TRM	\$1,816.25	12	\$0.00 - \$1,816.25
Refrigerated Case Light Occupancy Sensors	per controller	No	No	Phase V TRM	\$35.00	8	\$0.00 - \$35.00
Food Service Equipment Novelty Cooler Shutoff	per controller	No	No	Phase V TRM	\$303.26	10	\$0.00 - \$303.26
ENERGY STAR Clothes Washer	per washer	No	No	Phase V TRM	\$676.89	7.1	\$0.00 - \$676.89
ENERGY STAR Bathroom Ventilation Fan in Commercial Applications	per fan	No	No	Phase V TRM	\$300.13	12	\$0.00 - \$300.13
ENERGY STAR Ice Machines	per machine	No	No	Phase V TRM	\$469.74	10	\$0.00 - \$469.74
Controls: Beverage and Snack Machine Controls	per control	No	No	Phase V TRM	\$234.30	5	\$0.00 - \$234.30
ENERGY STAR Electric Steam Cooker	per cooker	No	No	Phase V TRM	\$441.00	12	\$0.00 - \$441.00
ENERGY STAR Combination Oven	per oven	No	No	Phase V TRM	\$1,898.69	12	\$0.00 - \$1,898.69
ENERGY STAR Commercial Convection Oven - Full Size	per oven	No	No	Phase V TRM	\$1,118.48	12	\$0.00 - \$1,118.48
ENERGY STAR Commercial Fryer	per fryer	No	No	Phase V TRM	\$1,268.80	12	\$0.00 - \$1,268.80
ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size	per cabinet	No	No	Phase V TRM	\$549.55	12	\$0.00 - \$549.55

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size	per cabinet	No	No	Phase V TRM	\$2,479.45	12	\$0.00 - \$2,479.45
ENERGY STAR Commercial Dishwasher	per dishwasher	No	No	Phase V TRM	\$1,418.00	10	\$0.00 - \$1,418.00
ENERGY STAR Commercial Griddle	per griddle	No	No	Phase V TRM	\$1,289.28	12	\$0.00 - \$1,289.28
Commercial Induction Cooktops	per cooktop	No	No	Phase V TRM	\$1,511.88	10	\$0.00 - \$1,511.88
Wall and Ceiling Insulation	per project	No	No	Phase V TRM	\$9,235.20	20	\$0.00 - \$9,235.20
Advanced Power Strips	per power strip	No	No	Phase V TRM	\$56.50	5	\$0.00 - \$56.50
ENERGY STAR Servers	per data center	No	No	Phase V TRM	\$1,259,232.00	4	\$0.00 - \$1,259,232.00
Server Virtualization	per server	No	No	Phase V TRM	\$895.00	4	\$0.00 - \$895.00
Cycling Refrigerated Thermal Mass Dryer	per dryer	No	No	Phase V TRM	\$196.56	10	\$0.00 - \$196.56
Air-Entraining Air Nozzle	per nozzle	No	No	Phase V TRM	\$159.25	15	\$0.00 - \$159.25
No-Loss Condensate Drains	per drain	No	No	Phase V TRM	\$308.18	10	\$0.00 - \$308.18
Air Tanks for Load/No Load Compressors	per receiver tank addition	No	No	Phase V TRM	\$501.22	15	\$0.00 - \$501.22
Variable-Speed Drive Air Compressor	per compressor	No	No	Phase V TRM	\$12,582.09	14	\$0.00 - \$12,582.09
Compressed Air Controller	per controller	No	No	Phase V TRM	\$177.49	13	\$0.00 - \$177.49
Compressed Air Low Pressure Drop Filters	per filter	No	No	Phase V TRM	\$1,040.00	10	\$0.00 - \$1,040.00
Compressed Air Mist Eliminators	per air mist eliminator	No	No	Phase V TRM	\$37.89	5	\$0.00 - \$37.89
Engine Block Heater Timer	per heater timer	No	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
High Frequency Battery Chargers	per charger	No	No	Phase V TRM	\$402.48	15	\$0.00 - \$402.48
Uninterruptible Power Supply (UPS)	per UPS	No	No	Phase V TRM	\$46.80	7	\$0.00 - \$46.80
Automatic Milker Takeoffs	per milker takeoff system	No	No	Phase V TRM	\$20,000.00	10	\$0.00 - \$20,000.00
Dairy Scroll Compressors	per compressor	No	No	Phase V TRM	\$1,182.00	15	\$0.00 - \$1,182.00

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
High-Efficiency Ventilation Fans with and without Thermostats	per fan	No	No	Phase V TRM	\$226.20	13	\$0.00 - \$226.20
Heat Reclaimers	per heat reclaimer system	No	No	Phase V TRM	\$5,839.98	15	\$0.00 - \$5,839.98
High Volume Low Speed Fans	per fan	No	No	Phase V TRM	\$5,607.89	15	\$0.00 - \$5,607.89
Livestock Waterer	per livestock waterer system	No	No	Phase V TRM	\$552.98	10	\$0.00 - \$552.98
Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps	per dairy vacuum pump VSD	No	No	Phase V TRM	\$6,716.86	15	\$0.00 - \$6,716.86
Low Pressure Irrigation System	per irrigation system	No	No	Phase V TRM	\$3,000.00	5	\$0.00 - \$3,000.00
New Construction Lighting	Per Project	No	No	Phase V TRM	\$188,000.00	15	\$0.00 - \$188,000.00
Indoor Horticultural Lighting	per lighting equipment	No	No	Phase V TRM	\$164.00	7	\$0.00 - \$164.00
High Efficiency Transformer	per transformer	No	No	Phase V TRM	\$468.00	15	\$0.00 - \$468.00
Midstream lighting incentives - Street lighting	per lighting equipment	No	No	Phase V TRM	\$85.86	15	\$0.00 - \$85.86
Midstream lighting incentives: Outdoor floods	per lighting equipment	No	No	Phase V TRM	\$42.75	15	\$0.00 - \$42.75
Midstream lighting incentives: High Bays	per lighting equipment	No	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
Midstream lighting incentives: Other Interior Fixtures	per lighting equipment	No	No	Phase V TRM	\$76.00	15	\$0.00 - \$76.00
HVAC Systems for Midstream Delivery: Air Conditioner	per unit	No	No	Phase V TRM	\$912.78	15	\$0.00 - \$912.78
HVAC Systems for Midstream Delivery: Heat Pump	per unit	No	No	Phase V TRM	\$4,824.01	15	\$0.00 - \$4,824.01

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons for Midstream Delivery	per heat pump	No	No	Phase V TRM	\$2,273.76	15	\$0.00 - \$2,273.76
Midstream Indoor Horticultural Lighting	per lighting equipment	No	No	Phase V TRM	\$300.00	7	\$0.00 - \$300.00
Midstream Premium Efficiency Motors	per motor	No	No	Phase V TRM	\$1,000.00	15	\$0.00 - \$1,000.00
Midstream Variable Frequency Drive (VFD) Improvements	per drive	No	No	Phase V TRM	\$2,027.14	15	\$0.00 - \$2,027.14
Midstream ENERGY STAR Refrigeration Cases	per case	No	No	Phase V TRM	\$549.40	12	\$0.00 - \$549.40
Midstream ENERGY STAR Freezer Cases	per case	No	No	Phase V TRM	\$620.67	12	\$0.00 - \$620.67
Midstream Controls: Evaporator Fan Controllers	per controller	No	No	Phase V TRM	\$766.60	15	\$0.00 - \$766.60
Midstream Controls: Anti-Sweat Heater Controls	per door	No	No	Phase V TRM	\$1,119.27	12	\$0.00 - \$1,119.27
Midstream Controls: Evaporator Coil Defrost Control	per defrost control	No	No	Phase V TRM	\$1,275.66	10	\$0.00 - \$1,275.66
Midstream ENERGY STAR Ice Machines	per machine	No	No	Phase V TRM	\$469.74	10	\$0.00 - \$469.74
Midstream ENERGY STAR Electric Steam Cooker	per cooker	No	No	Phase V TRM	\$1,500.00	12	\$0.00 - \$1,500.00
Midstream ENERGY STAR Combination Oven	per oven	No	No	Phase V TRM	\$1,898.69	12	\$0.00 - \$1,898.69
Midstream ENERGY STAR Commercial Convection Oven - Full Size	per oven	No	No	Phase V TRM	\$1,118.48	12	\$0.00 - \$1,118.48

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Midstream ENERGY STAR Commercial Fryer	per fryer	No	No	Phase V TRM	\$1,268.80	12	\$0.00 - \$1,268.80
Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size	per cabinet	No	No	Phase V TRM	\$549.55	12	\$0.00 - \$549.55
Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size	per cabinet	No	No	Phase V TRM	\$2,479.45	12	\$0.00 - \$2,479.45
Midstream ENERGY STAR Commercial Dishwasher	per dishwasher	No	No	Phase V TRM	\$1,093.46	10	\$0.00 - \$1,093.46
Midstream ENERGY STAR Commercial Griddle	per griddle	No	No	Phase V TRM	\$1,289.28	12	\$0.00 - \$1,289.28
Midstream Air Tanks for Load/No Load Compressors	per receiver tank addition	No	No	Phase V TRM	\$1,750.00	15	\$0.00 - \$1,750.00
Midstream Variable-Speed Drive Air Compressor	per compressor	No	No	Phase V TRM	\$12,582.09	14	\$0.00 - \$12,582.09
Midstream High-Efficiency Ventilation Fans with and without Thermostats	per fan	No	No	Phase V TRM	\$226.20	13	\$0.00 - \$226.20
Midstream Heat Reclaimers	per heat reclaimer system	No	No	Phase V TRM	\$5,839.98	15	\$0.00 - \$5,839.98
Midstream High Volume Low Speed Fans	per fan	No	No	Phase V TRM	\$5,607.89	15	\$0.00 - \$5,607.89
Midstream Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps	per dairy vacuum pump VSD	No	No	Phase V TRM	\$6,716.86	15	\$0.00 - \$6,716.86
Building Operator Certification Training	per building tune up	No	No	Phase V TRM	\$4,298.77	13	\$0.00 - \$4,298.77
Custom:Other - SEM	Per Participant	No	No	Phase V TRM	\$50,000.00	15	\$0.00 - \$50,000.00
Custom:Other - VCx	Per Participant	No	No	Phase V TRM	\$31,282.01	15	\$0.00 - \$31,282.01

Measure	Unit	Low-Income Measure (Yes/No)	Comprehensive Measure (Yes/No)	Eligibility Requirements	Incremental Cost (\$/unit)	Estimated Useful Life	Incentive Amount or Incentive Range (\$/unit)
Custom:Other - vSEM	Per Participant	No	No	Phase V TRM	\$10,000.00	15	\$0.00 - \$10,000.00
Solar	per project	No	No	Phase V TRM	\$297,602.20	15	\$0.00 - \$297,602.20
Custom:Other - Compressed Air	Per Participant	No	No	Phase V TRM	\$151,015.93	15	\$0.00 - \$151,015.93
Custom: Data Center	Per Participant	No	No	Phase V TRM	\$100,000.00	15	\$0.00 - \$100,000.00
Custom:HVAC	Per Participant	No	No	Phase V TRM	\$113,365.00	15	\$0.00 - \$113,365.00
Custom: Motors & Drives	Per Participant	No	No	Phase V TRM	\$151,015.93	15	\$0.00 - \$151,015.93
Custom: Other	Per Participant	No	No	Phase V TRM	\$124,715.00	15	\$0.00 - \$124,715.00
Custom: Process	Per Participant	No	No	Phase V TRM	\$200,000.00	15	\$0.00 - \$200,000.00
Custom: Refrigeration	Per Participant	No	No	Phase V TRM	\$60,585.00	15	\$0.00 - \$60,585.00
Custom: EMS	Per Participant	No	No	Phase V TRM	\$25,000.00	15	\$0.00 - \$25,000.00
Custom: Retrocommissioning	Per Participant	No	No	Phase V TRM	\$173,280.00	15	\$0.00 - \$173,280.00
Custom: CHP	Per Participant	No	No	Phase V TRM	\$5,710,026.00	15	\$0.00 - \$5,710,026.00
ASHRAE Audits/Feasibility Studies	Per Participant	No	No	Phase V TRM	\$18,000.00	5	\$0.00 - \$18,000.00
Incentive Buy Down	Per Participant	No	No	Phase V TRM	\$15,000.00	5	\$0.00 - \$15,000.00
C&I Load Shifting	per unit	No	No	Phase V TRM	\$200,000.00	1	\$0.00 - \$200,000.00
Lighting Retrofits - Street lighting	per lighting equipment	No	No	Phase V TRM	\$276.15	15	\$0.00 - \$276.15

To maximize opportunities for customer energy savings, PECO reserves the right to offer an incentive of up to the incremental measure costs²⁴ for any measure that is not listed in Table 32 but is identified in the TRM or approved as an interim measure protocol.

²⁴ The incremental measure costs is determined through Exhibit 5: 2026 Incremental Measure Cost Database issued by the PUC found here [Total Resource Cost Test | PA PUC](#)

Basis for the Proposed Incentive Levels

Incentives are based on previous experience and knowledge of the market in PECO's territory. The incentives may be per unit, or per kWh, per kW saved, or any other suitable structure to drive participation. Incentives can cover up to 80% of project costs for qualifying measures, reducing ROI periods to 1–5 years and helping overcome financial barriers. Market response will be monitored, and incentive levels adjusted as needed to maintain competitiveness and momentum. Key program components include:

- **Strategic Energy Management:** Lower incentives due to high personal engagement.
- **Small Business Direct Install:** Full funding of installation costs to eliminate financial barriers.
- **New Construction:** Higher upfront incentives to integrate energy efficiency during design.
- **Existing Buildings:** Higher incentives to encourage participation from customers and contractors.
- **Building Optimization:** Lower incentives, similar to SEM, due to personal engagement.
- **Distributed Energy Resources:** Higher incentives due to expensive, complex measure types.

PECO will implement a range of incentive strategies. The incentives may be per unit, or per kWh, per kW saved, or any other suitable structure to drive participation.

Maximum Deadlines for Rebates

PECO requires 180 days as a maximum length of time for an application to be submitted as any longer may affect reporting and reconciliation timeframes.

Key Schedule Milestones

The planned implementation schedule is as follows:

- **March 2026:** PECO and the CSPs will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems, and marketing and outreach is in place.
- **June 1, 2026:** The programs will launch with some components on a ramp-up period for the first 6 months.
- **June 2026–May 2031:** Programs will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.
- **May 31, 2031:** Last day of the Phase V programs.

Assumed EM&V

See Residential Program Assumed EM&V in Section 3.2.

Administrative Requirements

PECO will administer the program through a CSP. PECO will confirm major milestones are met and that the program is delivered according to the program design. Requested external staffing levels will be provided upon the completion of the CSP selection and contracting process. PECO will have five FTEs dedicated to the non-residential sector.

Savings Projections and Participation

Table 33. Non-Residential Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Lighting Retrofits - Street lighting</i>	3.1.1	Energy Savings (MWh) ²	6,060	7,483	8,153	7,483	6,060	35,239
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	763.3	942.5	1,026.8	942.5	763.3	4,438.4
		Projected Participation ³	5,990	7,396	8,058	7,396	5,990	34,830
<i>Lighting Retrofits - Outdoor floods</i>	3.1.1	Energy Savings (MWh) ²	6,142	10,940	6,419	6,361	6,142	36,003
		Summer Demand Reduction (MW)	226.1	402.7	236.3	234.2	226.1	1,325.5
		Winter Demand Reduction (MW)	862.4	1,579.9	947.6	941.4	900.9	5,232.3
		Projected Participation ³	6,711	11,953	7,014	6,950	6,711	39,339
<i>Lighting Retrofits - High Bays</i>	3.1.1	Energy Savings (MWh) ²	31,344	38,020	39,387	34,131	31,344	174,226
		Summer Demand Reduction (MW)	5,748.0	6,972.4	7,223.1	6,259.3	5,748.0	31,950.9
		Winter Demand Reduction (MW)	4,387.4	5,322.0	5,513.4	4,777.7	4,387.5	24,388.1
		Projected Participation ³	24,183	29,334	30,389	26,334	24,183	134,423
<i>Lighting Retrofits - Other Interior Fixtures</i>	3.1.1	Energy Savings (MWh) ²	18,299	21,734	24,472	21,734	18,299	104,537
		Summer Demand Reduction (MW)	3,358.4	3,988.8	4,491.4	3,988.8	3,358.4	19,185.8
		Winter Demand Reduction (MW)	2,566.9	3,055.6	3,440.1	3,056.3	2,572.9	14,691.9
		Projected Participation ³	198,080	235,264	264,907	235,264	198,080	1,131,595
<i>Lighting Controls</i>	3.1.3	Energy Savings (MWh) ²	76	153	175	157	127	688
		Summer Demand Reduction (MW)	14.2	28.6	32.7	29.3	23.8	128.6
		Winter Demand Reduction (MW)	10.5	21.2	24.3	21.7	17.7	95.4
		Projected Participation ³	629	1,265	1,449	1,299	1,055	5,697
<i>LED Exit Signs</i>	3.1.4	Energy Savings (MWh) ²	44	41	44	34	24	187
		Summer Demand Reduction (MW)	5.7	5.3	5.7	4.4	3.2	24.2
		Winter Demand Reduction (MW)	4.0	7.5	8.0	7.3	5.6	32.3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	152	142	152	118	85	649
<i>LED Refrigeration Display Case Lighting</i>	3.1.5	Energy Savings (MWh) ²	-	-	-	-	1	1
		Summer Demand Reduction (MW)	-	-	-	-	0.2	0.2
		Winter Demand Reduction (MW)	-	-	-	-	0.2	0.2
		Projected Participation ³	-	-	-	-	2	2
<i>HVAC Systems: Air Conditioner</i>	3.2.1	Energy Savings (MWh) ²	15	8	11	8	11	53
		Summer Demand Reduction (MW)	8.6	4.3	6.5	4.3	6.5	30.2
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	8	4	6	4	6	28
<i>HVAC Systems: Heat Pump</i>	3.2.1	Energy Savings (MWh) ²	11	19	37	45	56	168
		Summer Demand Reduction (MW)	4.0	6.7	13.5	16.2	20.2	60.7
		Winter Demand Reduction (MW)	3.2	5.3	10.6	12.7	15.9	47.6
		Projected Participation ³	3	5	10	12	15	45
<i>Electric Chillers</i>	3.2.3	Energy Savings (MWh) ²	110	66	176	44	44	440
		Summer Demand Reduction (MW)	54.8	32.9	87.7	21.9	21.9	219.3
		Winter Demand Reduction (MW)	2.2	1.3	3.5	0.9	0.9	8.8
		Projected Participation ³	5	3	8	2	2	20
<i>Groundwater Source and Ground Source Heat Pumps</i>	3.2.4	Energy Savings (MWh) ²	5	-	2	2	-	9
		Summer Demand Reduction (MW)	3.4	-	1.7	1.7	-	6.8
		Winter Demand Reduction (MW)	2.6	-	1.3	1.3	-	5.2
		Projected Participation ³	2	-	1	1	-	4
<i>Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons</i>	3.2.5	Energy Savings (MWh) ²	292	565	749	624	412	2,640
		Summer Demand Reduction (MW)	212.7	411.4	545.6	454.4	300.0	1,924.0
		Winter Demand Reduction (MW)	162.6	314.5	417.1	347.4	229.3	1,470.9
		Projected Participation ³	168	325	431	359	237	1,520

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Small C&I HVAC Refrigerant Charge Correction</i>	3.2.7	Energy Savings (MWh) ²	7	-	7	-	-	15
		Summer Demand Reduction (MW)	3.8	-	3.8	-	-	7.5
		Winter Demand Reduction (MW)	0.1	-	0.1	-	-	0.3
		Projected Participation ³	2	-	2	-	-	4
<i>HVAC Tune Up</i>	3.2.8	Energy Savings (MWh) ²	64	263	297	263	229	1,115
		Summer Demand Reduction (MW)	32.8	135.0	152.6	135.0	117.9	573.4
		Winter Demand Reduction (MW)	13.1	53.8	60.8	53.8	47.0	228.5
		Projected Participation ³	155	638	721	638	557	2,709
<i>Room Air Conditioner</i>	3.2.9	Energy Savings (MWh) ²	0	0	-	0	-	0
		Summer Demand Reduction (MW)	0.1	0.1	-	0.1	-	0.3
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	2	1	-	1	-	4
<i>Controls: Guest Room Occupancy Sensor</i>	3.2.10	Energy Savings (MWh) ²	1	1	1	0	0	3
		Summer Demand Reduction (MW)	0.2	0.2	0.2	0.1	0.1	0.7
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.1
		Projected Participation ³	4	5	5	3	2	19
<i>Controls: Economizer</i>	3.2.11	Energy Savings (MWh) ²	-	-	-	20	59	79
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	-	-	1	3	4
<i>Computer Room Air Conditioner</i>	3.2.12	Energy Savings (MWh) ²	-	-	14	-	14	27
		Summer Demand Reduction (MW)	-	-	3.8	-	3.8	7.6
		Winter Demand Reduction (MW)	-	-	3.8	-	3.8	7.6
		Projected Participation ³	-	-	6	-	6	12
	3.2.13	Energy Savings (MWh) ²	-	-	-	-	18	18

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Computer Room Air Conditioner/Handler Electronically Commutated Plug Fans</i>		Summer Demand Reduction (MW)	-	-	-	-	2.3	2.3
		Winter Demand Reduction (MW)	-	-	-	-	2.3	2.3
		Projected Participation ³	-	-	-	-	2	2
<i>Computer Room Air Conditioner/Handler VSD on AC Fan Motors</i>	3.2.14	Energy Savings (MWh) ²	-	-	-	-	23	23
		Summer Demand Reduction (MW)	-	-	-	-	2.8	2.8
		Winter Demand Reduction (MW)	-	-	-	-	2.8	2.8
		Projected Participation ³	-	-	-	-	2	2
<i>Circulation Fan: High-Volume Low-Speed</i>	3.2.15	Energy Savings (MWh) ²	39	44	44	39	29	194
		Summer Demand Reduction (MW)	20.0	22.5	22.5	20.0	15.0	99.8
		Winter Demand Reduction (MW)	8.0	9.0	9.0	8.0	6.0	39.8
		Projected Participation ³	8	9	9	8	6	40
<i>Demand Controlled Ventilation</i>	3.2.16	Energy Savings (MWh) ²	-	-	-	-	2	2
		Summer Demand Reduction (MW)	-	-	-	-	0.5	0.5
		Winter Demand Reduction (MW)	-	-	-	-	0.5	0.5
		Projected Participation ³	-	-	-	-	4	4
<i>Advanced Rooftop Controls: Demand Controlled Ventilation (DCV)</i>	3.2.17	Energy Savings (MWh) ²	2	2	-	-	-	4
		Summer Demand Reduction (MW)	1.1	1.1	-	-	-	2.1
		Winter Demand Reduction (MW)	0.4	0.4	-	-	-	0.8
		Projected Participation ³	1	1	-	-	-	2
<i>Advanced Rooftop Controls: DCV with two speed controls</i>	3.2.17	Energy Savings (MWh) ²	-	6	6	-	-	13
		Summer Demand Reduction (MW)	-	3.3	3.3	-	-	6.5
		Winter Demand Reduction (MW)	-	1.3	1.3	-	-	2.6
		Projected Participation ³	-	1	1	-	-	2
<i>Advanced Rooftop Controls: DCV with three speed controls or VFD</i>	3.2.17	Energy Savings (MWh) ²	-	6	-	-	6	13
		Summer Demand Reduction (MW)	-	3.3	-	-	3.3	6.7

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	1.3	-	-	1.3	2.7
		Projected Participation ³	-	1	-	-	1	2
<i>C&I ENERGY STAR Certified Connected Thermostats</i>	3.2.18	Energy Savings (MWh) ²	1	1	1	1	1	5
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.6
		Winter Demand Reduction (MW)	0.0	0.0	0.0	0.0	0.0	0.0
		Projected Participation ³	4	4	4	4	3	19
<i>Duct Sealing and Insulation</i>	3.2.20	Energy Savings (MWh) ²	2	-	-	2	-	3
		Summer Demand Reduction (MW)	0.9	-	-	0.9	-	1.7
		Winter Demand Reduction (MW)	0.3	-	-	0.3	-	0.7
		Projected Participation ³	1	-	-	1	-	2
<i>Chilled Water Pipe Insulation</i>	3.2.21	Energy Savings (MWh) ²	-	-	-	-	1	1
		Summer Demand Reduction (MW)	-	-	-	-	0.0	0.0
		Winter Demand Reduction (MW)	-	-	-	-	0.0	0.0
		Projected Participation ³	-	-	-	-	2	2
<i>Premium Efficiency Motors</i>	3.3.1	Energy Savings (MWh) ²	-	10	-	-	101	111
		Summer Demand Reduction (MW)	-	3.2	-	-	32.2	35.4
		Winter Demand Reduction (MW)	-	0.1	-	-	0.9	1.0
		Projected Participation ³	-	1	-	-	10	11
<i>Variable Frequency Drive (VFD) Improvements</i>	3.3.2	Energy Savings (MWh) ²	178	237	285	225	178	1,103
		Summer Demand Reduction (MW)	20.2	26.9	32.3	25.6	20.2	125.2
		Winter Demand Reduction (MW)	41.6	55.5	66.6	52.7	41.6	258.1
		Projected Participation ³	15	20	24	19	15	93
<i>ECM Circulating Fan</i>	3.3.3	Energy Savings (MWh) ²	-	-	0	-	-	0
		Summer Demand Reduction (MW)	-	-	0.2	-	-	0.2
		Winter Demand Reduction (MW)	-	-	0.0	-	-	0.0

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	-	-	2	-	-	2
<i>VSD on Kitchen Exhaust Fan</i>	3.3.4	Energy Savings (MWh) ²	3	12	12	12	9	49
		Summer Demand Reduction (MW)	0.6	2.1	2.1	2.1	1.5	8.2
		Winter Demand Reduction (MW)	0.5	1.7	1.7	1.7	1.3	6.9
		Projected Participation ³	3	11	11	11	8	44
<i>ECM Circulator Pump</i>	3.3.5	Energy Savings (MWh) ²	-	-	1	-	-	1
		Summer Demand Reduction (MW)	-	-	0.2	-	-	0.2
		Winter Demand Reduction (MW)	-	-	0.1	-	-	0.1
		Projected Participation ³	-	-	4	-	-	4
<i>High Efficiency Pumps</i>	3.3.6	Energy Savings (MWh) ²	-	-	24	-	-	24
		Summer Demand Reduction (MW)	-	-	4.5	-	-	4.5
		Winter Demand Reduction (MW)	-	-	3.4	-	-	3.4
		Projected Participation ³	-	-	2	-	-	2
<i>Heat Pump Water Heaters</i>	3.4.1	Energy Savings (MWh) ²	2	-	-	4	5	11
		Summer Demand Reduction (MW)	0.5	-	-	1.0	1.5	3.1
		Winter Demand Reduction (MW)	0.3	-	-	0.6	0.8	1.7
		Projected Participation ³	1	-	-	2	3	6
<i>Low Flow Pre-Rinse Sprayers for Retrofit Programs and Time of Sale Programs</i>	3.4.2	Energy Savings (MWh) ²	6	6	6	6	6	28
		Summer Demand Reduction (MW)	1.6	1.6	1.6	1.6	1.6	7.9
		Winter Demand Reduction (MW)	0.9	0.9	0.9	0.9	0.9	4.4
		Projected Participation ³	3	3	3	3	3	15
<i>Domestic Hot Water Pipe Insulation</i>	3.4.3	Energy Savings (MWh) ²	-	-	-	1	1	2
		Summer Demand Reduction (MW)	-	-	-	0.2	0.3	0.5
		Winter Demand Reduction (MW)	-	-	-	0.1	0.2	0.3
		Projected Participation ³	-	-	-	1	2	3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>ENERGY STAR Refrigeration Cases</i>	3.5.1	Energy Savings (MWh) ²	1	3	3	2	1	9
		Summer Demand Reduction (MW)	0.1	0.3	0.3	0.3	0.1	1.2
		Winter Demand Reduction (MW)	0.1	0.3	0.3	0.3	0.1	1.2
		Projected Participation ³	2	8	8	6	3	27
<i>ENERGY STAR Freezer Cases</i>	3.5.1	Energy Savings (MWh) ²	1	4	5	5	2	18
		Summer Demand Reduction (MW)	0.2	0.5	0.6	0.7	0.3	2.2
		Winter Demand Reduction (MW)	0.2	0.5	0.6	0.7	0.3	2.2
		Projected Participation ³	2	6	7	8	3	26
<i>High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Cooler</i>	3.5.2	Energy Savings (MWh) ²	24	31	31	28	24	138
		Summer Demand Reduction (MW)	3.0	3.9	3.9	3.4	3.0	17.0
		Winter Demand Reduction (MW)	3.0	3.9	3.9	3.4	3.0	17.0
		Projected Participation ³	20	26	26	23	20	115
<i>High-Efficiency Evaporator Fan Motors for Walk-In or Reach-In Refrigerated Cases: Freezer</i>	3.5.2	Energy Savings (MWh) ²	4	5	5	5	4	22
		Summer Demand Reduction (MW)	0.5	0.6	0.6	0.6	0.5	2.7
		Winter Demand Reduction (MW)	0.5	0.6	0.6	0.6	0.5	2.7
		Projected Participation ³	21	24	27	24	20	116
<i>Controls: Evaporator Fan Controllers</i>	3.5.3	Energy Savings (MWh) ²	23	25	27	29	16	119
		Summer Demand Reduction (MW)	2.3	2.5	2.7	2.9	1.7	12.1
		Winter Demand Reduction (MW)	2.3	2.5	2.7	2.9	1.7	12.1
		Projected Participation ³	11	12	13	14	8	58
<i>Controls: Floating Head Pressure Controls</i>	3.5.4	Energy Savings (MWh) ²	-	-	-	-	82	82
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	2.4	2.4
		Projected Participation ³	-	-	-	-	2	2
<i>Controls: Anti-Sweat Heater Controls</i>	3.5.5	Energy Savings (MWh) ²	4	7	9	7	6	33

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.2	0.3	0.3	0.3	0.2	1.2
		Winter Demand Reduction (MW)	0.1	0.2	0.3	0.2	0.2	1.0
		Projected Participation ³	3	5	6	5	4	23
<i>Controls: Evaporator Coil Defrost Control</i>	3.5.6	Energy Savings (MWh) ²	3	6	7	5	2	21
		Summer Demand Reduction (MW)	0.1	0.2	0.2	0.1	0.1	0.7
		Winter Demand Reduction (MW)	0.1	0.2	0.2	0.2	0.1	0.8
		Projected Participation ³	3	6	7	5	2	23
<i>Variable Speed Refrigeration Compressor</i>	3.5.7	Energy Savings (MWh) ²	-	-	-	-	14	14
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	0.4	0.4
		Projected Participation ³	-	-	-	-	2	2
<i>Strip Curtains for Walk-In Freezers and Coolers</i>	3.5.8	Energy Savings (MWh) ²	4	22	44	20	20	109
		Summer Demand Reduction (MW)	0.8	4.2	8.5	3.9	3.9	21.2
		Winter Demand Reduction (MW)	0.8	4.2	8.5	3.9	3.9	21.2
		Projected Participation ³	2	11	22	10	10	55
<i>Night Covers for Display Cases</i>	3.5.9	Energy Savings (MWh) ²	-	-	23	-	-	23
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	-	4	-	-	4
<i>Auto Closers</i>	3.5.10	Energy Savings (MWh) ²	-	17	27	17	17	77
		Summer Demand Reduction (MW)	-	4.1	6.7	4.1	4.1	19.0
		Winter Demand Reduction (MW)	-	4.1	6.7	4.1	4.1	19.0
		Projected Participation ³	-	8	13	8	8	37
<i>Special Doors with Low or No Anti-Sweat Heat for Reach-In Freezers and Coolers</i>	3.5.11	Energy Savings (MWh) ²	-	-	1	-	-	1
		Summer Demand Reduction (MW)	-	-	0.1	-	-	0.1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	-	0.1	-	-	0.1
		Projected Participation ³	-	-	3	-	-	3
<i>Suction Pipe Insulation for Walk-In Coolers and Freezers</i>	3.5.12	Energy Savings (MWh) ²	-	-	-	-	3	3
		Summer Demand Reduction (MW)	-	-	-	-	0.1	0.1
		Winter Demand Reduction (MW)	-	-	-	-	0.1	0.1
		Projected Participation ³	-	-	-	-	4	4
<i>Refrigerated Display Cases with Doors Replacing Open Cases</i>	3.5.13	Energy Savings (MWh) ²	-	-	-	-	17	17
		Summer Demand Reduction (MW)	-	-	-	-	(0.4)	(0.4)
		Winter Demand Reduction (MW)	-	-	-	-	7.4	7.4
		Projected Participation ³	-	-	-	-	16	16
<i>Adding Doors to Existing Refrigerated Display Cases</i>	3.5.14	Energy Savings (MWh) ²	-	-	-	-	11	11
		Summer Demand Reduction (MW)	-	-	-	-	(0.5)	(0.5)
		Winter Demand Reduction (MW)	-	-	-	-	3.9	3.9
		Projected Participation ³	-	-	-	-	16	16
<i>Refrigerated Case Light Occupancy Sensors</i>	3.5.15	Energy Savings (MWh) ²	-	0	0	-	-	1
		Summer Demand Reduction (MW)	-	0.0	0.1	-	-	0.1
		Winter Demand Reduction (MW)	-	0.0	0.1	-	-	0.1
		Projected Participation ³	-	1	4	-	-	5
<i>Food Service Equipment Novelty Cooler Shutoff</i>	3.5.16	Energy Savings (MWh) ²	-	-	2	-	-	2
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	-	2	-	-	2
<i>ENERGY STAR Clothes Washer</i>	3.6.1	Energy Savings (MWh) ²	-	0	1	0	0	1
		Summer Demand Reduction (MW)	-	0.0	0.1	0.0	0.0	0.2
		Winter Demand Reduction (MW)	-	0.0	0.1	0.0	0.0	0.2

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	-	2	4	1	2	9
<i>ENERGY STAR Bathroom Ventilation Fan in Commercial Applications</i>	3.6.2	Energy Savings (MWh) ²	-	0	0	-	-	0
		Summer Demand Reduction (MW)	-	0.0	0.0	-	-	0.0
		Winter Demand Reduction (MW)	-	0.0	0.0	-	-	0.0
		Projected Participation ³	-	1	1	-	-	2
<i>ENERGY STAR Ice Machines</i>	3.7.1	Energy Savings (MWh) ²	0	1	0	-	-	2
		Summer Demand Reduction (MW)	0.1	0.2	0.1	-	-	0.4
		Winter Demand Reduction (MW)	0.1	0.1	0.1	-	-	0.3
		Projected Participation ³	1	2	1	-	-	4
<i>Controls: Beverage and Snack Machine Controls</i>	3.7.2	Energy Savings (MWh) ²	-	1	1	-	-	2
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	2	2	-	-	4
<i>ENERGY STAR Electric Steam Cooker</i>	3.7.3	Energy Savings (MWh) ²	-	9	9	-	-	17
		Summer Demand Reduction (MW)	-	1.7	1.7	-	-	3.5
		Winter Demand Reduction (MW)	-	1.1	1.1	-	-	2.2
		Projected Participation ³	-	2	2	-	-	4
<i>ENERGY STAR Combination Oven</i>	3.7.4	Energy Savings (MWh) ²	-	1	1	-	-	1
		Summer Demand Reduction (MW)	-	0.2	0.1	-	-	0.3
		Winter Demand Reduction (MW)	-	0.1	0.1	-	-	0.2
		Projected Participation ³	-	3	2	-	-	5
<i>ENERGY STAR Commercial Convection Oven - Full Size</i>	3.7.5	Energy Savings (MWh) ²	-	2	2	-	-	4
		Summer Demand Reduction (MW)	-	0.4	0.4	-	-	0.8
		Winter Demand Reduction (MW)	-	0.3	0.3	-	-	0.5
		Projected Participation ³	-	2	2	-	-	4

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>ENERGY STAR Commercial Fryer</i>	3.7.6	Energy Savings (MWh) ²	-	7	5	-	-	12
		Summer Demand Reduction (MW)	-	1.4	1.0	-	-	2.4
		Winter Demand Reduction (MW)	-	0.9	0.6	-	-	1.5
		Projected Participation ³	-	3	2	-	-	5
<i>ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size</i>	3.7.7	Energy Savings (MWh) ²	1	1	1	0	1	3
		Summer Demand Reduction (MW)	0.1	0.2	0.1	0.1	0.1	0.7
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.0	0.1	0.4
		Projected Participation ³	2	3	2	1	2	10
<i>ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size</i>	3.7.7	Energy Savings (MWh) ²	-	5	-	5	-	11
		Summer Demand Reduction (MW)	-	1.1	-	1.1	-	2.2
		Winter Demand Reduction (MW)	-	0.7	-	0.7	-	1.4
		Projected Participation ³	-	3	-	3	-	6
<i>ENERGY STAR Commercial Dishwasher</i>	3.7.8	Energy Savings (MWh) ²	14	28	180	14	28	263
		Summer Demand Reduction (MW)	2.8	5.6	36.1	2.8	5.6	52.8
		Winter Demand Reduction (MW)	1.8	3.6	23.1	1.8	3.6	33.8
		Projected Participation ³	1	2	13	1	2	19
<i>ENERGY STAR Commercial Griddle</i>	3.7.9	Energy Savings (MWh) ²	-	3	9	-	-	11
		Summer Demand Reduction (MW)	-	0.6	1.7	-	-	2.3
		Winter Demand Reduction (MW)	-	0.4	1.1	-	-	1.5
		Projected Participation ³	-	1	3	-	-	4
<i>Commercial Induction Cooktops</i>	3.7.10	Energy Savings (MWh) ²	-	0	0	-	-	0
		Summer Demand Reduction (MW)	-	0.0	0.0	-	-	0.0
		Winter Demand Reduction (MW)	-	0.0	0.0	-	-	0.0
		Projected Participation ³	-	1	1	-	-	2
<i>Wall and Ceiling Insulation</i>	3.8.1	Energy Savings (MWh) ²	-	-	-	-	3	3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	-	-	-	-	1.2	1.2
		Winter Demand Reduction (MW)	-	-	-	-	1.0	1.0
		Projected Participation ³	-	-	-	-	2	2
<i>Advanced Power Strips</i>	3.9.1	Energy Savings (MWh) ²	-	-	-	0	-	0
		Summer Demand Reduction (MW)	-	-	-	0.0	-	0.0
		Winter Demand Reduction (MW)	-	-	-	0.0	-	0.0
		Projected Participation ³	-	-	-	2	-	2
<i>ENERGY STAR Servers</i>	3.9.2	Energy Savings (MWh) ²	-	-	-	53,822	-	53,822
		Summer Demand Reduction (MW)	-	-	-	6,864.4	-	6,864.4
		Winter Demand Reduction (MW)	-	-	-	7,131.7	-	7,131.7
		Projected Participation ³	-	-	-	6	-	6
<i>Server Virtualization</i>	3.9.3	Energy Savings (MWh) ²	9	-	-	26	-	35
		Summer Demand Reduction (MW)	1.1	-	-	3.2	-	4.3
		Winter Demand Reduction (MW)	1.1	-	-	3.2	-	4.3
		Projected Participation ³	1	-	-	3	-	4
<i>Cycling Refrigerated Thermal Mass Dryer</i>	3.10.1	Energy Savings (MWh) ²	-	0	0	0	0	2
		Summer Demand Reduction (MW)	-	0.1	0.1	0.1	0.1	0.4
		Winter Demand Reduction (MW)	-	0.1	0.1	0.1	0.1	0.5
		Projected Participation ³	-	2	2	2	2	8
<i>Air-Entraining Air Nozzle</i>	3.10.2	Energy Savings (MWh) ²	1	-	2	-	6	9
		Summer Demand Reduction (MW)	0.1	-	0.2	-	0.7	1.1
		Winter Demand Reduction (MW)	0.1	-	0.2	-	0.7	1.1
		Projected Participation ³	1	-	2	-	6	9
<i>No-Loss Condensate Drains</i>	3.10.3	Energy Savings (MWh) ²	2	5	13	5	6	31
		Summer Demand Reduction (MW)	0.5	1.0	2.9	1.0	1.3	6.8

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.6	1.3	3.4	1.3	1.6	8.1
		Projected Participation ³	2	4	11	4	5	26
<i>Air Tanks for Load/No Load Compressors</i>	3.10.4	Energy Savings (MWh) ²	-	1	2	1	2	7
		Summer Demand Reduction (MW)	-	0.2	0.5	0.2	0.5	1.5
		Winter Demand Reduction (MW)	-	0.2	0.5	0.2	0.5	1.5
		Projected Participation ³	-	1	2	1	2	6
<i>Variable-Speed Drive Air Compressor</i>	3.10.5	Energy Savings (MWh) ²	290	340	328	290	277	1,525
		Summer Demand Reduction (MW)	62.9	73.8	71.0	62.9	60.1	330.6
		Winter Demand Reduction (MW)	62.9	73.8	71.0	62.9	60.1	330.6
		Projected Participation ³	23	27	26	23	22	121
<i>Compressed Air Controller</i>	3.10.6	Energy Savings (MWh) ²	1	2	2	1	1	6
		Summer Demand Reduction (MW)	0.1	0.4	0.4	0.2	0.2	1.3
		Winter Demand Reduction (MW)	0.1	0.4	0.4	0.2	0.2	1.3
		Projected Participation ³	1	3	3	2	2	11
<i>Compressed Air Low Pressure Drop Filters</i>	3.10.7	Energy Savings (MWh) ²	-	2	2	2	2	8
		Summer Demand Reduction (MW)	-	0.4	0.4	0.5	0.4	1.7
		Winter Demand Reduction (MW)	-	0.4	0.4	0.5	0.4	1.7
		Projected Participation ³	-	18	17	19	17	71
<i>Compressed Air Mist Eliminators</i>	3.10.8	Energy Savings (MWh) ²	0	1	1	1	1	3
		Summer Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.3
		Winter Demand Reduction (MW)	0.0	0.1	0.1	0.1	0.1	0.3
		Projected Participation ³	1	10	10	10	13	44
<i>Engine Block Heater Timer</i>	3.11.2	Energy Savings (MWh) ²	-	-	1	-	-	1
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	-	-	2	-	-	2
<i>High Frequency Battery Chargers</i>	3.11.3	Energy Savings (MWh) ²	9	10	11	10	6	46
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	7	8	9	8	5	37
<i>Uninterruptible Power Supply (UPS)</i>	3.11.4	Energy Savings (MWh) ²	-	-	1	-	0	1
		Summer Demand Reduction (MW)	-	-	0.1	-	0.0	0.1
		Winter Demand Reduction (MW)	-	-	0.1	-	0.0	0.1
		Projected Participation ³	-	-	5	-	1	6
<i>Automatic Milker Takeoffs</i>	4.1.1	Energy Savings (MWh) ²	3	-	3	-	-	6
		Summer Demand Reduction (MW)	0.5	-	0.5	-	-	1.1
		Winter Demand Reduction (MW)	0.5	-	0.5	-	-	1.1
		Projected Participation ³	1	-	1	-	-	2
<i>Dairy Scroll Compressors</i>	4.1.2	Energy Savings (MWh) ²	12	12	23	-	-	46
		Summer Demand Reduction (MW)	2.1	2.1	4.2	-	-	8.5
		Winter Demand Reduction (MW)	2.1	2.1	4.2	-	-	8.5
		Projected Participation ³	1	1	2	-	-	4
<i>High-Efficiency Ventilation Fans with and without Thermostats</i>	4.1.3	Energy Savings (MWh) ²	-	-	2	-	-	2
		Summer Demand Reduction (MW)	-	-	0.5	-	-	0.5
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	-	4	-	-	4
<i>Heat Reclaimers</i>	4.1.4	Energy Savings (MWh) ²	2	-	7	-	-	9
		Summer Demand Reduction (MW)	0.4	-	1.2	-	-	1.6
		Winter Demand Reduction (MW)	0.4	-	1.3	-	-	1.7
		Projected Participation ³	1	-	3	-	-	4

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>High Volume Low Speed Fans</i>	4.1.5	Energy Savings (MWh) ²	108	149	166	149	116	689
		Summer Demand Reduction (MW)	40.0	55.4	61.5	55.4	43.1	255.4
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	13	18	20	18	14	83
<i>Livestock Waterer</i>	4.1.6	Energy Savings (MWh) ²	-	-	1	-	0	2
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	1.3	-	0.4	1.7
		Projected Participation ³	-	-	3	-	1	4
<i>Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps</i>	4.1.7	Energy Savings (MWh) ²	-	5	5	-	5	15
		Summer Demand Reduction (MW)	-	0.8	0.8	-	0.8	2.3
		Winter Demand Reduction (MW)	-	0.8	0.8	-	0.8	2.3
		Projected Participation ³	-	1	1	-	1	3
<i>Low Pressure Irrigation System</i>	4.1.8	Energy Savings (MWh) ²	-	0	0	-	-	0
		Summer Demand Reduction (MW)	-	0.5	0.5	-	-	1.0
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	1	1	-	-	2
<i>New Construction Lighting</i>	3.1.2	Energy Savings (MWh) ²	3,691	5,625	10,020	9,668	6,680	35,684
		Summer Demand Reduction (MW)	652.2	993.9	1,770.4	1,708.3	1,180.3	6,305.1
		Winter Demand Reduction (MW)	652.2	993.9	1,770.4	1,708.3	1,180.3	6,305.1
		Projected Participation ³	21	32	57	55	38	203
<i>Indoor Horticultural Lighting</i>	3.1.7	Energy Savings (MWh) ²	3	5	7	8	10	33
		Summer Demand Reduction (MW)	0.5	0.8	1.0	1.3	1.5	5.2
		Winter Demand Reduction (MW)	0.4	0.6	0.9	1.1	1.3	4.3
		Projected Participation ³	2	3	4	5	6	20
<i>High Efficiency Transformer</i>	3.11.1	Energy Savings (MWh) ²	2	4	3	3	2	15

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.3	0.5	0.4	0.4	0.3	1.9
		Winter Demand Reduction (MW)	0.3	0.5	0.4	0.4	0.3	1.9
		Projected Participation ³	2	4	3	3	2	14
Midstream lighting incentives - Street lighting	3.1.6	Energy Savings (MWh) ²	1,537	1,676	1,751	1,676	1,537	8,178
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	206.9	225.6	235.7	225.6	206.9	1,100.7
		Projected Participation ³	3,270	3,565	3,724	3,565	3,270	17,394
Midstream lighting incentives: Outdoor floods	3.1.6	Energy Savings (MWh) ²	1,180	1,309	1,745	1,309	1,180	6,722
		Summer Demand Reduction (MW)	57.3	63.5	84.7	63.5	57.3	326.3
		Winter Demand Reduction (MW)	307.4	341.1	454.9	341.1	307.4	1,751.9
		Projected Participation ³	3,213	3,565	4,754	3,565	3,213	18,310
Midstream lighting incentives: High Bays	3.1.6	Energy Savings (MWh) ²	3,029	3,271	3,428	3,271	3,029	16,029
		Summer Demand Reduction (MW)	829.6	895.9	938.8	895.9	829.6	4,389.8
		Winter Demand Reduction (MW)	789.7	852.9	893.8	852.9	789.7	4,179.1
		Projected Participation ³	4,237	4,576	4,795	4,576	4,237	22,421
Midstream lighting incentives: Other Interior Fixtures	3.1.6	Energy Savings (MWh) ²	855	968	1,013	921	855	4,612
		Summer Demand Reduction (MW)	234.6	265.8	278.1	252.7	234.6	1,265.8
		Winter Demand Reduction (MW)	222.9	252.6	264.3	240.2	222.9	1,203.0
		Projected Participation ³	17,951	20,341	21,285	19,341	17,951	96,869
HVAC Systems for Midstream Delivery: Air Conditioner	3.2.2	Energy Savings (MWh) ²	-	30	30	30	30	120
		Summer Demand Reduction (MW)	-	15.5	15.5	15.5	15.5	61.9
		Winter Demand Reduction (MW)	-	6.2	6.2	6.2	6.2	24.7
		Projected Participation ³	-	40	40	40	40	160
HVAC Systems for Midstream Delivery: Heat Pump	3.2.2	Energy Savings (MWh) ²	-	30	30	30	30	122
		Summer Demand Reduction (MW)	-	15.6	15.6	15.6	15.6	62.5

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	6.2	6.2	6.2	6.2	24.9
		Projected Participation ³	-	40	40	40	40	160
<i>Ductless Mini-Split Heat Pumps - Commercial < 5.4 Tons for Midstream Delivery</i>	3.2.6	Energy Savings (MWh) ²	-	75	77	77	77	305
		Summer Demand Reduction (MW)	-	54.7	55.8	55.8	55.8	222.1
		Winter Demand Reduction (MW)	-	41.8	42.7	42.7	42.7	169.8
		Projected Participation ³	-	49	50	50	50	199
<i>Midstream Indoor Horticultural Lighting</i>	3.1.7	Energy Savings (MWh) ²	2	2	3	3	2	12
		Summer Demand Reduction (MW)	0.3	0.3	0.5	0.5	0.3	1.8
		Winter Demand Reduction (MW)	0.2	0.2	0.4	0.4	0.2	1.5
		Projected Participation ³	1	1	2	2	1	7
<i>Midstream Premium Efficiency Motors</i>	3.3.1	Energy Savings (MWh) ²	20	20	20	20	20	101
		Summer Demand Reduction (MW)	6.4	6.4	6.4	6.4	6.4	32.2
		Winter Demand Reduction (MW)	0.2	0.2	0.2	0.2	0.2	0.9
		Projected Participation ³	2	2	2	2	2	10
<i>Midstream Variable Frequency Drive (VFD) Improvements</i>	3.3.2	Energy Savings (MWh) ²	47	47	47	47	47	237
		Summer Demand Reduction (MW)	5.4	5.4	5.4	5.4	5.4	26.9
		Winter Demand Reduction (MW)	11.1	11.1	11.1	11.1	11.1	55.5
		Projected Participation ³	4	4	4	4	4	20
<i>Midstream ENERGY STAR Refrigeration Cases</i>	3.5.1	Energy Savings (MWh) ²	-	-	-	-	1	1
		Summer Demand Reduction (MW)	-	-	-	-	0.2	0.2
		Winter Demand Reduction (MW)	-	-	-	-	0.2	0.2
		Projected Participation ³	-	-	-	-	4	4
<i>Midstream ENERGY STAR Freezer Cases</i>	3.5.1	Energy Savings (MWh) ²	-	-	-	-	3	3
		Summer Demand Reduction (MW)	-	-	-	-	0.3	0.3
		Winter Demand Reduction (MW)	-	-	-	-	0.3	0.3

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	-	-	-	-	4	4
<i>Midstream Controls: Evaporator Fan Controllers</i>	3.5.3	Energy Savings (MWh) ²	-	-	-	-	4	4
		Summer Demand Reduction (MW)	-	-	-	-	0.4	0.4
		Winter Demand Reduction (MW)	-	-	-	-	0.4	0.4
		Projected Participation ³	-	-	-	-	2	2
<i>Midstream Controls: Anti-Sweat Heater Controls</i>	3.5.5	Energy Savings (MWh) ²	3	3	3	3	3	14
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.4
		Projected Participation ³	2	2	2	2	2	10
<i>Midstream Controls: Evaporator Coil Defrost Control</i>	3.5.6	Energy Savings (MWh) ²	-	-	-	-	2	2
		Summer Demand Reduction (MW)	-	-	-	-	0.1	0.1
		Winter Demand Reduction (MW)	-	-	-	-	0.1	0.1
		Projected Participation ³	-	-	-	-	2	2
<i>Midstream ENERGY STAR Ice Machines</i>	3.7.1	Energy Savings (MWh) ²	0	0	0	0	0	2
		Summer Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.5
		Winter Demand Reduction (MW)	0.1	0.1	0.1	0.1	0.1	0.3
		Projected Participation ³	1	1	1	1	1	5
<i>Midstream ENERGY STAR Electric Steam Cooker</i>	3.7.3	Energy Savings (MWh) ²	4	4	4	4	4	21
		Summer Demand Reduction (MW)	0.9	0.9	0.9	0.9	0.9	4.3
		Winter Demand Reduction (MW)	0.6	0.6	0.6	0.6	0.6	2.8
		Projected Participation ³	1	1	1	1	1	5
<i>Midstream ENERGY STAR Combination Oven</i>	3.7.4	Energy Savings (MWh) ²	2	0	1	0	1	4
		Summer Demand Reduction (MW)	0.3	0.1	0.3	0.1	0.2	0.9
		Winter Demand Reduction (MW)	0.2	0.0	0.2	0.0	0.1	0.6
		Projected Participation ³	6	1	5	1	4	17

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Midstream ENERGY STAR Commercial Convection Oven - Full Size</i>	3.7.5	Energy Savings (MWh) ²	6	-	1	-	1	8
		Summer Demand Reduction (MW)	1.3	-	0.2	-	0.2	1.7
		Winter Demand Reduction (MW)	0.8	-	0.1	-	0.1	1.1
		Projected Participation ³	6	-	1	-	1	8
<i>Midstream ENERGY STAR Commercial Fryer</i>	3.7.6	Energy Savings (MWh) ²	14	7	7	7	7	43
		Summer Demand Reduction (MW)	2.9	1.4	1.4	1.4	1.4	8.6
		Winter Demand Reduction (MW)	1.8	0.9	0.9	0.9	0.9	5.5
		Projected Participation ³	6	3	3	3	3	18
<i>Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Half Size</i>	3.7.7	Energy Savings (MWh) ²	1	-	-	-	-	1
		Summer Demand Reduction (MW)	0.1	-	-	-	-	0.1
		Winter Demand Reduction (MW)	0.1	-	-	-	-	0.1
		Projected Participation ³	2	-	-	-	-	2
<i>Midstream ENERGY STAR Commercial Hot Food Holding Cabinet: Full Size</i>	3.7.7	Energy Savings (MWh) ²	4	-	-	-	-	4
		Summer Demand Reduction (MW)	0.7	-	-	-	-	0.7
		Winter Demand Reduction (MW)	0.5	-	-	-	-	0.5
		Projected Participation ³	2	-	-	-	-	2
<i>Midstream ENERGY STAR Commercial Dishwasher</i>	3.7.8	Energy Savings (MWh) ²	28	28	124	41	28	249
		Summer Demand Reduction (MW)	5.6	5.6	25.0	8.3	5.6	50.0
		Winter Demand Reduction (MW)	3.6	3.6	16.0	5.3	3.6	32.0
		Projected Participation ³	2	2	9	3	2	18
<i>Midstream ENERGY STAR Commercial Griddle</i>	3.7.9	Energy Savings (MWh) ²	-	-	6	-	-	6
		Summer Demand Reduction (MW)	-	-	1.2	-	-	1.2
		Winter Demand Reduction (MW)	-	-	0.7	-	-	0.7
		Projected Participation ³	-	-	2	-	-	2
	3.10.4	Energy Savings (MWh) ²	-	-	-	-	2	2

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Midstream Air Tanks for Load/No Load Compressors</i>		Summer Demand Reduction (MW)	-	-	-	-	0.5	0.5
		Winter Demand Reduction (MW)	-	-	-	-	0.5	0.5
		Projected Participation ³	-	-	-	-	2	2
<i>Midstream Variable-Speed Drive Air Compressor</i>	3.10.5	Energy Savings (MWh) ²	25	25	25	25	25	126
		Summer Demand Reduction (MW)	5.5	5.5	5.5	5.5	5.5	27.3
		Winter Demand Reduction (MW)	5.5	5.5	5.5	5.5	5.5	27.3
		Projected Participation ³	2	2	2	2	2	10
<i>Midstream High-Efficiency Ventilation Fans with and without Thermostats</i>	4.1.3	Energy Savings (MWh) ²	-	-	1	-	-	1
		Summer Demand Reduction (MW)	-	-	0.3	-	-	0.3
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	-	-	2	-	-	2
<i>Midstream Heat Reclaimers</i>	4.1.4	Energy Savings (MWh) ²	-	-	4	-	-	4
		Summer Demand Reduction (MW)	-	-	0.8	-	-	0.8
		Winter Demand Reduction (MW)	-	-	0.8	-	-	0.8
		Projected Participation ³	-	-	2	-	-	2
<i>Midstream High Volume Low Speed Fans</i>	4.1.5	Energy Savings (MWh) ²	307	307	307	307	307	1,536
		Summer Demand Reduction (MW)	113.9	113.9	113.9	113.9	113.9	569.3
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	37	37	37	37	37	185
<i>Midstream Variable Speed Drive (VSD) Controller on Dairy Vacuum Pumps</i>	4.1.7	Energy Savings (MWh) ²	-	-	10	-	-	10
		Summer Demand Reduction (MW)	-	-	1.5	-	-	1.5
		Winter Demand Reduction (MW)	-	-	1.5	-	-	1.5
		Projected Participation ³	-	-	2	-	-	2
<i>Building Operator Certification Training</i>	3.11.5	Energy Savings (MWh) ²	1,296	1,729	1,729	2,161	2,161	9,075
		Summer Demand Reduction (MW)	97.3	129.7	129.7	162.1	162.1	680.8

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	68.7	91.7	91.7	114.6	114.6	481.2
		Projected Participation ³	6	8	8	10	10	42
Custom:Other - SEM	0.0.6	Energy Savings (MWh) ²	2,108	4,005	6,008	6,956	8,010	27,088
		Summer Demand Reduction (MW)	466.5	886.4	1,329.6	1,539.5	1,772.8	5,994.8
		Winter Demand Reduction (MW)	466.5	886.4	1,329.6	1,539.5	1,515.1	5,737.1
		Projected Participation ³	10	19	29	33	38	129
Custom:Other - VCx	0.0.7	Energy Savings (MWh) ²	7,500	7,500	7,500	7,500	7,500	37,500
		Summer Demand Reduction (MW)	1,246.1	1,246.1	1,246.1	1,246.1	1,246.1	6,230.3
		Winter Demand Reduction (MW)	1,246.1	1,246.1	1,246.1	1,246.1	1,246.1	6,230.3
		Projected Participation ³	75	75	75	75	75	375
Custom:Other - vSEM	0.0.9	Energy Savings (MWh) ²	-	2,000	2,000	2,000	5,000	11,000
		Summer Demand Reduction (MW)	-	332.3	332.3	332.3	830.7	1,827.5
		Winter Demand Reduction (MW)	-	332.3	332.3	332.3	830.7	1,827.5
		Projected Participation ³	-	20	20	20	50	110
Solar	0.0.2	Energy Savings (MWh) ²	14,455	17,006	16,368	10,204	2,551	60,583
		Summer Demand Reduction (MW)	5,031.5	5,919.4	5,697.4	3,551.6	887.9	21,087.8
		Winter Demand Reduction (MW)	784.3	922.8	888.2	553.7	138.4	3,287.3
		Projected Participation ³	68	80	77	48	12	285
Custom:Other - Compressed Air	0.0.10	Energy Savings (MWh) ²	1,367	1,641	1,914	3,829	3,829	12,580
		Summer Demand Reduction (MW)	136.8	164.2	191.6	383.2	383.2	1,258.9
		Winter Demand Reduction (MW)	136.8	164.2	191.6	383.2	383.2	1,258.9
		Projected Participation ³	5	6	7	14	14	46
Custom: Data Center	0.0.11	Energy Savings (MWh) ²	420	420	630	630	630	2,730
		Summer Demand Reduction (MW)	32.0	32.0	48.1	48.1	48.1	208.2
		Winter Demand Reduction (MW)	32.0	32.0	48.1	48.1	48.1	208.2

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation ³	2	2	3	3	3	13
Custom: HVAC	0.0.12	Energy Savings (MWh) ²	6,628	10,116	13,081	13,081	13,081	55,985
		Summer Demand Reduction (MW)	2,033.6	3,103.9	4,013.6	4,013.6	4,013.6	17,178.3
		Winter Demand Reduction (MW)	2,033.6	3,103.9	4,013.6	4,013.6	4,013.6	17,178.3
		Projected Participation ³	38	58	75	75	75	321
Custom: Motors & Drives	0.0.13	Energy Savings (MWh) ²	3,155	4,207	4,908	4,908	4,908	22,085
		Summer Demand Reduction (MW)	566.7	755.6	881.5	881.5	881.5	3,966.8
		Winter Demand Reduction (MW)	566.7	755.6	881.5	881.5	881.5	3,966.8
		Projected Participation ³	9	12	14	14	14	63
Custom: Other	0.0.14	Energy Savings (MWh) ²	20,530	25,903	29,356	29,356	16,501	121,647
		Summer Demand Reduction (MW)	2,241.1	2,827.5	3,204.5	3,204.5	1,801.2	13,278.9
		Winter Demand Reduction (MW)	2,241.1	2,827.5	3,204.5	3,204.5	1,801.2	13,278.9
		Projected Participation ³	107	135	153	153	86	634
Custom: Process	0.0.15	Energy Savings (MWh) ²	1,555	2,000	2,222	2,222	2,888	10,887
		Summer Demand Reduction (MW)	370.0	475.7	528.6	528.6	687.2	2,590.1
		Winter Demand Reduction (MW)	370.0	475.7	528.6	528.6	687.2	2,590.1
		Projected Participation ³	7	9	10	10	13	49
Custom: Refrigeration	0.0.16	Energy Savings (MWh) ²	2,144	2,703	3,076	3,076	3,076	14,074
		Summer Demand Reduction (MW)	247.8	312.4	355.5	355.5	355.5	1,626.9
		Winter Demand Reduction (MW)	247.8	312.4	355.5	355.5	355.5	1,626.9
		Projected Participation ³	23	29	33	33	33	151
Custom: EMS	0.0.17	Energy Savings (MWh) ²	891	1,188	1,336	1,336	1,336	6,088
		Summer Demand Reduction (MW)	35.2	46.9	52.7	52.7	52.7	240.2
		Winter Demand Reduction (MW)	35.2	46.9	52.7	52.7	52.7	240.2
		Projected Participation ³	6	8	9	9	9	41

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
<i>Custom: Retrocommissioning</i>	<i>0.0.18</i>	Energy Savings (MWh) ²	7,198	9,064	10,130	10,130	10,130	46,652
		Summer Demand Reduction (MW)	3,320.7	4,181.6	4,673.6	4,673.6	4,673.6	21,523.2
		Winter Demand Reduction (MW)	3,320.7	4,181.6	4,673.6	4,673.6	4,673.6	21,523.2
		Projected Participation ³	27	34	38	38	38	175
<i>Custom: CHP</i>	<i>0.0.19</i>	Energy Savings (MWh) ²	2,470	9,549	16,154	10,769	10,769	49,710
		Summer Demand Reduction (MW)	242.8	485.5	728.3	485.5	485.5	2,427.6
		Winter Demand Reduction (MW)	242.8	485.5	728.3	485.5	485.5	2,427.6
		Projected Participation ³	1	2	3	2	2	10
<i>Ashre Audits/Feasibility Studies</i>	<i>0.0.20</i>	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	10	10	10	10	10	50
<i>Incentive Buy Down</i>	<i>0.0.21</i>	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation ³	30	35	40	45	50	200
<i>C&I Load Shifting</i>	<i>3.12.1</i>	Energy Savings (MWh) ²	-	-	-	-	-	-
		Summer Demand Reduction (MW)	43.2	86.4	108.0	129.6	129.6	496.8
		Winter Demand Reduction (MW)	43.2	86.4	108.0	129.6	129.6	496.8
		Projected Participation ³	2	4	5	6	6	23

Estimated Program Budget (Total) by Year

Table 34. Non-Residential Program Budget

Program Name:		Non-Residential					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$34,181	\$41,904	\$47,195	\$51,004	\$39,614	\$213,898
Incentives (\$000)²⁵	Rebates	\$16,170	\$21,372	\$23,975	\$27,619	\$19,062	\$108,198
	Upstream/Midstream Buydown	\$913	\$1,062	\$1,159	\$1,040	\$973	\$5,148
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct-Install Materials & Labor	\$4,022	\$4,534	\$4,825	\$4,546	\$4,077	\$22,004
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$21,105	\$26,968	\$29,959	\$33,205	\$24,112	\$135,349
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$12,434	\$14,453	\$16,748	\$17,310	\$15,012	\$75,957
	Marketing	\$626	\$461	\$469	\$476	\$488	\$2,519
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$17	\$22	\$19	\$14	\$2	\$73
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$13,076	\$14,936	\$17,236	\$17,799	\$15,502	\$78,549
Percent Incentives		62%	64%	63%	65%	61%	63%

²⁵ Incentive totals include interest-free financing options for qualified small commercial customers in addition to traditional incentive offerings. These financing options fall within the incentive definition outlined in the TRC Order of “transfer payments intended to offset the IMC of efficient equipment.”

Estimated Percentage of Sector Budget Attributed to the Program

The Non-Residential program offers incentives to customers in the SCI and LCI sectors. The Non-Residential program accounts for 95.6% of SCI and 95.9% of LCI sector spending exclusive of common cost allocation.

Table 35. Non-Residential Summary of EE&C Costs

Sector	EE&C Program	Cost Elements (\$)									Total Cost	Expected Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Expected Acquisition Cost (\$/MW)
		Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	AEPS Registration Support	Other (Describe)				
Non-Residential Portfolio	Small C&I	\$66,587,232	\$0	\$0	\$0	\$34,814,665	\$1,155,777	\$0	\$33,423	\$0	\$102,591,096	\$232	\$70	\$1,458,638
	Large C&I	\$68,761,645	\$0	\$0	\$0	\$41,142,531	\$1,363,220	\$0	\$39,327	\$0	\$111,306,722	\$209	\$69	\$1,157,362
	Sector Total	\$135,348,877	\$0	\$0	\$0	\$75,957,195	\$2,518,996	\$0	\$72,750	\$0	\$213,897,819	\$220	\$70	\$1,308,000

Cost Effectiveness

Table 36. Non-Residential TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
			Gross TRC ¹	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits ⁴	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
	Program Year ²	NTGR		Paid by EDC	Paid by Participants							
Non-Residential	PY18	1.00	1.56	\$21,105	\$78,457	\$13,076	\$112,638	\$52,133	\$116,672	\$36	\$7,072	\$175,913
Non-Residential	PY19	1.00	1.57	\$26,968	\$101,443	\$14,936	\$143,347	\$64,384	\$152,603	\$104	\$8,550	\$225,640
Non-Residential	PY20	1.00	1.40	\$29,959	\$129,049	\$17,236	\$176,244	\$71,161	\$166,875	\$172	\$9,338	\$247,546
Non-Residential	PY21	1.00	1.47	\$33,205	\$109,050	\$17,799	\$160,055	\$68,362	\$158,497	\$56	\$8,303	\$235,217
Non-Residential	PY22	1.00	1.57	\$24,112	\$79,227	\$15,502	\$118,840	\$54,697	\$125,133	\$75	\$7,072	\$186,977
Non-Residential Total		1.00	1.51	\$135,349	\$497,226	\$78,549	\$711,124	\$310,737	\$719,780	\$443	\$40,333	\$1,071,293

Table 37. Non-Residential TRC Benefits (Net)

Portfolio	NTGR & TRC Ratio			TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)					
	Program	Program Year ²	NTGR	Gross TRC ¹	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits ⁴	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
					Paid by EDC	Paid by Participants							
Non-Residential	PY18	0.684	1.48	\$21,105	\$47,005	\$13,076	\$81,187	\$35,664	\$79,815	\$25	\$4,838	\$120,342	
Non-Residential	PY19	0.684	1.50	\$26,968	\$60,878	\$14,936	\$102,782	\$44,045	\$104,396	\$71	\$5,849	\$154,360	
Non-Residential	PY20	0.684	1.34	\$29,959	\$78,819	\$17,236	\$126,013	\$48,681	\$114,159	\$118	\$6,388	\$169,346	
Non-Residential	PY21	0.684	1.40	\$33,205	\$64,112	\$17,799	\$115,116	\$46,766	\$108,428	\$38	\$5,680	\$160,912	
Non-Residential	PY22	0.684	1.48	\$24,112	\$46,582	\$15,502	\$86,196	\$37,418	\$85,604	\$52	\$4,838	\$127,911	
Non-Residential Total		0.684		\$135,349	\$297,396	\$78,549	\$511,294	\$212,575	\$492,401	\$303	\$27,592	\$732,872	

Summary of Benchmarking Results

As mentioned in Section 3.2 PECO conducted benchmarking against similar utilities to inform its budget and savings split in Phase V.

Engagement of Different Housing and Ownership Types

PECO's engagement strategy reflects the distinct needs of large and small C&I customers. Large businesses often have complex operations and longer decision-making cycles, requiring data-driven targeting, customized solutions, and detailed cost-benefit analyses. Small businesses, by contrast, prioritize simplicity and quick payback, so PECO focuses on streamlined program designs, clear communication, and minimal administrative burden. Additionally, PECO plans to offer small businesses 0% financing to help overcome capital constraints and implement impactful projects. By tailoring approaches to these differences, PECO ensures broad participation in its program design.

Other Information Deemed Appropriate

Not applicable.

3.5 Government/Nonprofit/Institutional Sector

Municipal government, nonprofits, and institutions will have a specific assigned outreach representative for engagement in the prescriptive and custom components of the Non-Residential program. Outreach will coordinate with PECO's economic development, large customer services team and government affairs to work collaboratively to engage and educate these customers on the value of energy efficiency and participation in PECO programs. The CSP will tailor marketing and outreach to reflect the priorities of GNI customers, such as sustainability goals and budget constraints and will implement sector-specific messaging where appropriate. For example, many municipal governments use energy master planning to better understand how they use and manage energy. PECO's outreach team will directly support implementation of those plans using its Non-Residential program incentives.

4. Program Management and Implementation Strategies

This section provides a detailed description of how PECO plans to manage and implement programs, including the approach to, and use of, CSPs. Section 4.1 discusses an overview of PECO's management and implementation strategies, including the organization with CSPs, constraints, milestones, and risks. Section 4.2 includes the executive management structure and the basis for costs. Section 4.3 describes the selected CSPs and the activities they will carry out for Act 129 implementation. Section 4.4 speaks to coordination with other state conservation programs, discussing health and safety, AEPS registration, and collaboration with programs such as the IRA 50121 and 50122 programs.

4.1 Overview of PECO Management and Implementation Strategies

Led by PECO's program management team, each CSP will work closely with the PECO Marketing and Promotions Team, the E&O CSP, and the Exelon Energy Efficiency Marketing Agency to make PECO's energy efficiency programs successful. The responsibilities of each role are described below.

4.1.1 Services to be Provided by PECO, Consultants, Trade Allies, and CSPs

This section describes the services to be provided by key program stakeholders, including PECO Program Managers, PECO's Marketing Team, CSPs, Data Vendors, Evaluators, Trade Allies, and Market Actors.

PECO Program Managers

Oversee the CSP's performance and service obligations and make sure the CSP's delivery aligns with the approved EE&C Plan.

Oversee and actively manage the CSP's performance.

Approve CSP payments (non-incentive payments) on a monthly and annual basis and incentive payments on a weekly or otherwise basis.

Manage the overall CSP contract.

Oversee program-level marketing with the CSP in coordination with the PECO marketing and promotions team.

Work with CSPs to manage and direct the sales process and approach.

Engage with customers as needed when issues are escalated by the customer, trade ally, and/or CSP.

PECO Marketing and Promotions Team

Manage the portfolio's broad awareness campaign with the Exelon Energy Efficiency Marketing Agency and coordinate the implementation CSPs and E&O CSP on advertising and marketing participant engagement strategies.

Coordinate the education outreach strategy, content, and community event participation.

Manage and track customer awareness and satisfaction studies.

Facilitate delivery of premium customer/participant experiences by providing oversight of customer support infrastructure.

Exelon Energy Efficiency Marketing Agency

The Exelon Energy Efficiency Marketing Agency will design and lead the overall advertising plan for all programs. This will include the programs' look and feel, messaging, and advertising channels. The Exelon Energy Efficiency Marketing Agency will coordinate through the PECO senior marketing specialists and CSPs on program-specific materials. (Note: The advertising vendor will not be responsible for identifying and tracking leads. CSPs will identify, follow up with, and track leads).

CSPs

- Deliver energy efficiency savings and associated peak demand reductions on time and on budget while making it easy for customers to participate.
- Maintain high customer satisfaction.
- Develop and adjust program implementation strategies in collaboration with PECO program managers.
- Develop, maintain and support market actor networks (retailers, distributors, contractors, manufacturers, builders, raters, project developers).
- Develop program marketing and coordinate with the PECO Marketing and Promotions team and Exelon Energy Efficiency Marketing Agency for design and consistency in messaging.
- Program outreach and lead generation (including development and distribution of program materials, neighborhood canvassing, trade ally and association networking, customer support infrastructure/lead conversion).
- Manage audits (including customer screening, hiring, training and monitoring of auditors and contractors, measure direct installation, and customer audit reports).
- Distribute efficient measure giveaways or energy kits, if applicable.
- Pick up and recycle appliances (and other equipment), if applicable.
- Process incentives (receive, review, and verify applications and pay rebates).
- Track program performance and implement continuous improvement.
- Report program activities while adhering to PECO and regulatory data reporting requirements and responding to internal or external requests.
- Continuously improve forecasting accuracy.
- Achieve low-income carve-out targets.
- Coordinate with other related activities and partnerships.
- Support any program amendment process should program goals or budget need adjustment to suit the portfolio.

- Provide weekly transactional data to PECO for execution of customer satisfaction survey tools.
- Adapt program implementation strategies to continue program operations and achieve program goals through market disruptions such as changing codes and standards, removal of federal programs such as ENERGY STAR, etc.

Facilitate AEPS registration process.

Data Vendor

The database vendor will develop and maintain an appropriate tracking system for the programs to compile and aggregate data from PECO and CSPs, using generally accepted data input and validation techniques. The data vendor will also collaborate with PECO, CSPs, and evaluators to develop and provide summary and detailed reports.

Evaluator

The independent evaluation contractor is responsible for the portfolio's EM&V and will verify that programs meet goals and are operated consistently with the approved Plan. They will interface with the SWE to confirm measurement and verification protocols are aligned with the state's requirements and periodically provide PECO feedback on the identified areas where delivery performance could be improved. The independent evaluation contractors will also support PECO with semiannual and annual compliance reports.

Trade Allies

Through the right combination of trade ally management, marketing, education, data analytics, and outreach, trade ally networks will be motivated to increase performance and provide valuable feedback for program design and implementation. CSPs will engage existing trade allies and reach out to potential new trade ally participants prior to the start of Phase V to provide a portfolio-wide trade ally database focused on:

Maintaining active trade ally participation requirement status

Identifying underperformers to focus campaigns for increased production

Engaging contractors to participate

Providing all participating trade allies with program information and announcements

Trade ally outreach may also include monthly program newsletters with updates, quarterly trade ally report cards with metrics, and annual trade ally events to provide education on programs and technologies, sales training, and networking opportunities for those with complementary business models.

Market Actors

The CSPs will engage market actors as partners in program outreach and marketing. Specific market actors and their roles include:

- **Influencers:** Community organizations, associations and influencers that customers follow, join, or rely on for advice. They are trusted partners with unique connections to

their constituents – targeted PECO customers. Examples include condominium boards for multifamily tenants and property managers, home care services, community Weatherization Assistance program agencies and food banks serving low-income customers, and HERS Raters and Home Builders Associations for new construction.

- **Contractors and design firms:** Professionals who specify energy and demand savings equipment, sell and install planned or emergency replacement high-efficiency equipment.
- **Distributors and manufacturers:** Stakeholders who stock and price-to-move high-efficiency equipment as well as participants in a residential and non-residential midstream or upstream program component. CSPs will build relationships through national distribution and manufacturer networks, associations, and organizations.
- **Multicultural alliances and neighborhood associations:** Partners that can assist with reaching customers with English as a second language, providing content and collateral that resonate given the nuances of their language and cultural norms; access to neighborhood meetings to present the value proposition of multiple programs; potential workforce development partners to recruit local contractors and individual program staff.
- **Government agencies:** Local township sponsored community events enabling direct customer engagement for cross promotion of multiple programs; recycling centers and township websites encouraging PECO refrigerator and freezer recycling programs; and financial assistance programs that can aid customers along the energy efficiency continuum.

4.1.2 Risk Categories and Risk Mitigation Strategies

Section 3 includes risks for individual programs. There are also risks inherent in the delivery of any energy efficiency portfolio. PECO is taking several key steps to manage those risks:

Selecting programs that are diversified in design and implementation strategy including some program components that are relatively simple, flexible, and have a history of delivering results in Pennsylvania and other states (e.g., upstream and midstream retail programs) combined with comprehensive program offerings that strive for deeper energy savings.

Developing a Plan with multiple program components and a broad mix of measures to avoid over-reliance on any single measure.

Forecasting to exceed the overall energy and demand savings targets to hedge unknown performance across the entire portfolio.

4.1.2.1 Performance Risk

PECO managed performance risk by using a robust CSP RFP process for selecting CSPs with proven experience to implement the approved Plan. PECO used a disciplined RFP evaluation and selection process to support the engagement of experienced CSPs in the delivery of the programs (requiring CSP proposals to demonstrate a proven track record of performance). CSP contracts, where possible, will include performance clauses to establish that CSPs have a strong financial incentive to succeed.

PECO program managers will be responsible for continual oversight of CSP performance against the Plan and will promptly implement corrective actions if goals are not being met. Lastly, PECO will continue to meet with stakeholders and other Pennsylvania EDCs to share learnings and draw on program experience across the state to continuously improve the programs in its portfolio.

4.1.2.2 Technology Risk

The EE&C Plan incentivizes customers for purchasing and installing known technologies and products with established TRM energy and demand savings. The TRM provides the standards for determining the prescriptive or deemed energy savings. Using this approach removes much of the technology risk from the Plan's prescriptive energy efficiency measures and results in a more cost-effective measurement and verification process.

PECO's CSPs will calculate custom project savings on an individual project basis, using the existing (or code-required) equipment as the baseline of energy use. CSPs will conduct pre- and post-inspections, where appropriate, to verify equipment and operating conditions. Incentive payment estimates will be based on standard engineering and energy calculation principles and final payments will be based on the confirmed savings.

An additional technology risk is related to data sharing and cybersecurity. Coordination with external entities and complementary programs introduces the potential for sensitive customer information to be exposed without consistent or clearly defined guidance. As data exchanges become more frequent and complex, particularly when integrating with statewide initiatives with third-party platforms, such as the IRA programs, the risk of unauthorized access or misuse grows.

Mitigation strategies focus on proactive governance and secure practices. PECO will adopt robust, industry-standard data-sharing protocols that prioritize encryption, authentication, and customer consent at every stage of the process. Clear procedures will be implemented to ensure compliance with applicable privacy regulations and internal security policies. Additionally, PECO will actively participate in the PUC working group on data sharing and cybersecurity to align with statewide best practices, anticipate emerging threats, and continuously refine its approach to safeguarding customer information.

4.1.2.3 Market Risk

PECO worked diligently to develop a strong portfolio of programs, benchmarked for success in comparable jurisdictions, and developed with input from key stakeholders. Uncovering barriers to participation and developing approaches that address these barriers facilitates program success. PECO has gained significant experience and market connections in the process of delivering its Phase I-IV programs. Informed by this experience, some of PECO's strategies to reduce market risk include the following:

CSP Collaboration: PECO developed the Plan collaboratively with CSPs to reduce the risk that the Plan is not achievable in the market environment.

Customer Education: Education and awareness are an integral component of every program. This will include program awareness and the benefits of becoming more energy efficient.

Trade Ally Coordination: All trade allies will be offered training opportunities and provided appropriate materials and technical support. The intent is to facilitate program awareness and knowledge, provide strategies for selling energy efficiency and peak demand reduction to their customers, and educate the trade allies.

Program Promotion: PECO and its contractors will implement a strong promotional advertising campaign to drive awareness and call on customers to act.

Product Promotion: Point-of-purchase materials will be placed in participating retail stores; customers will be able to easily participate using instant rebates.

Streamlined Participation: Program eligibility and streamlined application processes will make participation as easy as possible for customers.

4.1.2.4 Evaluation Risk

PECO will use several strategies to minimize evaluation risk. Eliminating evaluation risk begins with program design to establish that all assumptions and EM&V protocols are agreed upon in advance. PECO will work closely with the SWE to maintain consistent assumptions and processes throughout implementation.

However, there are emerging risks that could impact evaluation outcomes. Changes to regulatory guidance or updates to the TRM may affect claimable savings, introducing uncertainty in compliance verification. Additionally, the potential elimination of the ENERGY STAR program could make verifying the efficiency of certain equipment more challenging, as ENERGY STAR has historically provided a widely accepted benchmark for qualifying products.

To mitigate these risks, PECO's independent EM&V contractor will continue to conduct disciplined verification activities for each program, ensuring that measures receiving incentives are properly installed. PECO and its EM&V contractor will rely on industry standards and state-approved methods for measurement and verification, while adapting processes as needed to address any changes in guidance or program requirements.

4.1.3 Human Resource and Contractor Resource Constraints

Flexibility in resource staffing is needed to effectively implement the EE&C Plan. PECO will manage human resource and contractor resource constraints through deliberate staffing and training. Each CSP has laid out a succession plan in the event of staff changes, including backups for staff roles.

Internally, the organization will be overseen by PECO's Energy and Marketing Services team and will be further broken out in the marketing department by the following groups: Residential Energy Efficiency programs, C&I programs, Measurement and Verification, Business Planning and Promotions.

4.1.4 Early Warning Systems To Indicate Progress Towards Goals and Process for Adjustment

PECO has several methods for monitoring progress toward goals and ensuring that corrective actions are taken:

- Program managers will closely monitor the programs through direct interface with the CSPs and through the demand side management program tracking database. PECO will develop and monitor performance indicators for each program monthly. Regular review of performance metrics and feedback from CSPs will allow program managers to identify potential issues and take prompt corrective actions.
- Regular program evaluation will identify issues that may impede a program's ability to effectively reach its goals. The EM&V contractor will conduct evaluations to make sure that issues are identified early in the program cycle. It will be the PECO EM&V team's responsibility to confirm that program managers consider recommended improvements and incorporate them into the program design as warranted.
- As part of PECO's ongoing review of program performance, PECO will regularly assess budget distribution to establish that funds are allocated effectively. If monitoring shows adjustments are needed, PECO will take proactive steps, including amending its EE&C Plan as done in Phase IV, to keep program dollars aligned with compliance objectives and customer needs.
- PECO will monitor efforts to update building and appliance codes that may affect the building or equipment baselines and develop strategies to adapt these changes into any affected program's design. Whether there are changes due to codes and standards or evaluation results, PECO will quickly react to actual or potential changes in the TRM to confirm that programs are claiming appropriate energy savings. In addition, changes to TRM measures through IMPs will be actively monitored by PECO and the PECO EM&V team to determine that savings remain accurate and are verified using the most up-to-date guidance.

4.1.5 Implementation Schedule with Milestones

The planned implementation schedule follows:

January through March 2026: PECO and the CSPs will kick off the program pre-launch process. During pre-launch, CSPs will assign key staff and confirm all customer support systems and marketing and outreach is in place.

June 1, 2026: The programs will launch with some components on a ramp-up period for the first 6 months.

June 2026–May 2031: Programs will operate and adjust to market changes. Savings and budget compared to goals will be reviewed on a regular basis.

May 31, 2031: Last day of the Phase V programs.

4.1.6 Stakeholder Engagement Overview

PECO plans to regularly engage with stakeholders, including community organizations, groups, and individuals serving low-income populations to help establish that the Plan design is implemented consistently with the vision presented in this Plan. PECO will continue to be an active and engaged participant in PUC-sponsored meetings and activities and will initiate stakeholder input sessions with PECO's customer groups and partners.

The CSPs will also engage a variety of organizations such as:

- **Multicultural alliances and neighborhood associations:** Partners that can assist with reaching customers with English as a second language, providing content and collateral that resonate given the nuances of their language and cultural norms; access to neighborhood meetings to present the value proposition of multiple programs; potential workforce development partners to recruit local contractors and individual program staff.
- **Local community-based organizations:** Bucks County Opportunity Council, Delaware and Philadelphia County Housing Authorities, government organizations like Philadelphia Energy Authority, and advocates such as the Housing Alliance.
- **Business and Diversity Networks:** African American Chamber of Commerce of PA, NJ & DE; U.S. Black Chambers / National Black Chamber of Commerce; National Association of Women Business Owners (NAWBO); Small Business Diversity Network (SBDN); Brown Skin Brunchin’.
- **Local and Regional Business Support Organizations:** Penn State Smeal Minority-Owned Business Network; Pennsylvania Events & Small Business Network; Service Corps of Retired Executives (SCORE); Accion U.S. Network. Partners that offer mentoring, workshops, and procurement opportunities; provide access to small business communities and events; and support workforce development through coaching and training resources.

4.2 Executive Management Structure

This section describes PECO’s structure for addressing portfolio strategy, planning, review of program metrics, internal and external communications, budgeting and financial management, program implementation, procurement, program tracking and reporting, and QA/QC. Figure 3 includes the management team responsible for implementing PECO’s EE&C Plan.

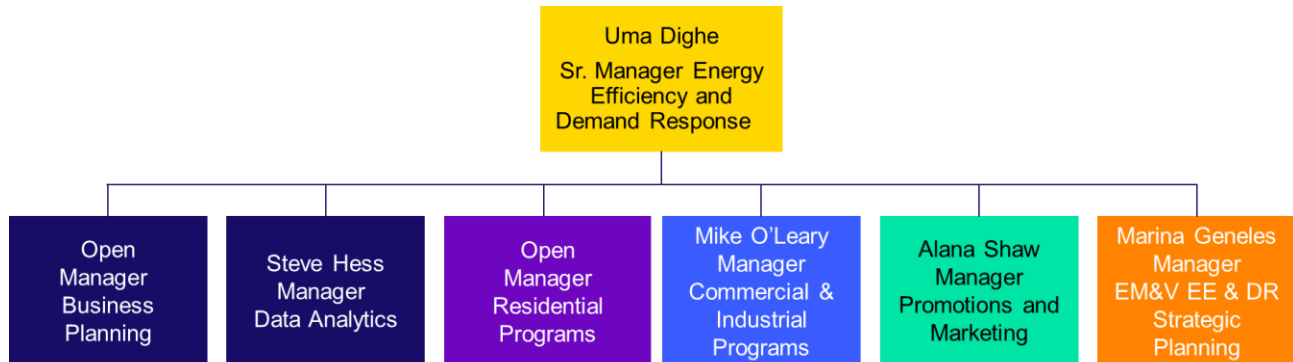
4.2.1 PECO Structure for Addressing Portfolio Strategy

Responsibility for the entire portfolio of programs resides within a single organization, with executive-level leadership provided by the Senior Manager of the Energy Efficiency Portfolio. Individual Managers are assigned responsibility for each market sector and key functional support areas. This executive team is responsible for overall portfolio strategy and planning.

Primary program management is organized by market sector: C&I and residential. Individual program managers are assigned to each program and have overall responsibility for the programs with support from the functional support groups: promotions and marketing, data analytics, business planning, and EM&V. They provide specialized support services to the program managers in the following areas:

- Promotions and marketing coordinates all internal and external communications.
- Business planning is responsible for all financial aspects of the portfolio. This responsibility includes budget and financial management as well as maintaining the portfolio tracking database to provide performance tracking and reporting.
- EM&V oversees the evaluation contractor and interfaces with the SWE.

Figure 3. PECO Proposed EE&C Organization



4.2.2 Approach for Overseeing the Performance of CSPs and Other Providers

PECO will oversee CSPs through a comprehensive management, compensation, and evaluation framework designed to facilitate achievement of Act 129 goals and continuous program improvement.

Performance-Based Compensation: A portion of CSP compensation will be tied to verified MWh and MW savings that contribute to achieving regulatory targets (\$/verified MWh and \$/verified MW).

Key Performance Metrics and Monitoring: PECO will incorporate key performance metrics into CSPs contracts including participation, costs, savings, adherence to plan, participant experience, and more. PECO program managers will maintain regular communication with CSPs to review progress, address challenges, and implement changes as needed to support program success.

- **Regular Reporting by CSPs to PECO:** CSPs will share program participation and project status updates with PECO on a regular basis.

Independent Evaluation and Customer Feedback: PECO will assess customer and market actor satisfaction through each program's EM&V process. Independent evaluation contractors will provide PECO with feedback on CSP performance. PECO will use this feedback to inform program adjustment and help the CSPs deliver high-quality programs.

Continuous Improvement and Accountability: PECO's program management approach emphasizes transparency, accountability, and ongoing improvement. CSPs are required to report lessons learned, propose enhancements, and response to evolving market and regulatory requirements. This structure will support CSPs in delivering programs that maximize benefits for PECO customers.

4.2.3 Basis for Administrative Budget (non-incentive costs)

Administrative costs (non-incentive costs) in PY18–PY22 will be factored into the overall portfolio benefit-cost analysis. These costs include all non-incentive costs and are aligned with the budget categories in Table 9 for each program. To determine the administrative budget, PECO followed the PUC's Phase V Final Order to have a minimum of 50% of the total budget

go to incentives, including direct-install. PECO then benchmarked the Phase IV budget to determine PECO and non-PECO administrative budget. Administrative cost categories include:

Program Design: Includes all costs related to designing the Phase VI program, assuming there will be a Phase VI, including updating avoided costs and load shape research. Additionally, program design costs will include research and development (R&D) efforts including those for pilots.

Administrative: Represents costs required to develop, oversee, and execute all programs in the portfolio. These costs include the data vendor contract, PECO legal, IT support, administrative costs related to the data sharing workgroup, and costs related to braided funding support.

EDC Delivery Costs: Represents labor costs for PECO staff to run the programs.

CSP Delivery Fees: Includes all fixed costs to implement the Plan for the Residential Energy Efficiency, HER, and Non-Residential Energy Efficiency programs, as well as costs associated with facilitating AEPS registration.

Marketing: Represents broad marketing, education, and outreach efforts to promote the overall portfolio of energy efficiency and peak demand reduction programs as well as specific and targeted marketing strategies for specific programs and solutions. This will include expenditures on radio, newspaper, social media, and sponsorships promoting the program portfolio.

EM&V: Represents costs associated with third-party independent EM&V for the full portfolio process and impact evaluation activities, including continuous improvement activities.

AEPS Registration Support: Represents costs for the CSP to facilitate the AEPS registration process.

Other: Includes PECO staff training, Conferences such as eSource related to energy efficiency programs, licenses required for successful program implementation and unforeseen circumstances which are possible but cannot be predicted at the time of developing this Plan.

4.3 CSPs

4.3.1 Selected CSPs

PECO issued RFPs and is in the process of selecting and contracting CSPs for implementing and evaluating the Phase V programs. The selected implementation CSPs and independent evaluator, their qualifications, and basis for selection will be shared with the PUC. Each CSP and evaluation contract is deemed confidential and proprietary; each will be filed with the PUC separately. No CSP contract will be effective until approved by the PUC.

4.3.2 Describe the Work and Measures Being Performed by CSPs

CSPs will implement the energy efficiency programs using their experience and capabilities from implementing previous PECO programs and other programs across the country. Each of the selected CSPs will be responsible for implementation services detailed in the individual program descriptions in Section 3.

4.3.3 Describe Any Pending RFPs to Be Issued for Additional CSPs

PECO does not plan to issue any additional RFPs at the time of developing this Plan.

Exelon will look to hire an Energy Efficiency Marketing Agency. This vendor will design and lead the overall advertising plan for Energy Efficiency programs across the Exelon Operating Companies. This will include look and feel, messaging, and advertising channels. The vendor will coordinate with PECO's Promotions Team and CSPs on program-specific materials. The vendor will not be responsible for identifying and tracking leads.

4.4 Coordination with Other State Conservation Programs

As part of its Phase V program plans, PECO will actively collaborate with other state conservation initiatives to maximize impact. These partnerships are essential for delivering the greatest possible value in energy savings and improving customer experience for ratepayers across PECO's service territory.

4.4.1 Collaboration with Other State or Federal Programs to Achieve Savings

Refer to Section 3.1.5 for details about collaboration with non-Act 129 programs.

4.4.2 PECO's Plan to Highlight the Availability of Multiple Funding Sources

PECO's Phase V Plan highlights the availability of multiple funding sources to help customers maximize participation and project impact. To facilitate awareness and accessibility, PECO will engage contractors through targeted outreach and provide education. These strategies are designed to reduce barriers, enhance affordability, and deliver greater value across PECO's service territory.

4.4.3 Process to Facilitate Alternative Energy Portfolio Standards Registration for C&I Participants of Act 129 Programs

PECO is committed to establishing a clear and collaborative process to help C&I participants meet Alternative Energy Portfolio Standards (AEPS) within Act 129 programs. This approach will focus on alignment with regulatory objectives, streamlined participation, and enhanced customer support, with additional details to be defined as program design evolves.

Current planning considerations, active June 1, 2026, include:

- Identifying eligible projects and informing customers of AEPS registration requirements and benefits

- Providing guidance to facilitate AEPS registration

- Coordinating with the PUC, as needed, to enable timely and accurate registration

- Tracking and reporting AEPS-related activities and costs to facilitate transparency and alignment with regulatory obligations

4.4.4 Plans to Address Health and Safety Issues that Arise in the Delivery of Act 129 Services

PECO recognizes the importance of addressing health and safety barriers to ensure equitable access to energy efficiency programs for residential customers. As part of the broader Phase V Residential Energy Efficiency portfolio, the program will allocate up to \$3,000,000 to fund health and safety measures for low-income households.

The program will take proactive steps during a customer's in-home appointment. Energy advisors will identify any obstacles that could prevent the installation of energy efficiency measures such as electrical safety concerns, combustion issues, mold, or asbestos and may install safety devices, such as a smoke/carbon monoxide detector, when appropriate. By addressing these issues, the program ensures that homes are not deferred from participation due to such barriers.

To make participation accessible for all, the program will provide bilingual energy advisors and translation services when needed, assisting customers whose primary language is not English. Additionally, to support individuals with different abilities, the program will confirm during scheduling that customers with special needs have a trusted friend or relative present during service. This approach ensures every customer receives the full benefits of the program.

4.4.5 Strategies to Collect Information about Dual Participation to Facilitate Accurate Reporting on Braided Funding Opportunities and Calculation of the "Leverage Ratio" by Program.

In alignment with the Phase V Final Order, PECO will implement strategies to accurately capture and report instances of dual participation across programs. This effort is critical for identifying braided funding opportunities and ensuring compliance with reporting requirements. PECO's approach will include enhanced data-sharing protocols, coordination with state agencies, and stakeholder engagement to support transparent calculation of the "Leverage Ratio" by program.

5. Reporting and Tracking Systems

This section describes the reporting and critical data management and tracking systems PECO will use to implement programs, and which the PUC and PECO's evaluation contractor will need to access. Section 5.1 will include reporting done by PECO to the SWE, including an example proposed schedule for PY18 and PY19. Section 5.2 details the proposed project management tracking systems, such as how data will be handled, how CSPs will integrate with the tracking system, how the Commission and SWE would access this data, and what protocols are in place for handling personal identifiable information (PII).

5.1 Reporting

The evaluation contractor will be responsible for interfacing with the SWE to determine the required data collection and reporting requirements and confirm that all data collection and reporting requirements are satisfied by the data vendor and CSPs.

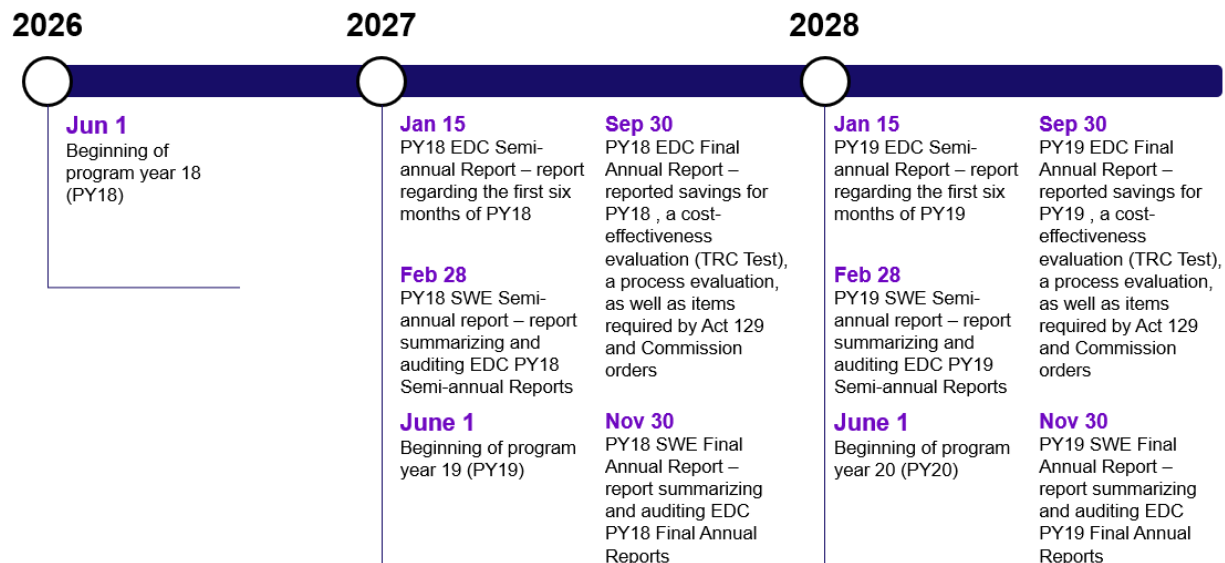
The evaluation contractor will support development of PECO's semiannual and annual reports as prescribed in the Phase V Final Order for each program year of Phase V:

Semiannual Reports: These reports capture program activity for the first half of each program year and are filed by January 15 of each year.

Annual Reports: These final annual reports will be filed no later than September 30th, 120 days after the end of each full program year. Final annual reports for each program year will include reported and verified savings, a cost-effectiveness evaluation (total resource cost [TRC] test), process evaluation results, and items required by Act 129 and PUC orders.

Reporting Schedule: All PECO Act 129 EE&C Phase V reports will be filed with the PUC's Secretary's Bureau, with a copy provided to the SWE. Further, all reports will be posted to the PECO website. Reporting for each program year of Phase V will follow the example proposed schedule for PY18 and PY19 outlined in the Phase V Final Order:

Figure 4. Proposed Schedule for PY18 and PY19



5.2 Project Management Tracking Systems

This section presents the data management system requirements that PECO anticipates will meet internal and external (SWE) needs.

5.2.1 Data Tracking System Overview

PECO's data tracking system collects and stores comprehensive and consistent program and invoice data from CSPs. The data management system will track metrics that facilitate effective project tracking and regulatory reporting. This data will also support PECO's QA process and EM&V requirements. Protecting sensitive data, personally identifiable information, personal information, intellectual property, and data from theft and damage is integrated into PECO's data management process.

The data tracking system includes a user interface for entering, reviewing, and extracting program and invoice data. The data tracking system will support PECO's tracking of:

Incentives paid

Reported kilowatt-hours and kilowatts achieved

Implementation costs

Administrative costs

PECO's data management tracking system and approach to data management will facilitate consistent data inputs across the different CSPs throughout Phase V. There are four key contributors/users involved with data tracking, each with an important role in ensuring tracking data quality:

Database Vendor: The database vendor will develop and maintain an appropriate tracking system for the programs to compile and aggregate data from PECO and CSPs, using generally accepted data input and validation techniques.

CSPs: CSPs will be responsible for inputting program data into the tracking database in accordance with the data protocols.

PECO Program Managers: PECO program managers will track and review data for their individual programs.

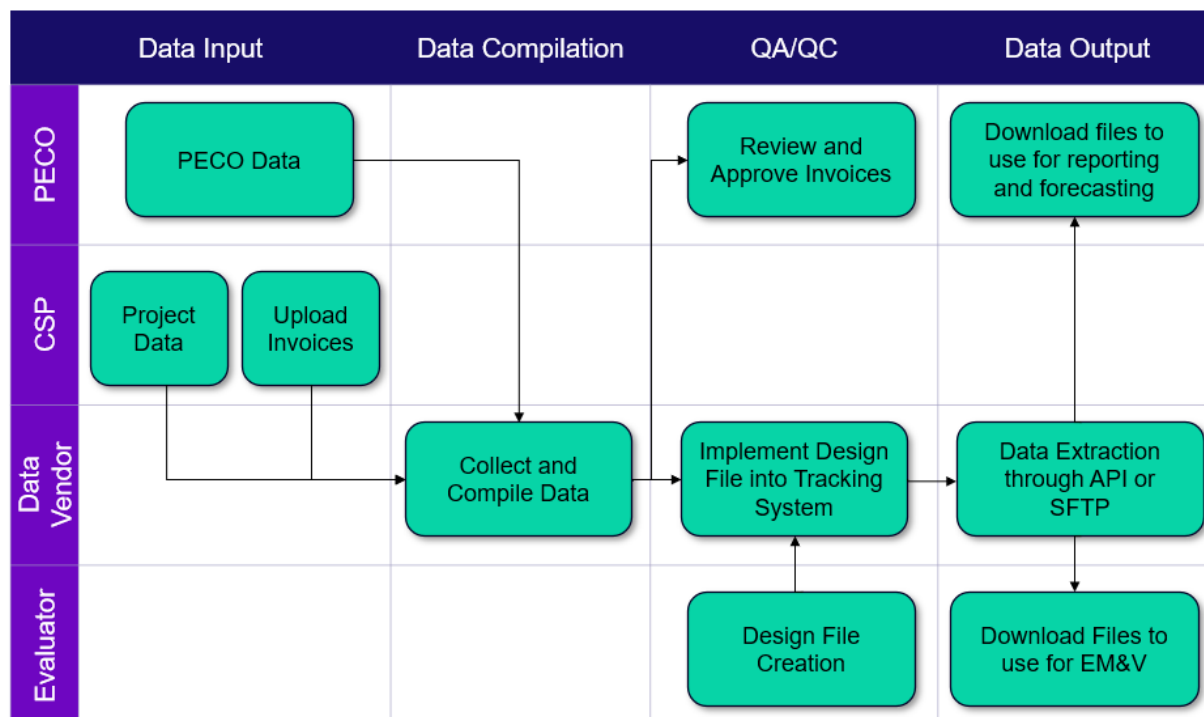
Evaluator: The evaluation contractor will conduct process and impact evaluations for each program. These evaluations will review the tracking data inputs for accuracy and adherence to data protocols, produce verified savings estimates and provide recommendations for program improvement. The evaluation contractor will provide a design file to the data vendor ahead of Phase V with data completeness, consistency, and accuracy checks. CSPs are required to update data that does not pass the design file criteria.

Figure 5 depicts the data management, QA, and evaluation processes that PECO, the data vendor, CSPs, and independent evaluation contractor will use to facilitate accurate data tracking.

5.2.2 Software Format, Data Exchange Format, and Database Structure

The data tracking system will interact with PECO's existing systems. PECO will provide an initial population of customer, premises, and account data that will be used to qualify customers for programs. Additional data will be entered by the implementation CSP or PECO to complete the application process. PECO will provide a full set of customer data information on a regular basis to update implementation CSP records.

Figure 5. Program Documentation and EM&V



PECO's approach addresses five areas critical to ensuring program implementation quality:

1. **Selection of CSPs that implement programs:** PECO is in the process of selecting and contracting CSPs with demonstrated experience implementing data management protocols and a commitment to maintaining data quality and integrity. Contracts will be awarded based on a pay for performance contracting mechanism.
2. **Program implementation and documentation protocols:** PECO and the CSPs will develop specific protocols and procedures for each program. These will govern all aspects of the program implementation, from procedures for conducting site visits to data input.
3. **Verification and documentation of activities and savings:** Verification of project eligibility and actual installation of measures is important. Documentation of purchases and installations will confirm that programs are implemented in top quality fashion and will provide the basis for defensible program evaluations.
4. **Program evaluation:** PECO will contract an experienced EM&V vendor to conduct an independent assessment of each program's performance. This contractor will develop a comprehensive evaluation plan for conducting process and impact evaluations. The EM&V contractor will work with the SWE to confirm that the evaluations are conducted according to state requirements.
5. **Evaluation-based program adjustments:** PECO will use the findings and recommendations resulting from the impact and process evaluations to adjust program

implementation as necessary to confirm the programs are implemented in accordance with recognized best practices, maintain participant satisfaction, and contribute to PECO's successful attainment of its portfolio savings goals.

5.2.3 Describe How CSPs Will Integrate with the Tracking System

CSPs will have a secure log-in to access the tracking system. After logging in, the CSP can enter and submit projects (with required data) for PECO's review, approval, or request for additional information or modifications. Following any required revisions and PECO's approval of a submitted project, projects are maintained within the tracking system.

CSPs will enter information into the tracking system for individual projects and through batch-methods for several projects. Project batches will typically be associated with monthly invoices. CSPs will interact with the tracking system on a monthly basis or more frequently.

The project data submitted and updated by CSPs includes but is not limited to:

- Measure information and equipment specifications
- Inputs for deemed or partially deemed TRM calculations
- Reported savings
- Project status
- Invoices, including project costs and incentives
- Other project details stored in files and not directly entered into a tracking system (e.g., PDFs for custom C&I projects)
- Customer data from PECO's internal customer care and billing system

5.2.4 Access for Commission and SWE

PECO's energy efficiency information will be available for review by the PUC and SWE upon request. As part of the customer validation process for application enrollment, PECO will provide select customer account data to the data management system vendor. This data is highly confidential and must be protected against unauthorized access or disclosure. In addition, all data collected from CSPs related to PECO's programs will be considered confidential and subject to the same protections. Security processes and protocols will be established to secure all data from unauthorized access. PECO and the data management system vendor will jointly develop processes for data backup and disaster recovery.

5.2.5 PECO Cybersecurity Procedures to Protect Program Participant Personally Identifiable Information

As part of Phase V cybersecurity planning, PECO is actively participating in the Act 129 Phase V Data Sharing Working Group, convened by the Pennsylvania PUC under the Phase V Final Order. The group addresses critical topics related to secure data sharing among program administrators, including:

- Inventorying current data-sharing processes
- Identifying data types and associated benefits
- Establishing customer consent requirements
- Developing guidelines for third-party CSPs
- Drafting a standardized Memorandum of Understanding
- Recommending secure storage and exchange protocols (e.g., push vs. pull methods)
- Determining allocation of administrative costs

The initial meeting on July 23, 2025, focused on understanding data needs and sharing expectations among EDCs, the PA DEP, and Commission staff. These discussions also explore safeguarding participant PII, leveraging categorical eligibility, and best practices for collaboration with the PA DEP and Home Energy Rebates programs. PECO will incorporate guidance from the Working Group into its Phase V cybersecurity procedures to support robust data protection and compliance.

6. QA and EM&V

This section explains PECO's approach to EM&V and QA/QC, and how these processes align with SWE activities. Section 6.1 outlines the overall QA/QC strategy and actions for continuous improvement. Section 6.2 details procedures for installation verification, savings documentation, and QC. Section 6.3 describes how PECO will incorporate feedback from participants, contractors, and trade allies. Section 6.4 covers market and process evaluations to assess program effectiveness. Section 6.5 addresses coordination of EM&V activities with the SWE, and Section 6.6 explains how PECO integrates changes to codes and standards into program operations.

6.1 Overall Approach to QA/QC

To implement the programs and solutions in this Plan, PECO will leverage the experience of program implementation professionals by selecting CSPs with the following qualifications:

- Demonstrated experience implementing programs for the specific target market associated with the program.
- Demonstrated understanding of the measures and features of the program and solutions the CSP will implement.
- Existing relationships and experience establishing relationships with upstream equipment suppliers and contractors, as appropriate for the program.
- Experience in providing or coordinating training by other qualified providers about the program, solutions, and measures to delivery channels (e.g., equipment suppliers, contractors, auditors) and the target participant market.
- Capabilities for processing incentives.

The CSPs' approach to QC and continuous improvement will include:

Program tracking: Scorecards, weekly and monthly forecasting reports, and operations meetings will be used to monitor and track program progress against program goals and metrics. The scorecards will be reviewed monthly to provide updates and identify action items to keep the program on track.

Responding to customers: Contractor and trade ally feedback is important. CSPs will have a tiered response procedure to facilitate delivery of the highest level of customer support. Any suggestions or complaints are logged into their customer contact log and resolved at the appropriate level. Complaints are escalated as required following a deliberate and documented process.

Equipment installation inspections: CSPs will conduct random targeted in-process and post inspections while ensuring the quantity of inspections are distributed fairly among the program segments according to their most recent performance. Post inspections will include client interviews and a methodical visual inspection (where possible and feasible) to verify that measures have been installed correctly and as reported. Post inspections will also confirm that those measures comply with program specifications and that those measures are serving their intended function. This enables personnel to understand and comply with

program requirements and provides an opportunity to address any deficiencies early on. Post inspections will be performed as soon as possible after completion of work in a home or building. Prompt QA/QC follow-up creates a greater likelihood of customer cooperation, identify missed opportunities for further improvements, and reinforces the importance of quality and customer satisfaction in the programs. Finally, inspectors will review the appropriateness and accuracy of recommendations made by energy advisors and others.

PECO will also use the experience of an independent EM&V contractor who will conduct unbiased estimations of verified gross energy impacts on all programs. Estimations of verified gross energy impacts will be based on statistically significant verified savings measured as described in the EM&V contractor's EM&V plan, developed prior to Phase IV program implementation.

The contractor's EM&V plan will contain a detailed evaluation methodology for each program, including definition of the impact and process evaluation methods, and the data needed to support them (design file). The EM&V plan will provide the implementation CSP with the data to track and the Database Vendor with the data to house. Having the evaluation plan completed and available to PECO and CSP staff for each program will help establish that the implementers maintain appropriate and high-quality records so that savings can be verified.

6.2 Procedures for Measure and Project Installation Verification, QA/QC, and Savings Documentation

Although the procedures for measure and project installation verification, QA and QC, and savings documentation will vary by program and measures, PECO anticipates independent evaluation contractors applying the following process to impact evaluations:

1. Choose a random sample of participants for evaluations, using statistical methods consistent with established state protocols.
2. Conduct verifications onsite, by phone, or via online survey instrument, tailored to the measure and program type.
3. Gather pre-evaluation data and prepare data collection documents.
4. Verify measure and project installation and collect pertinent data such as equipment nameplate.
5. Cross-reference equipment data with customer application data contained in the data management system for accuracy.
6. Observe and note equipment operational tests and quality of the equipment installation:
 - a. For prescriptive measures, calculate measure savings using the methodologies and algorithms detailed in the TRM.
 - b. For custom measures, use energy simulation modeling (such as eQuest or DOE-2) or pre-/post-measure metering to determine measure savings.

6.3 Process for Collecting and Addressing Participant, Contractor, and Trade Ally Feedback

PECO anticipates applying the following general process to collect participant, contractor, and trade ally feedback:

- Independent evaluation contractors will interview contractors, trade allies, and other market actors to gauge their satisfaction with PECO's programs and identify areas for improvement.
- Independent evaluation contractors will identify the appropriate survey mode (e.g., telephone, in-person, or online) for capturing participant feedback.
- Independent evaluation contractors will survey a random sample of participants to gather fast program feedback and assess satisfaction with the program.
- Independent evaluation contractors will follow all guidelines outlined in the existing daily load shifting guidance provided as well as the SWE Evaluation Framework for Phase V.

6.4 Market and Process Evaluations

CSPs will regularly evaluate their programs to help maintain best practices and continually improve. Additionally, PECO's independent evaluation contractors will conduct annual market and process evaluations for each program throughout the program's entirety. Market and process evaluations may include program materials review, tracking database analysis, implementation team interviews, surveys or interviews with participating and nonparticipating customers, contractors, and trade allies.

- Market and process evaluations will examine:
 - Program design
 - Implementation protocols and procedures
 - Marketing materials and strategies
 - Outreach and recruitment activities
 - Documentation and compliance with incentive eligibility requirements
 - Processing and timely payment of incentives
 - Market characteristics
 - Net energy and demand savings

PECO will use process evaluation results to improve program design (e.g., modify measures offered, eligibility requirements) and implementation procedures (e.g., modify recruitment, advertising methods, monitoring, database maintenance). The frequency and schedule of the process evaluations will be determined for each program individually.

6.5 Strategy for Coordinating with SWE

PECO's EM&V manager and its independent evaluation contractor will engage with the SWE through scheduled working group meetings and through ad hoc meetings and communications. Throughout Phases I-IV, PECO worked with the SWE to determine that its program evaluations aligned with PUC requirements, clarified policy questions, and contributed data and recommendations to assist the SWE and the PUC to establish policy. PECO anticipates extending this productive relationship in Phase IV.

To the extent feasible and appropriate, PECO will consult with the SWE to establish that its data management system contains information relevant and needed for evaluation of the programs. It also will confirm that PECO's EM&V contractor uses the most appropriate methods for determining the impacts of the EE&C Plan's programs.

6.6 Approach to Incorporating Changes to Codes and Standards

PECO recognizes that changes to federal, state, and local codes and standards can significantly impact the calculation of energy savings and the design of energy efficiency programs. As such, throughout Phase V, PECO and its CSPs will proactively monitor regulatory developments and updates to codes and standards as feasible that may influence baseline assumptions, measure eligibility, or program effectiveness.

7. Cost Recovery Mechanism

The objective of this section is to provide detailed descriptions and estimated values for the cost recovery mechanism. Section 7.1 summarizes total annual revenues for Phase V. Section 7.2 discusses Phase V in accordance with Pennsylvania cost recovery laws. Section 7.3 includes relevant data tables supporting the cost recovery analysis. Section 7.4 addresses tariffs and the Section 1307 cost recovery mechanism. Finally, Section 7.5 discusses ensuring that recovery of Act-129 activities align to the customer class receiving the benefit and Section 7.6 outlines how PECO aims to account for Phase V costs versus prior phase costs, ensuring transparency and compliance with regulatory requirements.

7.1 Total Annual Revenues for Phase V

PECO's annual retail revenue as of December 31, 2006, totals \$4,273,858,275. Applying the 2% annual limit set forth in Act 129 to this amount produces a total allowable annual level of expenditures of \$85,477,166 per year or \$427,385,828 over the five program years of the Phase V Plan.

Figure 6 details how the total 2006 annual retail revenues were derived.²⁶ The electricity sales from all of PECO's customers (FERC Accounts 440.0 through 446.0) and other operating income (FERC Accounts 450.0 through 456.1) were summed. In addition, as required by the Phase V Final Order, the total annual retail revenue was adjusted to include "...generation revenues collected by an EDC for an electric generation supplier (EGS) that use consolidated billing." The revenues thus derived were then adjusted to remove several "non-retail" (i.e., wholesale) revenue items, which include, sales for resales (447.0), other electric revenues (456.0) and revenues from wholesale transmission (456.1).

Figure 6. Calculation of 2006 Annual Revenue

Amount	Description
\$4,371,215,020*	Total revenue as of 12/31/06
\$92,390,366†	Adjustment for "shopping" customers
\$(189,747,111)‡	Wholesale revenue adjustment
\$4,273,858,275§	Total retail revenue
\$85,477,166	Annual spend (2% of revenue)
\$427,385,828#	Five-year total spend

*Source: PUC Annual Report-400 Income Statement

† Source: PECO records

‡ Source: PUC AR Accounts 447, 456.0, 456.1

§ Sum of total revenue, adjustment for "shopping" customers, and wholesale revenue adjustment

|| Total retail revenue times 0.02

Annual spend times five program years

²⁶ The calculation is based on Schedule 400 - Income Statement contained in PECO's 2006 Electric Annual Revenue Report to the PUC.

7.2 Description of Phase V Plan in Accordance with 66 Pa. C.S. § 1307 and 2806.1

Act 129 requires that the EE&C Plan include a cost recovery mechanism to fund EE&C measures and to facilitate the recovery of prudent and reasonable costs, including administrative costs. See 66 Pa.C.S. § 2806.1(b)(1)(i)(H). Act 129 also requires an analysis of administrative costs. See 66 Pa.C.S. § 2806.1(b)(1)(i)(K). The Phase V Final Order defines administrative costs as including 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.²⁷ Based on this definition, PECO's EE&C Phase IV administrative costs (e.g., non-incentive costs) include those as described in Section 4.2.3.

²⁷ EE&C Phase V Final Order, p. 233.

7.3 Data Tables

Table 38. Budget by Program and Subprogram

Program Name:		Residential Energy Efficiency					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$14,738	\$15,015	\$15,321	\$15,580	\$15,840	\$76,493
Incentives (\$000)	Rebates	\$4,976	\$5,199	\$5,467	\$5,741	\$6,037	\$27,419
	Upstream/Midstream Buydown	\$1,787	\$1,837	\$1,887	\$1,887	\$1,887	\$9,285
	Kits	\$758	\$758	\$758	\$758	\$758	\$3,791
	Direct Install Materials & Labor	\$567	\$572	\$559	\$544	\$510	\$2,753
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$8,089.0	\$8,366.4	\$8,671.1	\$8,929.3	\$9,192.4	\$43,248
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$5,046	\$5,161	\$5,016	\$4,920	\$4,769	\$24,912
	Marketing	\$1,603	\$1,488	\$1,634	\$1,730	\$1,878	\$8,333
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentive Total		\$6,649	\$6,649	\$6,650	\$6,650	\$6,647	\$33,245
Percent Incentives		56%	55%	56%	57%	57%	58%

Program Name:		Residential Home Energy Reports					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
Incentives (\$000)	Rebates	\$0	\$0	\$0	\$0	\$0	\$0
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Install Materials & Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
	Marketing	\$0	\$0	\$0	\$0	\$0	\$0
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0

	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$2,342	\$3,639	\$2,634	\$2,783	\$2,590	\$13,989
Percent Incentives		0%	0%	0%	0%	0%	0%

Program Name:		Low-Income Energy Efficiency					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$10,870	\$11,028	\$11,394	\$11,754	\$10,160	\$55,207
Incentives (\$000)	Rebates	\$534	\$532	\$535	\$538	\$533	\$2,672
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$855	\$855	\$855	\$855	\$855	\$4,273
	Direct Install Materials & Labor	\$6,442	\$6,589	\$6,926	\$7,256	\$5,787	\$33,000
	Braided Funding Support Labor	\$19	\$19	\$19	\$19	\$19	\$96
	Incentive Total	\$7,850	\$7,995	\$8,334	\$8,667	\$7,194	\$40,040
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$2,265	\$2,275	\$2,295	\$2,315	\$2,225	\$11,375
	Marketing	\$755	\$758	\$765	\$772	\$742	\$3,792
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentive Total		\$3,020	\$3,033	\$3,060	\$3,087	\$2,966	\$15,167
Percent Incentives		72%	72%	73%	74%	71%	73%

Program Name:		Income-Eligible Home Energy Reports					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$172	\$91	\$95	\$85	\$81	\$524
Incentives (\$000)	Rebates	\$0	\$0	\$0	\$0	\$0	\$0
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Install Materials & Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$172	\$91	\$95	\$85	\$81	\$524
	Marketing	\$0	\$0	\$0	\$0	\$0	\$0

	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$0	\$0	\$0	\$0	\$0	\$0
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$172	\$91	\$95	\$85	\$81	\$524
Percent Incentives		0%	0%	0%	0%	0%	0%

Program Name: Non-Residential Energy Efficiency		Total					
Cost Element		PY18	PY19	PY20	PY21	PY22	Phase V Total
Total Budget (\$000)		\$34,181	\$41,904	\$47,195	\$51,004	\$39,614	\$213,898
Incentives (\$000)	Rebates	\$16,170	\$21,372	\$23,975	\$27,619	\$19,062	\$108,198
	Upstream/Midstream Buydown	\$913	\$1,062	\$1,159	\$1,040	\$973	\$5,148
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct Install Materials & Labor	\$4,022	\$4,534	\$4,825	\$4,546	\$4,077	\$22,004
	Braided Funding Support Labor	\$0	\$0	\$0	\$0	\$0	\$0
	Incentive Total	\$21,105	\$26,968	\$29,959	\$33,205	\$24,112	\$135,349
Non-Incentives (\$000)	Program Design	\$0	\$0	\$0	\$0	\$0	\$0
	Administrative	\$0	\$0	\$0	\$0	\$0	\$0
	EDC Delivery Costs	\$0	\$0	\$0	\$0	\$0	\$0
	CSP Delivery Fees	\$12,434	\$14,453	\$16,748	\$17,310	\$15,012	\$75,957
	Marketing	\$626	\$461	\$469	\$476	\$488	\$2,519
	EM&V	\$0	\$0	\$0	\$0	\$0	\$0
	AEPS Registration Support	\$17	\$22	\$19	\$14	\$2	\$73
	Other (Describe)	\$0	\$0	\$0	\$0	\$0	\$0
	Non-Incentive Total	\$13,076	\$14,936	\$17,236	\$17,799	\$15,502	\$78,549
Percent Incentives		62%	64%	63%	65%	61%	63%

Table 39. Summary of EE&C Costs by Sector and Program

Cost Elements (\$)														
Sector	EE&C Program	Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	AEPS Registration Support	Other (Describe)	Total Cost	Expected Acquisition Cost ³ (\$/MWh)	Levelized Cost ⁴ (\$/MWh)	Expected Acquisition Cost (\$/MWh)
Residential Portfolio (incl. Low-Income)	Residential Energy Efficiency	\$42,841,347	\$0	\$0	\$0	\$24,490,397	\$8,191,911	\$0	\$0	\$0	\$75,523,655	\$312	\$163	\$1,510,591
	Residential Home Energy Reports	\$0	\$0	\$0	\$0	\$13,989,327	\$0	\$0	\$0	\$0	\$13,989,327	\$98	\$26	\$434,512
	Low-Income Energy Efficiency	\$34,330,888	\$0	\$0	\$0	\$9,219,672	\$3,073,224	\$0	\$0	\$0	\$46,623,784	\$646	\$157	\$3,886,241
	Low-Income Home Energy Reports	\$0	\$0	\$0	\$0	\$523,673	\$0	\$0	\$0	\$0	\$523,673	\$97	\$26	\$488,339
	Sector Total⁵	\$77,172,235	\$0	\$0	\$0	\$48,223,069	\$11,265,135	\$0	\$0	\$0	\$136,660,438	\$296	\$138	\$1,434,589
Small C&I	Non-Residential Energy Efficiency	\$66,587,232	\$0	\$0	\$0	\$34,814,665	\$1,155,777	\$0	\$33,423	\$0	\$102,591,096	\$232	\$70	\$1,458,638
	Residential Energy Efficiency	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
	Low-Income Energy Efficiency	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
	Sector Total	\$69,645,338	\$0	\$0	\$0	\$36,103,112	\$1,585,504	\$0	\$33,423	\$0	\$107,367,377	\$237	\$69	\$1,497,440

Large C&I	<i>Non-Residential Energy Efficiency</i>	\$68,761,645	\$0	\$0	\$0	\$41,142,531	\$1,363,220	\$0	\$39,327	\$0	\$111,306,722	\$209	\$69	\$1,157,362
	<i>Residential Energy Efficiency</i>	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
	<i>Low-Income Energy Efficiency</i>	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
	Sector Total	\$71,819,751	\$0	\$0	\$0	\$42,430,978	\$1,792,947	\$0	\$39,327	\$0	\$116,083,003	\$214	\$69	\$1,190,108

Table 40. Allocation of Common Costs to Applicable Customer Sector

Common Cost Element	Total Cost (\$)	Basis for Cost Allocation	Sector Cost Allocation (\$)		
			Residential (Including Low-Income)	Small C&I	Large C&I
Marketing	\$20,400,000	Sector allocations based fraction of PY18 MWh Savings	\$7,592,659	\$6,379,070	\$6,428,271
Administrative	\$4,700,000	Sector allocations based fraction of PY18 MWh Savings	\$1,749,289	\$1,469,688	\$1,481,023
Program Design	\$8,540,000	Sector allocations based fraction of PY18 MWh Savings	\$3,178,496	\$2,670,454	\$2,691,051
EM&V	\$19,600,000	Sector allocations based fraction of PY18 MWh Savings	\$7,294,908	\$6,128,911	\$6,176,182
EDC Delivery Costs	\$11,035,012	Sector allocations based fraction of PY18 MWh Savings	\$4,107,112	\$3,450,643	\$3,477,257
Other (Describe)	\$3,000,000	Sector allocations based fraction of PY18 MWh Savings	\$1,116,568	\$938,099	\$945,334
Totals	\$67,275,012		\$25,039,032	\$21,036,864	\$21,199,117
SWE Cost	\$0		\$0	\$0	\$0

Table 41. Summary of Portfolio EE&C Costs

Portfolio	Total Sector Portfolio-specific Costs	Total Common Costs	Total of All Costs
Residential (Including Low-Income)	\$136,660,438	\$25,039,032	\$161,699,470
Small C&I	\$107,322,978	\$21,036,864	\$128,359,841
Large C&I	\$116,127,403	\$21,199,117	\$137,326,519
Totals	\$360,110,819	\$67,275,012	\$427,385,831

Table 42. TRC Benefits Table (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)					
	Program Year	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
<i>Residential Energy Efficiency</i>	<i>PY18</i>	<i>1.00</i>	<i>0.93</i>	<i>\$8,089</i>	<i>\$47,656</i>	<i>\$6,649</i>	<i>\$62,393</i>	<i>\$15,882</i>	<i>\$31,653</i>	<i>\$10,180</i>	<i>\$0</i>	<i>\$57,715</i>
<i>Residential Energy Efficiency</i>	<i>PY19</i>	<i>1.00</i>	<i>0.91</i>	<i>\$8,366</i>	<i>\$48,063</i>	<i>\$6,649</i>	<i>\$63,078</i>	<i>\$15,383</i>	<i>\$31,552</i>	<i>\$10,422</i>	<i>\$0</i>	<i>\$57,357</i>
<i>Residential Energy Efficiency</i>	<i>PY20</i>	<i>1.00</i>	<i>0.77</i>	<i>\$8,671</i>	<i>\$58,374</i>	<i>\$6,650</i>	<i>\$73,695</i>	<i>\$15,376</i>	<i>\$30,815</i>	<i>\$10,777</i>	<i>\$0</i>	<i>\$56,968</i>
<i>Residential Energy Efficiency</i>	<i>PY21</i>	<i>1.00</i>	<i>0.75</i>	<i>\$8,929</i>	<i>\$58,413</i>	<i>\$6,650</i>	<i>\$73,992</i>	<i>\$15,267</i>	<i>\$29,260</i>	<i>\$11,003</i>	<i>\$0</i>	<i>\$55,531</i>
<i>Residential Energy Efficiency</i>	<i>PY22</i>	<i>1.00</i>	<i>0.74</i>	<i>\$9,192</i>	<i>\$58,452</i>	<i>\$6,647</i>	<i>\$74,292</i>	<i>\$14,917</i>	<i>\$29,034</i>	<i>\$11,269</i>	<i>\$0</i>	<i>\$55,220</i>
<i>Residential Energy Efficiency Total</i>		<i>1.00</i>	<i>0.81</i>	<i>\$43,248</i>	<i>\$270,957</i>	<i>\$33,245</i>	<i>\$347,450</i>	<i>\$76,825</i>	<i>\$152,315</i>	<i>\$53,652</i>	<i>\$0</i>	<i>\$282,792</i>
<i>Residential Home Energy Reports</i>	<i>PY18</i>	<i>1.00</i>	<i>4.96</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,342</i>	<i>\$2,342</i>	<i>\$3,400</i>	<i>\$8,222</i>	<i>\$0</i>	<i>\$0</i>	<i>\$11,622</i>
<i>Residential Home Energy Reports</i>	<i>PY19</i>	<i>1.00</i>	<i>5.14</i>	<i>\$0</i>	<i>\$0</i>	<i>\$3,639</i>	<i>\$3,639</i>	<i>\$7,135</i>	<i>\$11,557</i>	<i>\$0</i>	<i>\$0</i>	<i>\$18,692</i>
<i>Residential Home Energy Reports</i>	<i>PY20</i>	<i>1.00</i>	<i>4.80</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,634</i>	<i>\$2,634</i>	<i>\$5,028</i>	<i>\$7,602</i>	<i>\$0</i>	<i>\$0</i>	<i>\$12,631</i>
<i>Residential Home Energy Reports</i>	<i>PY21</i>	<i>1.00</i>	<i>3.88</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,783</i>	<i>\$2,783</i>	<i>\$4,006</i>	<i>\$6,795</i>	<i>\$0</i>	<i>\$0</i>	<i>\$10,801</i>
<i>Residential Home Energy Reports</i>	<i>PY22</i>	<i>1.00</i>	<i>3.52</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,590</i>	<i>\$2,590</i>	<i>\$3,115</i>	<i>\$6,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$9,116</i>
<i>Residential Home Energy Reports Total</i>		<i>1.00</i>	<i>4.49</i>	<i>\$0</i>	<i>\$0</i>	<i>\$13,989</i>	<i>\$13,989</i>	<i>\$22,684</i>	<i>\$40,177</i>	<i>\$0</i>	<i>\$0</i>	<i>\$62,862</i>
<i>Low-Income Energy Efficiency</i>	<i>PY18</i>	<i>1.00</i>	<i>1.37</i>	<i>\$7,850</i>	<i>\$3,176</i>	<i>\$3,020</i>	<i>\$14,047</i>	<i>\$3,467</i>	<i>\$13,312</i>	<i>\$2,477</i>	<i>\$0</i>	<i>\$19,257</i>
<i>Low-Income Energy Efficiency</i>	<i>PY19</i>	<i>1.00</i>	<i>1.37</i>	<i>\$7,995</i>	<i>\$3,174</i>	<i>\$3,033</i>	<i>\$14,202</i>	<i>\$3,292</i>	<i>\$13,638</i>	<i>\$2,530</i>	<i>\$0</i>	<i>\$19,460</i>
<i>Low-Income Energy Efficiency</i>	<i>PY20</i>	<i>1.00</i>	<i>1.36</i>	<i>\$8,334</i>	<i>\$3,124</i>	<i>\$3,060</i>	<i>\$14,519</i>	<i>\$3,301</i>	<i>\$13,777</i>	<i>\$2,612</i>	<i>\$0</i>	<i>\$19,691</i>
<i>Low-Income Energy Efficiency</i>	<i>PY21</i>	<i>1.00</i>	<i>1.31</i>	<i>\$8,667</i>	<i>\$3,080</i>	<i>\$3,087</i>	<i>\$14,834</i>	<i>\$3,254</i>	<i>\$13,550</i>	<i>\$2,699</i>	<i>\$0</i>	<i>\$19,503</i>

Low-Income Energy Efficiency	PY22	1.00	1.27	\$7,194	\$3,261	\$2,966	\$13,421	\$2,748	\$11,787	\$2,548	\$0	\$17,083
Low-Income Energy Efficiency Total		1.00	1.34	\$40,040	\$15,816	\$15,167	\$71,023	\$16,063	\$66,064	\$12,867	\$0	\$94,994
Low-Income Home Energy Reports	PY18	1.00	7.78	\$0	\$0	\$172	\$172	\$299	\$1,041	\$0	\$0	\$1,340
Low-Income Home Energy Reports	PY19	1.00	7.18	\$0	\$0	\$91	\$91	\$139	\$512	\$0	\$0	\$651
Low-Income Home Energy Reports	PY20	1.00	6.80	\$0	\$0	\$95	\$95	\$130	\$517	\$0	\$0	\$648
Low-Income Home Energy Reports	PY21	1.00	6.31	\$0	\$0	\$85	\$85	\$109	\$427	\$0	\$0	\$536
Low-Income Home Energy Reports	PY22	1.00	6.12	\$0	\$0	\$81	\$81	\$94	\$400	\$0	\$0	\$494
Low-Income Home Energy Reports Total		1.00	7.01	\$0	\$0	\$524	\$524	\$772	\$2,897	\$0	\$0	\$3,669
Non-Residential Energy Efficiency	PY18	1.00	1.56	\$21,105	\$78,457	\$13,076	\$112,638	\$52,133	\$116,672	\$36	\$7,072	\$175,913
Non-Residential Energy Efficiency	PY19	1.00	1.57	\$26,968	\$101,443	\$14,936	\$143,347	\$64,384	\$152,603	\$104	\$8,550	\$225,640
Non-Residential Energy Efficiency	PY20	1.00	1.40	\$29,959	\$129,049	\$17,236	\$176,244	\$71,161	\$166,875	\$172	\$9,338	\$247,546
Non-Residential Energy Efficiency	PY21	1.00	1.47	\$33,205	\$109,050	\$17,799	\$160,055	\$68,362	\$158,497	\$56	\$8,303	\$235,217
Non-Residential Energy Efficiency	PY22	1.00	1.57	\$24,112	\$79,227	\$15,502	\$118,840	\$54,697	\$125,133	\$75	\$7,072	\$186,977
Non-Residential Energy Efficiency Total		1.00	1.51	\$135,349	\$497,226	\$78,549	\$711,124	\$310,737	\$719,780	\$443	\$40,333	\$1,071,293
Total		1.00		\$218,637	\$783,999	\$141,473	\$1,144,110	\$427,081	\$981,233	\$66,962	\$40,333	\$1,515,610

Table 43. TRC Benefits Table (Net)

Portfolio	NTGR & TRC Ratio	TRC Costs By Program Per Year (\$000)	TRC Benefits By Program Per Year (\$000)

Program/Subprogram	Program Year	NTGR	Net TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Residential Energy Efficiency	PY18	0.655	0.88	\$8,089	\$28,435	\$6,649	\$43,173	\$10,406	\$20,739	\$6,670	\$0	\$37,815
Residential Energy Efficiency	PY19	0.655	0.86	\$8,366	\$28,606	\$6,649	\$43,621	\$10,079	\$20,673	\$6,829	\$0	\$37,580
Residential Energy Efficiency	PY20	0.655	0.74	\$8,671	\$35,257	\$6,650	\$50,577	\$10,074	\$20,190	\$7,061	\$0	\$37,325
Residential Energy Efficiency	PY21	0.655	0.72	\$8,929	\$35,193	\$6,650	\$50,773	\$10,003	\$19,171	\$7,209	\$0	\$36,384
Residential Energy Efficiency	PY22	0.655	0.71	\$9,192	\$35,128	\$6,647	\$50,968	\$9,774	\$19,023	\$7,383	\$0	\$36,180
Residential Energy Efficiency Total		0.655		\$43,248	\$162,619	\$33,245	\$239,112	\$50,336	\$99,797	\$35,153	\$0	\$185,285
Residential Home Energy Reports	PY18	1.000	4.96	\$0	\$0	\$2,342	\$2,342	\$3,400	\$8,222	\$0	\$0	\$11,622
Residential Home Energy Reports	PY19	1.000	5.14	\$0	\$0	\$3,639	\$3,639	\$7,135	\$11,557	\$0	\$0	\$18,692
Residential Home Energy Reports	PY20	1.000	4.80	\$0	\$0	\$2,634	\$2,634	\$5,028	\$7,602	\$0	\$0	\$12,631
Residential Home Energy Reports	PY21	1.000	3.88	\$0	\$0	\$2,783	\$2,783	\$4,006	\$6,795	\$0	\$0	\$10,801
Residential Home Energy Reports	PY22	1.000	3.52	\$0	\$0	\$2,590	\$2,590	\$3,115	\$6,000	\$0	\$0	\$9,116
Residential Home Energy Reports Total		1.000		\$0	\$0	\$13,989	\$13,989	\$22,684	\$40,177	\$0	\$0	\$62,862
Low-Income Energy Efficiency	PY18	1.000	1.37	\$7,850	\$3,176	\$3,020	\$14,047	\$3,467	\$13,312	\$2,477	\$0	\$19,257
Low-Income Energy Efficiency	PY19	1.000	1.37	\$7,995	\$3,174	\$3,033	\$14,202	\$3,292	\$13,638	\$2,530	\$0	\$19,460
Low-Income Energy Efficiency	PY20	1.000	1.36	\$8,334	\$3,124	\$3,060	\$14,519	\$3,301	\$13,777	\$2,612	\$0	\$19,691
Low-Income Energy Efficiency	PY21	1.000	1.31	\$8,667	\$3,080	\$3,087	\$14,834	\$3,254	\$13,550	\$2,699	\$0	\$19,503
Low-Income Energy Efficiency	PY22	1.000	1.27	\$7,194	\$3,261	\$2,966	\$13,421	\$2,748	\$11,787	\$2,548	\$0	\$17,083
Low-Income Energy Efficiency Total		1.000		\$40,040	\$15,816	\$15,167	\$71,023	\$16,063	\$66,064	\$12,867	\$0	\$94,994
Low-Income Home Energy Reports	PY18	1.000	7.78	\$0	\$0	\$172	\$172	\$299	\$1,041	\$0	\$0	\$1,340

Low-Income Home Energy Reports	PY19	1.000	7.18	\$0	\$0	\$91	\$91	\$139	\$512	\$0	\$0	\$651
Low-Income Home Energy Reports	PY20	1.000	6.80	\$0	\$0	\$95	\$95	\$130	\$517	\$0	\$0	\$648
Low-Income Home Energy Reports	PY21	1.000	6.31	\$0	\$0	\$85	\$85	\$109	\$427	\$0	\$0	\$536
Low-Income Home Energy Reports	PY22	1.000	6.12	\$0	\$0	\$81	\$81	\$94	\$400	\$0	\$0	\$494
Low-Income Home Energy Reports Total		1.000		\$0	\$0	\$524	\$524	\$772	\$2,897	\$0	\$0	\$3,669
Non-Residential Energy Efficiency	PY18	0.684	1.48	\$21,105	\$47,005	\$13,076	\$81,187	\$35,664	\$79,815	\$25	\$4,838	\$120,342
Non-Residential Energy Efficiency	PY19	0.684	1.50	\$26,968	\$60,878	\$14,936	\$102,782	\$44,045	\$104,396	\$71	\$5,849	\$154,360
Non-Residential Energy Efficiency	PY20	0.684	1.34	\$29,959	\$78,819	\$17,236	\$126,013	\$48,681	\$114,159	\$118	\$6,388	\$169,346
Non-Residential Energy Efficiency	PY21	0.684	1.40	\$33,205	\$64,112	\$17,799	\$115,116	\$46,766	\$108,428	\$38	\$5,680	\$160,912
Non-Residential Energy Efficiency	PY22	0.684	1.48	\$24,112	\$46,582	\$15,502	\$86,196	\$37,418	\$85,604	\$52	\$4,838	\$127,911
Non-Residential Energy Efficiency Total		0.684		\$135,349	\$297,396	\$78,549	\$511,294	\$212,575	\$492,401	\$303	\$27,592	\$732,872
Total		0.73		\$218,637	\$475,831	\$141,473	\$835,941	\$302,430	\$701,337	\$48,323	\$27,592	\$1,079,682

7.4 Tariffs and Section 1307 Cost Recovery Mechanism for Phase V Plan

As part of the implementation of PECO's Phase V EE&C Plan, PECO proposes to use a cost recovery mechanism similar to the one it used to recover the cost of its Phase IV Plan. See PECO Statement No. 4, Exhibit MAM-1, for a copy of the proposed supplement to PECO's Electric Service Tariff that contains the tariff provisions designed to implement the cost recovery mechanism for PECO's proposed Phase V EE&C Plan.

A high-level summary description of the Phase V cost recovery mechanism was provided in Section 1.9. Additional details on the Phase V cost recovery mechanism, calculations of the charge, and supporting cost documentation are provided in this section.

7.4.1 Cost Recovery Mechanism

PECO proposes to recover the cost of its Phase V EE&C Plan through an Energy Efficiency & Conservation Program Charge (EEPC) similar to the one used in Phase IV. The Phase IV EEPC was designed to comply with Section 1307 of the Public Utility Code and, as the Commission required, was reconcilable and non-bypassable. As required by the Commission in PECO's previous EE&C final implementation orders, the EEPC was not to be a separate line item on residential customers' bills and not included in the price to compare. Instead, residential customers' distribution rates were adjusted by the amount of the EEPC charge calculated for each rate class. For SCI customers, the EEPC was based on energy use or kWh. For large commercial customers, the charge was based on a PJM Peak Load Contribution (PLC). The EEPC was listed as a separate item on SCI and LCI customers' bills and was not included in the price to compare. For the Phase V EE&C Plan, PECO proposes to follow the same format as used in Phase IV.

The cost recovery mechanism for Phase V is shown in the proposed supplement to PECO's Electric Service Tariff submitted as PECO Exhibit MAM-1. The tariff language describes the cost recovery method, the formula for calculating the charge, and the charges specific to each rate class.

The Phase V EEPC will recover all of the fixed capital costs (depreciation and pre-tax return) and operating expenses, not otherwise recovered in base rates, to design and implement the EE&C programs incorporated in its Phase V EE&C Plan. These costs include, among others, the cost of information technology (IT) needed to design and implement the EE&C programs; the costs of customer outreach and program promotion; incremental labor costs incurred to manage and administer the EE&C programs on an ongoing basis; the cost to measure and verify EE&C program results; and the cost of incentives offered to customers to participate in the approved EE&C programs. PECO Exhibit MAM-2 contains a summary of the projected expenditures for each of the programs across these rate classes.

In accordance with the Phase V Final Order, PECO is required to establish a cost recovery methodology for Phase V that is designed to recover, on an annual basis, projected program costs that it anticipates will be incurred over each surcharge application year. In addition, PECO is required to reconcile actual expenses incurred with actual revenues received for the

reconciliation period. For PY18 (2026/27), the cost recovery rates are being calculated based on the projected total program expenditures allocated to each rate class for that program year plus the reconciliation amount for PY17 (2025/26) and any costs remaining from previous periods. To develop the recovery charge for each rate class for PY18 (2026/27), the total expenditure for that class was divided by the appropriate projected class billing units for the period from June 1, 2026, through May 31, 2027. Subsequently, PECO will develop Phase V recovery rates annually based on the projected program expenditures for that program year plus reconciliation amounts for previous periods. The charge that was calculated per billing unit for each rate class was grossed up to provide for recovery of Pennsylvania Gross Receipts Tax. This calculation produces a charge that, net of Pennsylvania Gross Receipts Tax, will recover the projected total expenditures over the recovery period.

The Phase V Final Order also requires PECO to remove the SWE costs from the EE&C Phase V budget in the same manner as was done in Phase IV. PECO will, therefore, track the Phase V SWE costs separately from its EE&C costs but will still recover such costs through its Phase V EEPC.

The Phase V SWE costs will be determined through an RFP bidding process. Until the final SWE costs are known, PECO has included an estimate. PECO Exhibit MAM-3 contains the detailed calculations for the development of the EEPC charges for each class as well as the SWE costs, which are reflected as a separate line item.

7.5.2 True-Up

As noted earlier, PECO's Phase V EEPC will be reconciled on an annual basis to account for any under- or over-recovery from the prior year. As the Phase V Final Order specifies, PECO will 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. The net over- or under-recovery shall be reflected (without interest) as a separate line item of the E factor calculation of the Phase V rates to become effective June 1, 2026. These rates will also include, as a separate line item, PECO's projection of its expenses related to Phase IV program implementation incurred in April and May 2026, including projected expenses to finalize any measures installed and commercially operable on or before May 31, 2026; projected expenses to finalize any contracts; and other Phase IV administrative obligations. The difference between PECO's projected and actual expenses and EEPC revenue for the months of April and May 2026 will be presented as clearly identified, separate line items in the reconciliation statement for the period April 1, 2026, through March 31, 2027.

7.5 Ensuring Recovery Alignment with Benefitting Customer Classes

PECO's cost recovery mechanism for its EE&C Plan is designed to ensure that measures are paid for by the same customer class(es) that receive the associated measures' EE&C benefits. This is accomplished by creating separate EE&C charges for the residential class, SCI class, LCI class, and Municipal Lighting class.²⁸ Incentives and program costs are tracked independently for each class to maintain transparency and accurate allocation. Project

²⁸ For Municipal Lighting, charges were developed in accordance with the Opinion and Order of Petition of PECO Energy Company for Approval of Changes to its Act 129 Phase IV Energy Efficiency and Conservation Plan, at Docket No. M-2020-3020830, adopted on May 23, 2024.

management and data systems monitor cost flows and compliance, integrating with CSP reporting for oversight.

See PECO Exhibits MAM-2 and MAM-3, which list the program costs by rate class and for the spreadsheet that shows how the EEPC was developed for each customer class according to the method just described. PECO proposes to start the recovery period for Phase V with bills sent to customers during July 2026 (June usage) and will continue through bills sent to customers in June 2031 (May usage).

7.6 Accounting for Phase V Costs versus Prior Phase Costs

In accordance with the Phase V Filing Template provided with the Commission's Secretarial Letter dated September 8, 2025, at Docket No. M-2025-3052826, PECO must provide a description of how it will account for Phase V costs separately from costs incurred in prior phases.²⁹ To satisfy this requirement, PECO will do the following:

- Account for the Phase V costs and revenues on its books separately from prior phases by setting up new general ledger accounts for Phase V costs and revenues so that there will be no comingling of prior phase costs and Phase V costs or funds in PECO's accounting records.
- Clearly and separately identify and track prior phase costs and revenues in the EEPC cost recovery and reconciliation mechanism so that Phase V costs will be reconciled against the Phase V funds collected. See the description of the cost recovery mechanism in the proposed supplement to PECO's Electric Service Tariff provided as PECO Exhibit MAM-1.

²⁹ EE&C Phase V Filing Template Secretarial Letter, issued September 8, 2025.

8. Cost-Effectiveness

This section provides an overview of the cost-effectiveness framework for Phase V. Section 8.1 details avoided costs. Section 8.2 confirms the values used for the real discount rate and nominal discount rate. Section 8.3 discusses the cost-effectiveness analysis approach. Section 8.3 provides cost-effectiveness information for Phase V, including supporting data tables.

8.1 Avoided Costs

The following sections report on the avoided capacity and energy costs that were used to conduct the cost-effectiveness analysis. PECO developed data inputs to support the avoided cost analysis based on direction from the PUC in the TRC Order.

PECO used the SWE's Avoided Cost Calculator to develop avoided cost inputs as directed in the PUC TRC Order. The final PECO Avoided Cost Calculator is included in Appendix E.

8.2 Confirm Use of 3% Real Discount Rate and 5% Nominal Discount Rate

PECO used a real discount of 3% for cost test modeling as directed in the PUC TRC Order.

8.3 Cost-Effectiveness Analysis Approach

The cost-effectiveness results in this Plan follow PUC specifications outlined in the 2026 TRC Order issued November 7, 2024. PECO calculates the TRC test at the measure, program, and portfolio levels. Key elements of the TRC Order include:

Measure life capped at 15 years

Use of gross and net energy and demand savings for benefit-cost purposes

Inclusion of quantifiable savings in fossil fuels, water consumption, and operations and maintenance (O&M) benefits

At the measure level, the TRC test compares lifetime benefits—calculated by multiplying annual savings by avoided costs for each year and discounting to present value—with lifetime costs, including incremental capital, installation, and O&M. Program-level TRC adds CSP and PECO delivery costs, while portfolio-level TRC includes all program costs plus portfolio-wide common costs. A ratio of benefits to costs ≥ 1 indicates cost-effectiveness.

PECO also screens the proposed measure mix economically using the TRC test. Although not all measures must pass individually, the overall portfolio must meet cost-effectiveness requirements. This approach supports a comprehensive mix of energy and demand savings measures for all customers while maintaining compliance.

8.4 Data Tables

Table 44 and Table 45 contains data tables as required by the PUC EE&C Plan template.

Table 44. TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
			Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
	Program Year	NTGR		Paid by EDC	Paid by Participants							
Residential Energy Efficiency	PY18	1.0	0.93	\$8,089	\$47,656	\$6,649	\$62,393	\$15,882	\$31,653	\$10,180	\$0	\$57,715
Residential Energy Efficiency	PY19	1.0	0.91	\$8,366	\$48,063	\$6,649	\$63,078	\$15,383	\$31,552	\$10,422	\$0	\$57,357
Residential Energy Efficiency	PY20	1.0	0.77	\$8,671	\$58,374	\$6,650	\$73,695	\$15,376	\$30,815	\$10,777	\$0	\$56,968
Residential Energy Efficiency	PY21	1.0	0.75	\$8,929	\$58,413	\$6,650	\$73,992	\$15,267	\$29,260	\$11,003	\$0	\$55,531
Residential Energy Efficiency	PY22	1.0	0.74	\$9,192	\$58,452	\$6,647	\$74,292	\$14,917	\$29,034	\$11,269	\$0	\$55,220
Residential Energy Efficiency Total				\$43,248	\$270,957	\$33,245	\$347,450	\$76,825	\$152,315	\$53,652	\$0	\$282,792
Residential Home Energy Reports	PY18	1.0	4.96	\$0	\$0	\$2,342	\$2,342	\$3,400	\$8,222	\$0	\$0	\$11,622
Residential Home Energy Reports	PY19	1.0	5.14	\$0	\$0	\$3,639	\$3,639	\$7,135	\$11,557	\$0	\$0	\$18,692
Residential Home Energy Reports	PY20	1.0	4.80	\$0	\$0	\$2,634	\$2,634	\$5,028	\$7,602	\$0	\$0	\$12,631
Residential Home Energy Reports	PY21	1.0	3.88	\$0	\$0	\$2,783	\$2,783	\$4,006	\$6,795	\$0	\$0	\$10,801
Residential Home Energy Reports	PY22	1.0	3.52	\$0	\$0	\$2,590	\$2,590	\$3,115	\$6,000	\$0	\$0	\$9,116
Residential Home Energy Reports Total				\$0	\$0	\$13,989	\$13,989	\$22,684	\$40,177	\$0	\$0	\$62,862
Low-Income Energy Efficiency	PY18	1.0	1.37	\$7,850	\$3,176	\$3,020	\$14,047	\$3,467	\$13,312	\$2,477	\$0	\$19,257
Low-Income Energy Efficiency	PY19	1.0	1.37	\$7,995	\$3,174	\$3,033	\$14,202	\$3,292	\$13,638	\$2,530	\$0	\$19,460
Low-Income Energy Efficiency	PY20	1.0	1.36	\$8,334	\$3,124	\$3,060	\$14,519	\$3,301	\$13,777	\$2,612	\$0	\$19,691

Low-Income Energy Efficiency	PY21	1.0	1.31	\$8,667	\$3,080	\$3,087	\$14,834	\$3,254	\$13,550	\$2,699	\$0	\$19,503
Low-Income Energy Efficiency	PY22	1.0	1.27	\$7,194	\$3,261	\$2,966	\$13,421	\$2,748	\$11,787	\$2,548	\$0	\$17,083
Low-Income Energy Efficiency Total				\$40,040	\$15,816	\$15,167	\$71,023	\$16,063	\$66,064	\$12,867	\$0	\$94,994
Low-Income Home Energy Reports	PY18	1.0	7.78	\$0	\$0	\$172	\$172	\$299	\$1,041	\$0	\$0	\$1,340
Low-Income Home Energy Reports	PY19	1.0	7.18	\$0	\$0	\$91	\$91	\$139	\$512	\$0	\$0	\$651
Low-Income Home Energy Reports	PY20	1.0	6.80	\$0	\$0	\$95	\$95	\$130	\$517	\$0	\$0	\$648
Low-Income Home Energy Reports	PY21	1.0	6.31	\$0	\$0	\$85	\$85	\$109	\$427	\$0	\$0	\$536
Low-Income Home Energy Reports	PY22	1.0	6.12	\$0	\$0	\$81	\$81	\$94	\$400	\$0	\$0	\$494
Low-Income Home Energy Reports Total				\$0	\$0	\$524	\$524	\$772	\$2,897	\$0	\$0	\$3,669
Non-Residential Energy Efficiency	PY18	1.0	1.56	\$21,105	\$78,457	\$13,076	\$112,638	\$52,133	\$116,672	\$36	\$7,072	\$175,913
Non-Residential Energy Efficiency	PY19	1.0	1.57	\$26,968	\$101,443	\$14,936	\$143,347	\$64,384	\$152,603	\$104	\$8,550	\$225,640
Non-Residential Energy Efficiency	PY20	1.0	1.40	\$29,959	\$129,049	\$17,236	\$176,244	\$71,161	\$166,875	\$172	\$9,338	\$247,546
Non-Residential Energy Efficiency	PY21	1.0	1.47	\$33,205	\$109,050	\$17,799	\$160,055	\$68,362	\$158,497	\$56	\$8,303	\$235,217
Non-Residential Energy Efficiency	PY22	1.0	1.57	\$24,112	\$79,227	\$15,502	\$118,840	\$54,697	\$125,133	\$75	\$7,072	\$186,977
Non-Residential Energy Efficiency Total				\$135,349	\$497,226	\$78,549	\$711,124	\$310,737	\$719,780	\$443	\$40,333	\$1,071,293
Total		1.0		\$218,637	\$783,999	\$141,473	\$1,144,110	\$427,081	\$981,233	\$66,962	\$40,333	\$1,515,610

Table 45. TRC Benefits (Net)

Portfolio	Program Year	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)				
		NTGR	Net TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Residential Energy Efficiency	PY18	0.655	0.85	\$8,247	\$28,288	\$6,491	\$43,026	\$10,520	\$19,629	\$6,581	\$0	\$36,730
Residential Energy Efficiency	PY19	0.655	0.83	\$8,524	\$28,459	\$6,491	\$43,474	\$10,221	\$19,279	\$6,748	\$0	\$36,248
Residential Energy Efficiency	PY20	0.655	0.71	\$8,830	\$35,110	\$6,491	\$50,430	\$10,249	\$18,458	\$6,989	\$0	\$35,696
Residential Energy Efficiency	PY21	0.655	0.68	\$9,088	\$35,046	\$6,491	\$50,626	\$10,213	\$17,107	\$7,149	\$0	\$34,469
Residential Energy Efficiency	PY22	0.655	0.69	\$9,349	\$34,981	\$6,491	\$50,821	\$10,022	\$17,886	\$7,335	\$0	\$35,243
Residential Energy Efficiency Total		0.655		\$44,038	\$161,884	\$32,456	\$238,377	\$51,225	\$92,360	\$34,801	\$0	\$178,386
Residential Home Energy Reports	PY18	1.000	4.95	\$0	\$0	\$2,267	\$2,267	\$3,402	\$7,820	\$0	\$0	\$11,223
Residential Home Energy Reports	PY19	1.000	5.80	\$0	\$0	\$3,061	\$3,061	\$7,148	\$10,613	\$0	\$0	\$17,761
Residential Home Energy Reports	PY20	1.000	3.82	\$0	\$0	\$3,061	\$3,061	\$5,046	\$6,637	\$0	\$0	\$11,683
Residential Home Energy Reports	PY21	1.000	3.11	\$0	\$0	\$3,061	\$3,061	\$4,032	\$5,476	\$0	\$0	\$9,508
Residential Home Energy Reports	PY22	1.000	2.84	\$0	\$0	\$3,061	\$3,061	\$3,148	\$5,540	\$0	\$0	\$8,688
Residential Home Energy Reports Total		1.000		\$0	\$0	\$14,513	\$14,513	\$22,776	\$36,087	\$0	\$0	\$58,863
Low-Income Energy Efficiency	PY18	1.000	1.52	\$8,372	\$2,655	\$2,499	\$13,525	\$3,494	\$14,642	\$2,456	\$0	\$20,592
Low-Income Energy Efficiency	PY19	1.000	1.52	\$8,529	\$2,640	\$2,499	\$13,668	\$3,327	\$14,939	\$2,511	\$0	\$20,776
Low-Income Energy Efficiency	PY20	1.000	1.49	\$8,896	\$2,563	\$2,499	\$13,957	\$3,345	\$14,875	\$2,594	\$0	\$20,815

Portfolio		NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)			TRC Benefits By Program Per Year (\$000)					
Program/Subprogram	Program Year	NTGR	Net TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Low-Income Energy Efficiency	PY21	1.000	1.44	\$9,256	\$2,492	\$2,499	\$14,246	\$3,309	\$14,523	\$2,683	\$0	\$20,516
Low-Income Energy Efficiency	PY22	1.000	1.42	\$7,662	\$2,793	\$2,499	\$12,953	\$2,808	\$13,015	\$2,537	\$0	\$18,360
Low-Income Energy Efficiency Total		1.000		\$42,714	\$13,142	\$12,493	\$68,349	\$16,284	\$71,994	\$12,781	\$0	\$101,058
Low-Income Home Energy Reports	PY18	1.000	18.31	\$0	\$0	\$72	\$72	\$299	\$1,011	\$0	\$0	\$1,310
Low-Income Home Energy Reports	PY19	1.000	8.04	\$0	\$0	\$78	\$78	\$139	\$489	\$0	\$0	\$628
Low-Income Home Energy Reports	PY20	1.000	7.85	\$0	\$0	\$78	\$78	\$131	\$482	\$0	\$0	\$613
Low-Income Home Energy Reports	PY21	1.000	6.35	\$0	\$0	\$78	\$78	\$110	\$387	\$0	\$0	\$496
Low-Income Home Energy Reports	PY22	1.000	6.15	\$0	\$0	\$78	\$78	\$95	\$385	\$0	\$0	\$480
Low-Income Home Energy Reports Total		1.000		\$0	\$0	\$384	\$384	\$774	\$2,754	\$0	\$0	\$3,528
Non-Residential Energy Efficiency	PY18	0.684	1.44	\$21,105	\$47,005	\$13,076	\$81,187	\$36,127	\$75,768	\$25	\$4,838	\$116,757
Non-Residential Energy Efficiency	PY19	0.684	1.45	\$26,968	\$60,878	\$14,936	\$102,782	\$44,762	\$97,937	\$70	\$5,849	\$148,618
Non-Residential Energy Efficiency	PY20	0.684	1.28	\$29,959	\$78,819	\$17,236	\$126,013	\$49,639	\$105,590	\$117	\$6,388	\$161,734
Non-Residential Energy Efficiency	PY21	0.684	1.31	\$33,205	\$64,112	\$17,799	\$115,116	\$47,817	\$97,719	\$38	\$5,680	\$151,254
Non-Residential Energy Efficiency	PY22	0.684	1.44	\$24,112	\$46,582	\$15,502	\$86,196	\$38,461	\$80,966	\$51	\$4,838	\$124,316
Non-Residential Energy Efficiency Total		0.684		\$135,349	\$297,396	\$78,549	\$511,294	\$216,806	\$457,980	\$301	\$27,592	\$702,679
Total		0.73		\$222,100	\$472,422	\$138,394	\$832,917	\$307,866	\$661,175	\$47,882	\$27,592	\$1,044,515

9. Plan Compliance Information and Other Key Issues

This section contains additional required compliance items and addresses key issues in EE&C Plan, portfolio, and program design. Section 9.1 includes how PECO will comply with Plan requirements, including low-income requirements, spending on pilots, and the midstream delivery documentation process. Section 9.2 discusses other key issues such as long-term sustainability impacts, how customer education will be carried out, and how public reporting of Act 129 activities will be handled.

9.1 Plan Compliance Considerations

9.1.1 Description of Plan

As Section 3 of this document details, PECO's EE&C Plan provides energy efficiency programs to each of its customer classes, including two specific programs for low-income households.³⁰ PECO's programs are equitably provided across its customer classes consistent with the Phase V Final Order.

9.1.2 Statement Delineating the EE&C Plan

PECO's Plan (Section 1), is projected to achieve at least 1,111,685 MWh and 194.8 MW by the end of Phase V. The EE&C Plan is projected to achieve Phase V's energy and demand savings requirements through a broad array of financial incentives. These incentives will be provided to PECO's customers through CSPs, installation companies, and trade allies (e.g., HVAC contractors and retail stores).

9.1.3 Low-Income Requirements

PECO's EE&C Plan will meet the low-income requirements by building on its low-income programs in Phase IV. The Phase V Final Order highlights the importance of collaboration between LIURP and Act 129 for all utilities. The CSP for the Residential program will continue its existing partnerships with the LIURP, Philadelphia Gas Works, and Philadelphia Water Department. To meet the required demand reduction targets, PECO envisions a much higher participation level of electrically heated homes in Phase V. The Plan includes free energy checkups with no cost install measures and free electric heat assessments with no cost measures. PECO's Plan is designed to exceed the minimum requirement that 74,456 MWh come from the two dedicated low-income subprograms and the low-income portion of multifamily through the Residential program.³¹

³⁰ Consistent with Act 129, PECO's low-income household definition is households at or below 150% of the Federal poverty income guidelines. See 66 Pa.C.S. 2806.1(b)(1)(i)(B).

³¹ See PECO's discussion in Sections 3 and 4 of this document for a detailed description of its EE&C programs and its implementation strategy.

9.1.4 Spending on Experimental Equipment or Devices Limited to 2% of Funds

PECO confirms that spending on experimental equipment and devices, including pilot projects, will be capped at 2% of the overall budget. As part of this filing, PECO proposes a residential pilot program to test hybrid heat pump load-shifting capabilities.

PECO is uniquely positioned as a dual-fuel utility and seeks to leverage natural gas resources within its service territory to achieve PDRs. As PECO's system is primarily summer peaking, the Company recognizes that achieving meaningful winter peak demand reductions presents unique challenges.

This pilot program focuses on customers utilizing hybrid heat pump systems that integrate both electric and gas heating capabilities. The objective is to evaluate the feasibility of time-based control strategies for winter peak daily load shifting. Specifically, the program will transition heating operation from the electric system to the gas system during PECO's peak hours. This approach will provide valuable insights into the operational effectiveness of time-based controls for hybrid systems as a demand-side management tool and inform future strategies for optimizing these resources. Further details on this pilot are provided in Table 46.

Table 46. Hybrid Heat Pump Load Shifting Pilot

Pilot Design	Hybrid heat pump systems present an opportunity to serve as a daily load-shifting resource. During peak demand periods, these systems can be controlled to temporarily disable the electric heat pump and rely solely on the gas furnace for heating.
Hypothesis Being Tested	Are time-based controls for hybrid heat pumps an effective method to reduce electric peak demand reduction during winter peak hours?
Budget	\$1.6 million
Participation Estimates	200 customers ³²
Estimated Savings	600 kW ³³
Estimated Timeline	Fall 2027 – Fall 2028

9.1.5 Competitively Neutral to All Electric Distribution Customers

PECO's EE&C program suite will be available to all PECO customers, regardless of whether they receive generation supply from PECO as a default service provider or from an EGS. To ensure equitable access to program benefits and prudent use of ratepayer funds, PECO may establish maximum incentive limits for individual projects. These limits are designed to prevent any single project from disproportionately utilizing available funding, while maintaining compliance with Act 129 objectives and supporting broad participation across customer classes.

³² PECO's Residential CSP will source these customers from heating and cooling system data that is available through smart thermostat data in collaboration with manufacturing partners.

³³ Value estimated based on a typical heat pump power draw in the winter for a typical system during peak hours

9.1.6 Midstream Delivery Documentation Process

PECO will work with its non-residential CSP to confirm that midstream delivery of lighting minimizes like-for-like LED replacements. Participating distributors will be required to:

- **Confirm at the point of sale** that the replaced equipment is non-LED and certify installation within 90 days, in alignment with current program standards.
- **Provide mandatory baseline documentation** through the midstream upload template, including details such as existing fixture type, to confirm accurate data capture.
- **Undergo compliance verification**, which includes randomized post-installation checks—both phone and onsite—within 90 days of purchase. Sample sizes will be adjusted based on risk factors such as distributor performance or anomalies in transaction data.
- **Follow enhanced QA/QC protocols**, including automated flags for duplicate projects or missing baseline data, and annual compliance audits.
- **Complete mandatory training** on documentation requirements and program rules, reinforced through periodic refreshers and performance reviews.

The midstream platform will track transactions and verification status, providing transparency and reporting to PECO and evaluators. Distributors that fail to meet compliance standards will be subject to corrective action plans or removal from the program. This multi-layered approach to combine front-end controls, back-end verification, and ongoing distributor engagement facilitates midstream lighting incentives that deliver real, attributable savings and supports program integrity.

9.2 Other Key Issues

9.2.1 Describe How This EE&C Plan Will Lead to Long-Term, Sustainable Energy Efficiency Savings in the EDC's Service Territory and in Pennsylvania

PECO's EE&C Plan was developed to meet or exceed the requirements of Act 129 and the Phase V Final Order. In developing the Phase V EE&C Plan, PECO combined its own experience implementing programs in Phases I - IV with lessons learned from utility demand side management programs in other jurisdictions around the country and worked with CSPs to design the programs. The proposed Plan includes a variety of proven programs and components effective across all customer classes. PECO believes that providing programs along with comprehensive education will lead to long-term sustainability through ongoing customer participation.

9.2.2 Describe, by Sector, How the EDC Will Address Customer Education for Its Programs

To educate customers on energy efficiency, PECO will conduct outreach to schools, work with community partners, speak with groups, staff tables at events, and reach diverse communities. It also will send emails to customers, distribute program materials, and canvas neighborhoods.

PECO has strong relationships with numerous community organizations who, through annual sponsorships and other partner-specific programs, help spread the word to their constituents about energy efficiency.

To help educate customers about heat pumps, PECO will include heat pump-specific technology content within its customer newsletter (bill insert) twice a year as part of seasonal readiness communications. Content will include the benefits of heat pump technology and proper maintenance instructions. PECO will provide a post-installation email to customers with instructions on proper temperature settings and an overview of how heat pump technology works with tips regarding minimization of auxiliary heat systems and proper maintenance (sourced by ENERGY STAR).

9.2.3 Describe How the EDC Will Provide the Public with Information about the Results from the Programs

PECO will periodically issue press releases to inform the public of the progress of its EE&C Plan and refer the public to where reports about PECO's Act 129 results are posted on the PUC's website. PECO will only provide information to the public after the SWE completes its review and approves PECO's annual reports.

10. Appendices

Appendix A. CSP Contracts

PECO has bid out all CSP contracts. Each winning CSP resulting in a signed contract will be filed with the PUC as required. No CSP contract will be effective until it is approved by the PUC.

Appendix B. Calculation Methods and Assumptions

Total Resource Cost Test Calculation Methods

Benefit-cost analysis of PECO's portfolio of energy efficiency programs was conducted through the use of a comprehensive benefit-cost screening tool. The tool uses the most recent savings values and inputs from the 2026 TRM. The tool uses inputs at the individual measure level (electric savings, incremental cost, participation levels, avoided costs, and energy costs) to calculate measure level savings and cost-effectiveness. The savings at the measure-level are subtotaled for each program and sector and finally for the portfolio. At the program and sector level the model calculates program level cost-effectiveness, program incentive and non-incentive costs, total program costs. The outputs are compared against target savings goals, spending caps, and cost-effectiveness limits.

The TRC test was the primary test used to analyze the cost-effectiveness of PECO's energy efficiency portfolio. The TRC test measures the total net resource expenditures of an energy efficiency program from the point of view of the utility and its ratepayers. Resource costs include changes in supply and participant costs. A program that passes this test (i.e., a ratio greater than 1.0) is viewed as beneficial to the utility and its customers because the savings in electric costs outweigh the costs incurred by the utility and its customers. Of particular note, per the PA PUC guidelines, measure lifetime is capped at 15 years, and non-electric benefits are included in the savings calculations (e.g. complementary natural gas savings from an electric efficiency measure). The following section outlines Guidehouse's methodology for conducting the cost-effectiveness analysis including an explanation of key inputs and assumptions.

Incremental Measure Costs

Estimates of incremental measure costs were developed using the 2026 SWE IMC Database. Additionally, expert judgement from PECO's implementation contractors were used to refine saving and cost estimates where appropriate, such as for direct install measures where actual costs may be used.

Incentive Costs

Incentive amounts for each measure were developed using industry standards benchmarks. These initial estimates were further refined based on careful consideration of the market for each measure or set of measures.

Administrative Costs

To determine the administrative costs, PECO followed the PUC's Phase V Final Order to have a minimum of 50% of the total budget go to incentives, including direct-install. PECO then benchmarked the Phase IV budget to determine PECO and non-PECO administrative budget. Administrative cost categories include program design, administrative spending, EDC delivery costs, CSP delivery fees, marketing, EM&V, AEPS registration support and other expenditures.

Appendix C. Program by Program Savings, Costs, and TRC Results

Table 47. Summary of EE&C Costs by Sector and Program

Cost Elements (\$)														
Sector	EE&C Program	Incentives	Program Design	Administrative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	AEPS Registration Support	Other (Describe)	Total Cost	Expected Acquisition Cost ³ (\$/MWh)	Levelized Cost ⁴ (\$/MWh)	Expected Acquisition Cost (\$/MWh)
Residential Portfolio (incl. Low-Income)	Residential Energy Efficiency	\$42,841,347	\$0	\$0	\$0	\$24,490,397	\$8,191,911	\$0	\$0	\$0	\$75,523,655	\$312	\$163	\$1,510,591
	Residential Home Energy Reports	\$0	\$0	\$0	\$0	\$13,989,327	\$0	\$0	\$0	\$0	\$13,989,327	\$98	\$26	\$434,512
	Low-Income Energy Efficiency	\$34,330,888	\$0	\$0	\$0	\$9,219,672	\$3,073,224	\$0	\$0	\$0	\$46,623,784	\$646	\$157	\$3,886,241
	Low-Income Home Energy Reports	\$0	\$0	\$0	\$0	\$523,673	\$0	\$0	\$0	\$0	\$523,673	\$97	\$26	\$488,339
	Sector Total⁵	\$77,172,235	\$0	\$0	\$0	\$48,223,069	\$11,265,135	\$0	\$0	\$0	\$136,660,438	\$296	\$138	\$1,434,589
Small C&I	Non-Residential Energy Efficiency	\$66,587,232	\$0	\$0	\$0	\$34,814,665	\$1,155,777	\$0	\$33,423	\$0	\$102,591,096	\$232	\$70	\$1,458,638
	Residential Energy Efficiency	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
	Low-Income Energy Efficiency	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
	Sector Total	\$69,645,338	\$0	\$0	\$0	\$36,103,112	\$1,585,504	\$0	\$33,423	\$0	\$107,367,377	\$237	\$69	\$1,497,440
Large C&I	Non-Residential	\$68,761,645	\$0	\$0	\$0	\$41,142,531	\$1,363,220	\$0	\$39,327	\$0	\$111,306,722	\$209	\$69	\$1,157,362

	Energy Efficiency													
	Residential Energy Efficiency	\$203,432	\$0	\$0	\$0	\$210,773	\$70,502	\$0	\$0	\$0	\$484,707	\$642	\$54	\$4,612,577
	Low-Income Energy Efficiency	\$2,854,674	\$0	\$0	\$0	\$1,077,675	\$359,225	\$0	\$0	\$0	\$4,291,574	\$472	\$23	\$3,400,476
	Sector Total	\$71,819,751	\$0	\$0	\$0	\$42,430,978	\$1,792,947	\$0	\$39,327	\$0	\$116,083,003	\$214	\$69	\$1,190,108

Table 48. Allocation of Common Costs to Applicable Customer Sector

Common Cost Element	Total Cost (\$)	Basis for Cost Allocation	Sector Cost Allocation (\$)		
			Residential (Including Low-Income)	Small C&I	Large C&I
Marketing	\$20,400,000	First Year MWh Savings	\$7,592,659	\$6,379,070	\$6,428,271
Administrative	\$4,700,000	First Year MWh Savings	\$1,749,289	\$1,469,688	\$1,481,023
Program Design	\$8,540,000	First Year MWh Savings	\$3,178,496	\$2,670,454	\$2,691,051
EM&V	\$19,600,000	First Year MWh Savings	\$7,294,908	\$6,128,911	\$6,176,182
EDC Delivery Costs	\$11,035,012	First Year MWh Savings	\$4,107,112	\$3,450,643	\$3,477,257
Other (Describe)	\$3,000,000	First Year MWh Savings	\$1,116,568	\$938,099	\$945,334
Totals	\$67,275,012		\$25,039,032	\$21,036,864	\$21,199,117
SWE Cost	\$0		\$0	\$0	\$0

Table 49. Summary of Portfolio EE&C Costs

Portfolio	Total Sector Portfolio-specific Costs	Total Common Costs	Total of All Costs
Residential (Including Low-Income)	\$136,660,438	\$25,039,032	\$161,699,470
Small C&I	\$107,322,978	\$21,036,864	\$128,359,841
Large C&I	\$116,127,403	\$21,199,117	\$137,326,519
Totals	\$360,110,819	\$67,275,012	\$427,385,831

Table 50. TRC Benefits (Gross)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
	Program Year	NTGR	Gross TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
<i>Residential Energy Efficiency</i>	<i>PY18</i>	<i>1.0</i>	<i>0.93</i>	<i>\$8,089</i>	<i>\$47,656</i>	<i>\$6,649</i>	<i>\$62,393</i>	<i>\$15,882</i>	<i>\$31,653</i>	<i>\$10,180</i>	<i>\$0</i>	<i>\$57,715</i>
<i>Residential Energy Efficiency</i>	<i>PY19</i>	<i>1.0</i>	<i>0.91</i>	<i>\$8,366</i>	<i>\$48,063</i>	<i>\$6,649</i>	<i>\$63,078</i>	<i>\$15,383</i>	<i>\$31,552</i>	<i>\$10,422</i>	<i>\$0</i>	<i>\$57,357</i>
<i>Residential Energy Efficiency</i>	<i>PY20</i>	<i>1.0</i>	<i>0.77</i>	<i>\$8,671</i>	<i>\$58,374</i>	<i>\$6,650</i>	<i>\$73,695</i>	<i>\$15,376</i>	<i>\$30,815</i>	<i>\$10,777</i>	<i>\$0</i>	<i>\$56,968</i>
<i>Residential Energy Efficiency</i>	<i>PY21</i>	<i>1.0</i>	<i>0.75</i>	<i>\$8,929</i>	<i>\$58,413</i>	<i>\$6,650</i>	<i>\$73,992</i>	<i>\$15,267</i>	<i>\$29,260</i>	<i>\$11,003</i>	<i>\$0</i>	<i>\$55,531</i>
<i>Residential Energy Efficiency</i>	<i>PY22</i>	<i>1.0</i>	<i>0.74</i>	<i>\$9,192</i>	<i>\$58,452</i>	<i>\$6,647</i>	<i>\$74,292</i>	<i>\$14,917</i>	<i>\$29,034</i>	<i>\$11,269</i>	<i>\$0</i>	<i>\$55,220</i>
<i>Residential Energy Efficiency Total</i>				<i>\$43,248</i>	<i>\$270,957</i>	<i>\$33,245</i>	<i>\$347,450</i>	<i>\$76,825</i>	<i>\$152,315</i>	<i>\$53,652</i>	<i>\$0</i>	<i>\$282,792</i>
<i>Residential Home Energy Reports</i>	<i>PY18</i>	<i>1.0</i>	<i>4.96</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,342</i>	<i>\$2,342</i>	<i>\$3,400</i>	<i>\$8,222</i>	<i>\$0</i>	<i>\$0</i>	<i>\$11,622</i>
<i>Residential Home Energy Reports</i>	<i>PY19</i>	<i>1.0</i>	<i>5.14</i>	<i>\$0</i>	<i>\$0</i>	<i>\$3,639</i>	<i>\$3,639</i>	<i>\$7,135</i>	<i>\$11,557</i>	<i>\$0</i>	<i>\$0</i>	<i>\$18,692</i>
<i>Residential Home Energy Reports</i>	<i>PY20</i>	<i>1.0</i>	<i>4.80</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,634</i>	<i>\$2,634</i>	<i>\$5,028</i>	<i>\$7,602</i>	<i>\$0</i>	<i>\$0</i>	<i>\$12,631</i>
<i>Residential Home Energy Reports</i>	<i>PY21</i>	<i>1.0</i>	<i>3.88</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,783</i>	<i>\$2,783</i>	<i>\$4,006</i>	<i>\$6,795</i>	<i>\$0</i>	<i>\$0</i>	<i>\$10,801</i>
<i>Residential Home Energy Reports</i>	<i>PY22</i>	<i>1.0</i>	<i>3.52</i>	<i>\$0</i>	<i>\$0</i>	<i>\$2,590</i>	<i>\$2,590</i>	<i>\$3,115</i>	<i>\$6,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$9,116</i>
<i>Residential Home Energy Reports Total</i>				<i>\$0</i>	<i>\$0</i>	<i>\$13,989</i>	<i>\$13,989</i>	<i>\$22,684</i>	<i>\$40,177</i>	<i>\$0</i>	<i>\$0</i>	<i>\$62,862</i>
<i>Low-Income Energy Efficiency</i>	<i>PY18</i>	<i>1.0</i>	<i>1.37</i>	<i>\$7,850</i>	<i>\$3,176</i>	<i>\$3,020</i>	<i>\$14,047</i>	<i>\$3,467</i>	<i>\$13,312</i>	<i>\$2,477</i>	<i>\$0</i>	<i>\$19,257</i>
<i>Low-Income Energy Efficiency</i>	<i>PY19</i>	<i>1.0</i>	<i>1.37</i>	<i>\$7,995</i>	<i>\$3,174</i>	<i>\$3,033</i>	<i>\$14,202</i>	<i>\$3,292</i>	<i>\$13,638</i>	<i>\$2,530</i>	<i>\$0</i>	<i>\$19,460</i>
<i>Low-Income Energy Efficiency</i>	<i>PY20</i>	<i>1.0</i>	<i>1.36</i>	<i>\$8,334</i>	<i>\$3,124</i>	<i>\$3,060</i>	<i>\$14,519</i>	<i>\$3,301</i>	<i>\$13,777</i>	<i>\$2,612</i>	<i>\$0</i>	<i>\$19,691</i>

Low-Income Energy Efficiency	PY21	1.0	1.31	\$8,667	\$3,080	\$3,087	\$14,834	\$3,254	\$13,550	\$2,699	\$0	\$19,503
Low-Income Energy Efficiency	PY22	1.0	1.27	\$7,194	\$3,261	\$2,966	\$13,421	\$2,748	\$11,787	\$2,548	\$0	\$17,083
Low-Income Energy Efficiency Total				\$40,040	\$15,816	\$15,167	\$71,023	\$16,063	\$66,064	\$12,867	\$0	\$94,994
Low-Income Home Energy Reports	PY18	1.0	7.78	\$0	\$0	\$172	\$172	\$299	\$1,041	\$0	\$0	\$1,340
Low-Income Home Energy Reports	PY19	1.0	7.18	\$0	\$0	\$91	\$91	\$139	\$512	\$0	\$0	\$651
Low-Income Home Energy Reports	PY20	1.0	6.80	\$0	\$0	\$95	\$95	\$130	\$517	\$0	\$0	\$648
Low-Income Home Energy Reports	PY21	1.0	6.31	\$0	\$0	\$85	\$85	\$109	\$427	\$0	\$0	\$536
Low-Income Home Energy Reports	PY22	1.0	6.12	\$0	\$0	\$81	\$81	\$94	\$400	\$0	\$0	\$494
Low-Income Home Energy Reports Total				\$0	\$0	\$524	\$524	\$772	\$2,897	\$0	\$0	\$3,669
Non-Residential Energy Efficiency	PY18	1.0	1.56	\$21,105	\$78,457	\$13,076	\$112,638	\$52,133	\$116,672	\$36	\$7,072	\$175,913
Non-Residential Energy Efficiency	PY19	1.0	1.57	\$26,968	\$101,443	\$14,936	\$143,347	\$64,384	\$152,603	\$104	\$8,550	\$225,640
Non-Residential Energy Efficiency	PY20	1.0	1.40	\$29,959	\$129,049	\$17,236	\$176,244	\$71,161	\$166,875	\$172	\$9,338	\$247,546
Non-Residential Energy Efficiency	PY21	1.0	1.47	\$33,205	\$109,050	\$17,799	\$160,055	\$68,362	\$158,497	\$56	\$8,303	\$235,217
Non-Residential Energy Efficiency	PY22	1.0	1.57	\$24,112	\$79,227	\$15,502	\$118,840	\$54,697	\$125,133	\$75	\$7,072	\$186,977
Non-Residential Energy Efficiency Total				\$135,349	\$497,226	\$78,549	\$711,124	\$310,737	\$719,780	\$443	\$40,333	\$1,071,293
Total		1.0		\$218,637	\$783,999	\$141,473	\$1,144,110	\$427,081	\$981,233	\$66,962	\$40,333	\$1,515,610

Table 51. TRC Benefits (Net)

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)				TRC Benefits By Program Per Year (\$000)					
	Program Year	NTGR	Net TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Residential Energy Efficiency	PY18	0.655	0.85	\$8,247	\$28,288	\$6,491	\$43,026	\$10,520	\$19,629	\$6,581	\$0	\$36,730
Residential Energy Efficiency	PY19	0.655	0.83	\$8,524	\$28,459	\$6,491	\$43,474	\$10,221	\$19,279	\$6,748	\$0	\$36,248
Residential Energy Efficiency	PY20	0.655	0.71	\$8,830	\$35,110	\$6,491	\$50,430	\$10,249	\$18,458	\$6,989	\$0	\$35,696
Residential Energy Efficiency	PY21	0.655	0.68	\$9,088	\$35,046	\$6,491	\$50,626	\$10,213	\$17,107	\$7,149	\$0	\$34,469
Residential Energy Efficiency	PY22	0.655	0.69	\$9,349	\$34,981	\$6,491	\$50,821	\$10,022	\$17,886	\$7,335	\$0	\$35,243
Residential Energy Efficiency Total		0.655		\$44,038	\$161,884	\$32,456	\$238,377	\$51,225	\$92,360	\$34,801	\$0	\$178,386
Residential Home Energy Reports	PY18	1.000	4.95	\$0	\$0	\$2,267	\$2,267	\$3,402	\$7,820	\$0	\$0	\$11,223
Residential Home Energy Reports	PY19	1.000	5.80	\$0	\$0	\$3,061	\$3,061	\$7,148	\$10,613	\$0	\$0	\$17,761
Residential Home Energy Reports	PY20	1.000	3.82	\$0	\$0	\$3,061	\$3,061	\$5,046	\$6,637	\$0	\$0	\$11,683
Residential Home Energy Reports	PY21	1.000	3.11	\$0	\$0	\$3,061	\$3,061	\$4,032	\$5,476	\$0	\$0	\$9,508
Residential Home Energy Reports	PY22	1.000	2.84	\$0	\$0	\$3,061	\$3,061	\$3,148	\$5,540	\$0	\$0	\$8,688
Residential Home Energy Reports Total		1.000		\$0	\$0	\$14,513	\$14,513	\$22,776	\$36,087	\$0	\$0	\$58,863
Low-Income Energy Efficiency	PY18	1.000	1.52	\$8,372	\$2,655	\$2,499	\$13,525	\$3,494	\$14,642	\$2,456	\$0	\$20,592
Low-Income Energy Efficiency	PY19	1.000	1.52	\$8,529	\$2,640	\$2,499	\$13,668	\$3,327	\$14,939	\$2,511	\$0	\$20,776
Low-Income Energy Efficiency	PY20	1.000	1.49	\$8,896	\$2,563	\$2,499	\$13,957	\$3,345	\$14,875	\$2,594	\$0	\$20,815

Portfolio	NTGR & TRC Ratio		TRC Costs By Program Per Year (\$000)					TRC Benefits By Program Per Year (\$000)				
	Program Year	NTGR	Net TRC	Incremental Measure Cost		Program Administration Cost	Total TRC Costs	Capacity Benefits	Energy Benefits ⁵	Fossil Fuel and Water Benefits	O&M Benefits	Total TRC Benefits
				Paid by EDC	Paid by Participants							
Low-Income Energy Efficiency	PY21	1.000	1.44	\$9,256	\$2,492	\$2,499	\$14,246	\$3,309	\$14,523	\$2,683	\$0	\$20,516
Low-Income Energy Efficiency	PY22	1.000	1.42	\$7,662	\$2,793	\$2,499	\$12,953	\$2,808	\$13,015	\$2,537	\$0	\$18,360
Low-Income Energy Efficiency Total		1.000		\$42,714	\$13,142	\$12,493	\$68,349	\$16,284	\$71,994	\$12,781	\$0	\$101,058
Low-Income Home Energy Reports	PY18	1.000	18.31	\$0	\$0	\$72	\$72	\$299	\$1,011	\$0	\$0	\$1,310
Low-Income Home Energy Reports	PY19	1.000	8.04	\$0	\$0	\$78	\$78	\$139	\$489	\$0	\$0	\$628
Low-Income Home Energy Reports	PY20	1.000	7.85	\$0	\$0	\$78	\$78	\$131	\$482	\$0	\$0	\$613
Low-Income Home Energy Reports	PY21	1.000	6.35	\$0	\$0	\$78	\$78	\$110	\$387	\$0	\$0	\$496
Low-Income Home Energy Reports	PY22	1.000	6.15	\$0	\$0	\$78	\$78	\$95	\$385	\$0	\$0	\$480
Low-Income Home Energy Reports Total		1.000		\$0	\$0	\$384	\$384	\$774	\$2,754	\$0	\$0	\$3,528
Non-Residential Energy Efficiency	PY18	0.684	1.44	\$21,105	\$47,005	\$13,076	\$81,187	\$36,127	\$75,768	\$25	\$4,838	\$116,757
Non-Residential Energy Efficiency	PY19	0.684	1.45	\$26,968	\$60,878	\$14,936	\$102,782	\$44,762	\$97,937	\$70	\$5,849	\$148,618
Non-Residential Energy Efficiency	PY20	0.684	1.28	\$29,959	\$78,819	\$17,236	\$126,013	\$49,639	\$105,590	\$117	\$6,388	\$161,734
Non-Residential Energy Efficiency	PY21	0.684	1.31	\$33,205	\$64,112	\$17,799	\$115,116	\$47,817	\$97,719	\$38	\$5,680	\$151,254
Non-Residential Energy Efficiency	PY22	0.684	1.44	\$24,112	\$46,582	\$15,502	\$86,196	\$38,461	\$80,966	\$51	\$4,838	\$124,316
Non-Residential Energy Efficiency Total		0.684		\$135,349	\$297,396	\$78,549	\$511,294	\$216,806	\$457,980	\$301	\$27,592	\$702,679
Total		0.73		\$222,100	\$472,422	\$138,394	\$832,917	\$307,866	\$661,175	\$47,882	\$27,592	\$1,044,515

Appendix D. Avoided Cost Calculator

PECO created the avoided costs after gathering publicly available data sets as inputs to support the avoided cost analysis. PECO followed direction from the PUC in the TRC Order. We have organized the information according to the tabs in the PUC's Excel avoided cost calculator.

General Instructions

Pennsylvania Act 129 Phase V Avoided Energy and Capacity Cost Calculator

This calculator is to be utilized with the Pennsylvania (PA) Act 129 Phase V Total Resource Cost (TRC) Test Order. This calculator, developed by the Statewide Evaluator (SWE), executes the methodology outlined within the TRC Test Order to develop avoided energy and capacity costs for TRC calculations. Please refer to the Phase V TRC Test Order for additional methodology narrative and source references.

For Phase V, the start year shall be set to Program Year 18 (6/1/2026 - 5/31/2027).

The user shall gather publicly available data sets as inputs.

This calculator includes the costs of compliance with the Pennsylvania Alternative Energy Portfolio Standards (AEPS) Act within the avoided energy cost calculations.

Legend	
	Inputs - where no value is available, utilize text "No Value" and not a zero or null value
	Calculation Cell - do not edit
	Results for Segment 1 - Years 1 through 4
	Results for Segment 2 - Years 5 through 10
	Results for Segment 3 - Years 11 through 20

Data Needed	TRC Test Order Section	Input Tab
EDC Name		General Inputs
Start Year		General Inputs
Inflation Rate	A.7 Page 8	General Inputs
Plant Heat Rates	B.2.b.v Page 18	General Inputs
NYMEX Electric Futures at PJM Western Hub	B.2.a Page 15	Elec Futures
PJM State of Market EDC Zone Locational Adjustment	B.2.a Page 15	Elec Futures
NYMEX Natural Gas Futures at Henry Hub	B.2.b.i Page 16	NG Futures
EIA AEO Mid Atlantic Natural Gas Price Forecast in Real Dollars	B.2.b.iii Page 16	NG Futures
NYMEX Natural Gas Adjustments at Transco 6 (Non-NY) or Tetco M-3	B.2.b.ii Page 16	Adjustments
Bureau of Labor Statistics PPI Data for Electric Utilities	B.5 Page 18	BLS Input
PJM Base Residual Auction Results	B.7 Page 21	Generation Capacity
Transmission and Distribution Capacity Costs	B.8 Page 22	T&D Capacity
AEPS Avoided Costs	B.9 Page 24	AEPS
Demand Reduction Induced Price Effects (DRIPE)	B.10 Page 25	DRIPE
Benefits Incurred Through Reduced Arrearages Activity	B.12 Page 29	Arrearages

Monetary Issues:	All output dollars are nominal
Calendarization Issues:	The PA Act 129 calendar follows the PJM calendar, which starts in the month of June and ends in the month of May. For a measure installed within a PA Act 129 program year, the avoided energy costs are based on the calendar year of the last months in the PJM calendar. For instance, a measure installed in PA Act 129 Program Year 18 (6/1/2026-5/31/2027), the avoided energy costs will be calculated based on 12 months of data from the calendar year 2027.

General Inputs

General			Calendar			
Company Name	PECO		Act 129 PY	PY Start	PY End	Avoided Energy YR
Start Year (Program)	18	2027	18	2026	2027	2027
Discount Rate	5%	TRC Test Order A.4 page 10	19	2027	2028	2028
Inflation Rate	2%	TRC Test Order B.4 page 18	20	2028	2029	2029
Plant Specifications			21	2029	2030	2030
	Heat Rate (Btu/kWh)		22	2030	2031	2031
Low Efficiency Plant	11030	TRC Test Order B.2.b.v page 17	23	2031	2032	2032
High Efficiency Plant	7596	TRC Test Order B.2.b.v page 17	24	2032	2033	2033
EDC Natural Gas Futures Source			25	2033	2034	2034
Electric Distribution Companies	EDC Abbreviation	NYMEX NG Futures Source	26	2034	2035	2035
Duquesne Light Co	DLC	Tetco M-3	27	2035	2036	2036
Metropolitan Edison Co	Met-Ed	Transco 6 (Non-NY)	28	2036	2037	2037
PECO Energy Co	PECO	Transco 6 (Non-NY)	29	2037	2038	2038
Pennsylvania Electric Co	Penelec	Tetco M-3	30	2038	2039	2039
Pennsylvania Power Co	Penn Power	Tetco M-3	31	2039	2040	2040
PPL Utilities	PPL	Transco 6 (Non-NY)	32	2040	2041	2041
West Penn Power Co	West Penn	Tetco M-3	33	2041	2042	2042
Seasonal Definitions			34	2042	2043	2043
Jan	Winter		35	2043	2044	2044
Feb	Winter		36	2044	2045	2045
Mar	Shoulder		37	2045	2046	2046
Apr	Shoulder		38	2046	2047	2047
May	Summer		39	2047	2048	2048
Jun	Summer		40	2048	2049	2049
Jul	Summer		41	2049	2050	2050
Aug	Summer		42	2050	2051	2051
Sep	Summer		43	2051	2052	2052
Oct	Shoulder		44	2052	2053	2053
Nov	Shoulder		45	2053	2054	2054
Dec	Winter		46	2054	2055	2055
			47	2055	2056	2056

Outputs

PA ACT 129 Program Year	Year	PECO Zone Summer (\$/MWh)		PECO Zone Winter (\$/MWh)		PECO DLC Zone Shoulder (\$/MWh)		PECO Generation Capacity (\$/kW/year)		PECO Transmission Capacity (\$/kW/year)		PECO Distribution Capacity (\$/kW/year)		Avoided Natural Gas Fuel Costs (\$/MMBTU)	
		Summer On-Peak	Summer Off-Peak	Winter On-Peak	Winter Off-Peak	Shoulder On-Peak	Shoulder Off-Peak	Summer	Winter	Summer	Winter	Summer	Winter		
18	2027	\$79.44	\$58.18	\$94.46	\$83.19	\$72.51	\$61.06	\$93.84	\$93.84	\$22.48	\$0.00	\$39.61	\$10.26	\$4.07	Segment 1
19	2028	\$91.75	\$70.15	\$107.40	\$96.45	\$84.44	\$73.01	\$66.38	\$66.38	\$22.94	\$0.00	\$47.21	\$5.67	\$3.90	
20	2029	\$101.74	\$79.21	\$117.92	\$106.30	\$94.21	\$82.14	\$65.69	\$65.69	\$23.42	\$0.00	\$49.64	\$5.54	\$3.78	
21	2030	\$63.14	\$55.29	\$102.46	\$82.37	\$66.40	\$57.53	\$67.02	\$67.02	\$23.90	\$0.00	\$51.04	\$5.08	\$3.68	
22	2031	\$55.63	\$38.33	\$76.67	\$64.52	\$50.84	\$41.06	\$31.83	\$31.83	\$24.40	\$0.00	\$50.53	\$7.16	\$3.51	Segment 2
23	2032	\$55.81	\$38.50	\$78.16	\$65.59	\$51.17	\$41.34	\$32.49	\$32.49	\$24.90	\$0.00	\$51.57	\$7.31	\$3.54	
24	2033	\$57.99	\$40.04	\$81.71	\$68.08	\$53.28	\$42.84	\$33.17	\$33.17	\$25.42	\$0.00	\$52.64	\$7.46	\$3.76	
25	2034	\$60.45	\$41.79	\$85.93	\$71.04	\$55.91	\$44.70	\$33.85	\$33.85	\$25.95	\$0.00	\$53.73	\$7.62	\$4.01	
26	2035	\$62.74	\$43.41	\$89.83	\$73.77	\$58.49	\$46.52	\$34.56	\$34.56	\$26.48	\$0.00	\$54.85	\$7.78	\$4.25	
27	2036	\$64.89	\$44.94	\$93.66	\$76.46	\$60.67	\$48.08	\$35.27	\$35.27	\$27.03	\$0.00	\$55.98	\$7.94	\$4.47	
28	2037	\$65.88	\$45.68	\$94.92	\$77.38	\$61.71	\$48.84	\$36.00	\$36.00	\$27.59	\$0.00	\$57.14	\$8.10	\$4.55	Segment 3
29	2038	\$65.29	\$45.33	\$93.25	\$76.28	\$61.04	\$48.43	\$36.75	\$36.75	\$28.16	\$0.00	\$58.33	\$8.27	\$4.46	
30	2039	\$64.89	\$45.10	\$92.04	\$75.50	\$60.57	\$48.17	\$37.51	\$37.51	\$28.75	\$0.00	\$59.53	\$8.44	\$4.38	
31	2040	\$65.31	\$45.45	\$92.80	\$76.08	\$61.02	\$48.53	\$38.29	\$38.29	\$29.34	\$0.00	\$60.77	\$8.62	\$4.41	
32	2041	\$66.60	\$46.39	\$95.67	\$78.11	\$62.43	\$49.55	\$39.08	\$39.08	\$29.95	\$0.00	\$62.03	\$8.80	\$4.55	
33	2042	\$68.02	\$47.42	\$98.85	\$80.36	\$63.98	\$50.68	\$39.89	\$39.89	\$30.57	\$0.00	\$63.31	\$8.98	\$4.71	
34	2043	\$69.48	\$48.48	\$102.13	\$82.67	\$65.59	\$51.84	\$40.72	\$40.72	\$31.20	\$0.00	\$64.62	\$9.16	\$4.87	
35	2044	\$70.47	\$49.23	\$104.28	\$84.21	\$66.68	\$52.65	\$41.56	\$41.56	\$31.85	\$0.00	\$65.96	\$9.35	\$4.97	
36	2045	\$71.24	\$49.82	\$105.86	\$85.37	\$67.51	\$53.29	\$42.42	\$42.42	\$32.51	\$0.00	\$67.33	\$9.55	\$5.05	
37	2046	\$31.50	\$22.51	\$9.19	\$18.85	\$23.29	\$22.90	\$43.30	\$43.30	\$33.18	\$0.00	\$68.72	\$9.75	\$0.00	

LI Outputs

PA ACT 129 Program Year	Year	PECO Zone Summer (\$/MWh)		PECO Zone Winter (\$/MWh)		PECO DLC Zone Shoulder (\$/MWh)		PECO Generation Capacity (\$/kW/year)		PECO Transmission Capacity (\$/kW/year)		PECO Distribution Capacity (\$/kW/year)		Avoided Natural Gas Fuel Costs (\$/MMBTU)	
		Summer On- Peak	Summer Off- Peak	Winter On- Peak	Winter Off- Peak	Shoulder On- Peak	Shoulder Off- Peak	Summer	Winter	Summer	Winter	Summer	Winter		
18	2027	\$137.58	\$116.32	\$152.60	\$141.33	\$130.65	\$119.20	\$93.84	\$93.84	\$22.48	\$0.00	\$39.61	\$10.26	\$4.07	Segment 1
19	2028	\$151.05	\$129.45	\$166.70	\$155.75	\$143.74	\$132.31	\$66.38	\$66.38	\$22.94	\$0.00	\$47.21	\$5.67	\$3.90	
20	2029	\$162.23	\$139.70	\$178.41	\$166.79	\$154.70	\$142.63	\$65.69	\$65.69	\$23.42	\$0.00	\$49.64	\$5.54	\$3.78	
21	2030	\$124.83	\$116.99	\$164.16	\$144.07	\$128.10	\$119.23	\$67.02	\$67.02	\$23.90	\$0.00	\$51.04	\$5.08	\$3.68	
22	2031	\$118.57	\$101.26	\$139.60	\$127.45	\$113.77	\$104.00	\$31.83	\$31.83	\$24.40	\$0.00	\$50.53	\$7.16	\$3.51	Segment 2
23	2032	\$120.01	\$102.69	\$142.35	\$129.78	\$115.36	\$105.53	\$32.49	\$32.49	\$24.90	\$0.00	\$51.57	\$7.31	\$3.54	
24	2033	\$123.46	\$105.52	\$147.18	\$133.56	\$118.76	\$108.32	\$33.17	\$33.17	\$25.42	\$0.00	\$52.64	\$7.46	\$3.76	
25	2034	\$127.23	\$108.57	\$152.72	\$137.82	\$122.70	\$111.49	\$33.85	\$33.85	\$25.95	\$0.00	\$53.73	\$7.62	\$4.01	
26	2035	\$130.86	\$111.53	\$157.95	\$141.89	\$126.61	\$114.64	\$34.56	\$34.56	\$26.48	\$0.00	\$54.85	\$7.78	\$4.25	Segment 3
27	2036	\$134.37	\$114.43	\$163.14	\$145.94	\$130.15	\$117.56	\$35.27	\$35.27	\$27.03	\$0.00	\$55.98	\$7.94	\$4.47	
28	2037	\$136.75	\$116.55	\$165.79	\$148.25	\$132.58	\$119.71	\$36.00	\$36.00	\$27.59	\$0.00	\$57.14	\$8.10	\$4.55	
29	2038	\$137.58	\$117.62	\$165.54	\$148.57	\$133.33	\$120.72	\$36.75	\$36.75	\$28.16	\$0.00	\$58.33	\$8.27	\$4.46	
30	2039	\$138.63	\$118.84	\$165.77	\$149.23	\$134.31	\$121.90	\$37.51	\$37.51	\$28.75	\$0.00	\$59.53	\$8.44	\$4.38	
31	2040	\$140.52	\$120.66	\$168.01	\$151.29	\$136.23	\$123.74	\$38.29	\$38.29	\$29.34	\$0.00	\$60.77	\$8.62	\$4.41	
32	2041	\$143.31	\$123.10	\$172.38	\$154.82	\$139.14	\$126.27	\$39.08	\$39.08	\$29.95	\$0.00	\$62.03	\$8.80	\$4.55	
33	2042	\$146.27	\$125.67	\$177.10	\$158.61	\$142.23	\$128.93	\$39.89	\$39.89	\$30.57	\$0.00	\$63.31	\$8.98	\$4.71	
34	2043	\$149.29	\$128.30	\$181.94	\$162.49	\$145.40	\$131.66	\$40.72	\$40.72	\$31.20	\$0.00	\$64.62	\$9.16	\$4.87	
35	2044	\$151.88	\$130.64	\$185.69	\$165.62	\$148.09	\$134.06	\$41.56	\$41.56	\$31.85	\$0.00	\$65.96	\$9.35	\$4.97	
36	2045	\$154.28	\$132.86	\$188.90	\$168.40	\$150.55	\$136.32	\$42.42	\$42.42	\$32.51	\$0.00	\$67.33	\$9.55	\$5.05	
37	2046	\$116.20	\$107.21	\$93.89	\$103.55	\$107.99	\$107.59	\$43.30	\$43.30	\$33.18	\$0.00	\$68.72	\$9.75	\$0.00	

Elec Futures

Record Field	Period	NYMEX: PJM Western Hub On-peak (Nominal \$/MWh)	NYMEX: PJM Western Hub Off-peak (Nominal \$/MWh)	PECO Zone Adjusted On-Peak (Nominal \$/MWh)	PECO Zone Adjusted Off-Peak (Nominal \$/MWh)
1	Jan-26	\$82.25	\$66.70	\$73.22	\$59.38
2	Feb-26	\$72.35	\$62.30	\$64.41	\$55.46
3	Mar-26	\$53.00	\$47.25	\$47.18	\$42.07
4	Apr-26	\$50.75	\$38.50	\$45.18	\$34.28
5	May-26	\$55.90	\$38.15	\$49.77	\$33.96
6	Jun-26	\$57.35	\$36.90	\$51.06	\$32.85
7	Jul-26	\$78.35	\$44.20	\$69.75	\$39.35
8	Aug-26	\$69.50	\$41.30	\$61.87	\$36.77
9	Sep-26	\$58.65	\$36.40	\$52.21	\$32.41
10	Oct-26	\$53.00	\$38.30	\$47.18	\$34.10
11	Nov-26	\$56.80	\$44.95	\$50.57	\$40.02
12	Dec-26	\$69.90	\$58.90	\$62.23	\$52.44
13	Jan-27	\$92.85	\$76.50	\$82.66	\$68.11
14	Feb-27	\$81.80	\$69.85	\$72.82	\$62.19
15	Mar-27	\$61.70	\$50.75	\$54.93	\$45.18
16	Apr-27	\$55.50	\$40.70	\$49.41	\$36.23
17	May-27	\$56.80	\$39.85	\$50.57	\$35.48
18	Jun-27	\$58.35	\$38.60	\$51.95	\$34.36
19	Jul-27	\$79.80	\$45.90	\$71.04	\$40.86
20	Aug-27	\$70.60	\$42.55	\$62.85	\$37.88
21	Sep-27	\$59.65	\$38.90	\$53.10	\$34.63
22	Oct-27	\$53.95	\$39.85	\$48.03	\$35.48
23	Nov-27	\$57.90	\$46.30	\$51.55	\$41.22
24	Dec-27	\$71.10	\$61.40	\$63.30	\$54.66
25	Jan-28	\$97.00	\$80.75	\$86.36	\$71.89
26	Feb-28	\$85.35	\$73.80	\$75.98	\$65.70
27	Mar-28	\$64.35	\$53.85	\$57.29	\$47.94
28	Apr-28	\$57.90	\$43.40	\$51.55	\$38.64
29	May-28	\$59.35	\$42.20	\$52.84	\$37.57
30	Jun-28	\$60.95	\$41.00	\$54.26	\$36.50
31	Jul-28	\$83.35	\$48.70	\$74.20	\$43.36
32	Aug-28	\$73.80	\$45.15	\$65.70	\$40.20
33	Sep-28	\$62.30	\$41.40	\$55.46	\$36.86
34	Oct-28	\$56.35	\$42.20	\$50.17	\$37.57
35	Nov-28	\$60.35	\$48.15	\$53.73	\$42.87
36	Dec-28	\$74.25	\$65.15	\$66.10	\$58.00
37	Jan-29	\$100.35	\$83.20	\$89.34	\$74.07
38	Feb-29	\$88.35	\$76.00	\$78.66	\$67.66
39	Mar-29	\$66.60	\$55.45	\$59.29	\$49.37
40	Apr-29	\$60.05	\$44.65	\$53.46	\$39.75
41	May-29	\$61.40	\$43.55	\$54.66	\$38.77
42	Jun-29	\$63.10	\$42.25	\$56.18	\$37.61
43	Jul-29	\$86.30	\$50.15	\$76.83	\$44.65
44	Aug-29	\$76.30	\$46.50	\$67.93	\$41.40
45	Sep-29	\$64.50	\$42.65	\$57.42	\$37.97
46	Oct-29	\$58.25	\$43.55	\$51.86	\$38.77
47	Nov-29	\$62.55	\$49.60	\$55.69	\$44.16
48	Dec-29	\$76.80	\$67.15	\$68.37	\$59.78
49	Jan-30	\$87.20	\$60.05	\$77.63	\$53.46
50	Feb-30	\$74.70	\$51.44	\$66.50	\$45.80
51	Mar-30	\$38.06	\$26.21	\$33.88	\$23.33
52	Apr-30	\$29.59	\$20.38	\$26.35	\$18.14
53	May-30	\$26.86	\$18.50	\$23.91	\$16.47
54	Jun-30	\$28.40	\$19.56	\$25.28	\$17.41
55	Jul-30	\$30.15	\$20.76	\$26.84	\$18.48
56	Aug-30	\$29.72	\$20.47	\$26.46	\$18.22
57	Sep-30	\$26.46	\$18.22	\$23.55	\$16.22
58	Oct-30	\$25.18	\$17.34	\$22.42	\$15.44
59	Nov-30	\$35.10	\$24.17	\$31.24	\$21.52
60	Dec-30	\$55.56	\$38.26	\$49.46	\$34.06
End of Segment I					

Real-Time, Load-Weighted LMPs (\$/MWh)

EDC	2020	2021	2022	2023	2024	Basis Factor
Western Hub	\$ 20.92	\$ 38.88	\$ 77.53	\$ 31.78	\$ 30.84	
PECO	\$ 19.29	\$ 33.55	\$ 71.67	\$ 23.63	\$ 29.87	89%

Source: PJM State of the Market Report, Tables in chapter 11

NG Futures

EIA AEO Mid-Atlantic Data
(Electric Power, Natural Gas 20XX Dollars)
[\$/MMBTU]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Real	\$2.72	\$2.78	\$2.64	\$2.58	\$2.64	\$2.77	\$2.87	\$3.22	\$3.48	\$3.60	\$3.63	\$3.61	\$3.52	\$3.38	\$3.26	\$3.22	\$3.25	\$3.30	\$3.34	\$3.35	\$3.33
Nominal	\$2.78	\$2.89	\$2.80	\$2.79	\$2.92	\$3.12	\$3.29	\$3.78	\$4.16	\$4.39	\$4.52	\$4.58	\$4.55	\$4.46	\$4.38	\$4.41	\$4.55	\$4.71	\$4.87	\$4.97	\$5.05

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
1	Jan-26	Jan	2026	\$4.28	\$7.61	\$6.03	\$7.61
2	Feb-26	Feb	2026	\$4.05	\$6.55	\$5.16	\$6.55
3	Mar-26	Mar	2026	\$3.69	\$3.56	\$2.69	\$3.56
4	Apr-26	Apr	2026	\$3.60	\$3.19	\$2.15	\$3.19
5	May-26	May	2026	\$3.62	\$3.00	\$1.97	\$3.00
6	Jun-26	Jun	2026	\$3.78	\$3.16	\$2.07	\$3.16
7	Jul-26	Jul	2026	\$3.97	\$3.36	\$2.20	\$3.36
8	Aug-26	Aug	2026	\$4.03	\$3.31	\$2.17	\$3.31
9	Sep-26	Sep	2026	\$3.99	\$3.01	\$1.96	\$3.01
10	Oct-26	Oct	2026	\$4.04	\$2.88	\$1.87	\$2.88
11	Nov-26	Nov	2026	\$4.25	\$3.76	\$2.53	\$3.76
12	Dec-26	Dec	2026	\$4.67	\$5.59	\$3.91	\$5.59
13	Jan-27	Jan	2027	\$4.90	\$8.24	\$5.83	\$8.24
14	Feb-27	Feb	2027	\$4.58	\$7.09	\$5.00	\$7.09
15	Mar-27	Mar	2027	\$3.92	\$3.79	\$2.60	\$3.79
16	Apr-27	Apr	2027	\$3.51	\$3.10	\$2.08	\$3.10
17	May-27	May	2027	\$3.49	\$2.87	\$1.90	\$2.87
18	Jun-27	Jun	2027	\$3.61	\$2.99	\$2.01	\$2.99
19	Jul-27	Jul	2027	\$3.77	\$3.15	\$2.13	\$3.15
20	Aug-27	Aug	2027	\$3.83	\$3.12	\$2.10	\$3.12
21	Sep-27	Sep	2027	\$3.80	\$2.82	\$1.89	\$2.82
22	Oct-27	Oct	2027	\$3.86	\$2.71	\$1.81	\$2.71
23	Nov-27	Nov	2027	\$4.06	\$3.58	\$2.44	\$3.58
24	Dec-27	Dec	2027	\$4.48	\$5.40	\$3.78	\$5.40
25	Jan-28	Jan	2028	\$4.76	\$8.09	\$5.81	\$8.09
26	Feb-28	Feb	2028	\$4.38	\$6.89	\$4.98	\$6.89
27	Mar-28	Mar	2028	\$3.75	\$3.62	\$2.59	\$3.62
28	Apr-28	Apr	2028	\$3.32	\$2.91	\$2.07	\$2.91
29	May-28	May	2028	\$3.30	\$2.68	\$1.90	\$2.68
30	Jun-28	Jun	2028	\$3.43	\$2.81	\$2.00	\$2.81
31	Jul-28	Jul	2028	\$3.60	\$2.98	\$2.12	\$2.98
32	Aug-28	Aug	2028	\$3.66	\$2.94	\$2.10	\$2.94
33	Sep-28	Sep	2028	\$3.63	\$2.66	\$1.89	\$2.66
34	Oct-28	Oct	2028	\$3.69	\$2.54	\$1.81	\$2.54
35	Nov-28	Nov	2028	\$3.88	\$3.40	\$2.44	\$3.40
36	Dec-28	Dec	2028	\$4.31	\$5.23	\$3.77	\$5.23
37	Jan-29	Jan	2029	\$4.58	\$7.91	\$6.08	\$7.91
38	Feb-29	Feb	2029	\$4.29	\$6.80	\$5.21	\$6.80
39	Mar-29	Mar	2029	\$3.59	\$3.46	\$2.71	\$3.46
40	Apr-29	Apr	2029	\$3.16	\$2.75	\$2.17	\$2.75
41	May-29	May	2029	\$3.14	\$2.52	\$1.99	\$2.52
42	Jun-29	Jun	2029	\$3.30	\$2.68	\$2.09	\$2.68
43	Jul-29	Jul	2029	\$3.49	\$2.87	\$2.22	\$2.87
44	Aug-29	Aug	2029	\$3.56	\$2.84	\$2.19	\$2.84
45	Sep-29	Sep	2029	\$3.54	\$2.56	\$1.98	\$2.56
46	Oct-29	Oct	2029	\$3.61	\$2.45	\$1.89	\$2.45
47	Nov-29	Nov	2029	\$3.80	\$3.32	\$2.55	\$3.32
48	Dec-29	Dec	2029	\$4.24	\$5.17	\$3.94	\$5.17
49	Jan-30	Jan	2030	\$4.51	\$7.91	\$6.51	\$7.91
50	Feb-30	Feb	2030	\$4.22	\$6.77	\$5.58	\$6.77

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
51	Mar-30	Mar	2030	\$3.58	\$3.45	\$2.90	\$3.45
52	Apr-30	Apr	2030	\$3.10	\$2.68	\$2.32	\$2.68
53	May-30	May	2030	\$3.07	\$2.43	\$2.13	\$2.43
54	Jun-30	Jun	2030	\$3.21	\$2.57	\$2.24	\$2.57
55	Jul-30	Jul	2030	\$3.36	\$2.73	\$2.38	\$2.73
56	Aug-30	Aug	2030	\$3.42	\$2.69	\$2.35	\$2.69
57	Sep-30	Sep	2030	\$3.40	\$2.40	\$2.11	\$2.40
58	Oct-30	Oct	2030	\$3.46	\$2.28	\$2.02	\$2.28
59	Nov-30	Nov	2030	\$3.67	\$3.18	\$2.73	\$3.18
60	Dec-30	Dec	2030	\$4.09	\$5.04	\$4.22	\$5.04
61	Jan-31	Jan	2031	\$4.32	\$7.78	\$6.86	\$7.65
62	Feb-31	Feb	2031	\$4.04	\$6.65	\$5.88	\$6.54
63	Mar-31	Mar	2031	\$3.42	\$3.29	\$3.06	\$3.26
64	Apr-31	Apr	2031	\$2.95	\$2.53	\$2.44	\$2.51
65	May-31	May	2031	\$2.94	\$2.29	\$2.24	\$2.28
66	Jun-31	Jun	2031	\$3.08	\$2.43	\$2.36	\$2.42
67	Jul-31	Jul	2031	\$3.24	\$2.60	\$2.51	\$2.59
68	Aug-31	Aug	2031	\$3.31	\$2.57	\$2.48	\$2.55
69	Sep-31	Sep	2031	\$3.28	\$2.26	\$2.23	\$2.26
70	Oct-31	Oct	2031	\$3.34	\$2.14	\$2.13	\$2.14
71	Nov-31	Nov	2031	\$3.54	\$3.04	\$2.88	\$3.01
72	Dec-31	Dec	2031	\$3.97	\$4.93	\$4.45	\$4.86
73	Jan-32	Jan	2032	\$4.26	\$7.79	\$7.87	\$7.82
74	Feb-32	Feb	2032	\$3.95	\$6.61	\$6.74	\$6.65
75	Mar-32	Mar	2032	\$3.29	\$3.16	\$3.51	\$3.26
76	Apr-32	Apr	2032	\$2.83	\$2.40	\$2.80	\$2.52
77	May-32	May	2032	\$2.82	\$2.16	\$2.57	\$2.28
78	Jun-32	Jun	2032	\$2.97	\$2.31	\$2.71	\$2.42
79	Jul-32	Jul	2032	\$3.14	\$2.49	\$2.87	\$2.60
80	Aug-32	Aug	2032	\$3.21	\$2.45	\$2.84	\$2.56
81	Sep-32	Sep	2032	\$3.18	\$2.14	\$2.56	\$2.26
82	Oct-32	Oct	2032	\$3.26	\$2.03	\$2.44	\$2.15
83	Nov-32	Nov	2032	\$3.49	\$2.98	\$3.30	\$3.07
84	Dec-32	Dec	2032	\$3.92	\$4.90	\$5.10	\$4.96
85	Jan-33	Jan	2033	\$4.17	\$7.77	\$8.68	\$8.16
86	Feb-33	Feb	2033	\$3.90	\$6.61	\$7.43	\$6.97
87	Mar-33	Mar	2033	\$3.28	\$3.14	\$3.87	\$3.45
88	Apr-33	Apr	2033	\$2.83	\$2.39	\$3.09	\$2.69
89	May-33	May	2033	\$2.86	\$2.19	\$2.83	\$2.47
90	Jun-33	Jun	2033	\$3.00	\$2.33	\$2.98	\$2.61
91	Jul-33	Jul	2033	\$3.17	\$2.50	\$3.17	\$2.79
92	Aug-33	Aug	2033	\$3.22	\$2.45	\$3.13	\$2.74
93	Sep-33	Sep	2033	\$3.20	\$2.14	\$2.82	\$2.43
94	Oct-33	Oct	2033	\$3.24	\$2.00	\$2.69	\$2.29
95	Nov-33	Nov	2033	\$3.50	\$2.98	\$3.64	\$3.26
96	Dec-33	Dec	2033	\$3.90	\$4.91	\$5.63	\$5.22
97	Jan-34	Jan	2034	\$4.16	\$7.84	\$9.14	\$8.58
98	Feb-34	Feb	2034	\$3.92	\$6.69	\$7.83	\$7.34
99	Mar-34	Mar	2034	\$3.32	\$3.18	\$4.07	\$3.69
100	Apr-34	Apr	2034	\$2.92	\$2.47	\$3.26	\$2.92

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
101	May-34	May	2034	\$2.95	\$2.26	\$2.99	\$2.68
102	Jun-34	Jun	2034	\$3.08	\$2.39	\$3.14	\$2.82
103	Jul-34	Jul	2034	\$3.22	\$2.55	\$3.34	\$3.00
104	Aug-34	Aug	2034	\$3.26	\$2.47	\$3.30	\$2.94
105	Sep-34	Sep	2034	\$3.28	\$2.20	\$2.97	\$2.64
106	Oct-34	Oct	2034	\$3.33	\$2.05	\$2.84	\$2.50
107	Nov-34	Nov	2034	\$3.57	\$3.03	\$3.83	\$3.49
108	Dec-34	Dec	2034	\$3.97	\$4.99	\$5.93	\$5.53
109	Jan-35	Jan	2035	\$4.19	\$7.94	\$9.41	\$8.99
110	Feb-35	Feb	2035	\$3.95	\$6.77	\$8.06	\$7.69
111	Mar-35	Mar	2035	\$3.52	\$3.37	\$4.19	\$3.96
112	Apr-35	Apr	2035	\$3.19	\$2.73	\$3.35	\$3.17
113	May-35	May	2035	\$3.16	\$2.47	\$3.07	\$2.90
114	Jun-35	Jun	2035	\$3.20	\$2.50	\$3.24	\$3.03
115	Jul-35	Jul	2035	\$3.24	\$2.55	\$3.44	\$3.18
116	Aug-35	Aug	2035	\$3.28	\$2.47	\$3.39	\$3.13
117	Sep-35	Sep	2035	\$3.29	\$2.19	\$3.06	\$2.81
118	Oct-35	Oct	2035	\$3.34	\$2.04	\$2.92	\$2.67
119	Nov-35	Nov	2035	\$3.54	\$3.00	\$3.94	\$3.67
120	Dec-35	Dec	2035	\$3.94	\$4.99	\$6.10	\$5.78
121	Jan-36	Jan	2036	\$4.53	\$8.36	\$9.54	\$9.38
122	Feb-36	Feb	2036	\$4.24	\$7.12	\$8.18	\$8.03
123	Mar-36	Mar	2036	\$3.63	\$3.48	\$4.25	\$4.14
124	Apr-36	Apr	2036	\$3.21	\$2.74	\$3.40	\$3.31
125	May-36	May	2036	\$3.21	\$2.50	\$3.12	\$3.03
126	Jun-36	Jun	2036	\$3.35	\$2.64	\$3.28	\$3.19
127	Jul-36	Jul	2036	\$3.50	\$2.79	\$3.49	\$3.39
128	Aug-36	Aug	2036	\$3.56	\$2.74	\$3.44	\$3.34
129	Sep-36	Sep	2036	\$3.54	\$2.42	\$3.10	\$3.00
130	Oct-36	Oct	2036	\$3.60	\$2.27	\$2.96	\$2.87
131	Nov-36	Nov	2036	\$3.82	\$3.27	\$4.00	\$3.90
132	Dec-36	Dec	2036	\$4.25	\$5.32	\$6.19	\$6.06
133	Jan-37	Jan	2037	\$4.44	\$8.35	\$9.49	\$9.49
134	Feb-37	Feb	2037	\$4.15	\$7.09	\$8.13	\$8.13
135	Mar-37	Mar	2037	\$3.55	\$3.40	\$4.23	\$4.23
136	Apr-37	Apr	2037	\$3.15	\$2.68	\$3.38	\$3.38
137	May-37	May	2037	\$3.14	\$2.41	\$3.10	\$3.10
138	Jun-37	Jun	2037	\$3.28	\$2.55	\$3.26	\$3.26
139	Jul-37	Jul	2037	\$3.43	\$2.71	\$3.46	\$3.46
140	Aug-37	Aug	2037	\$3.49	\$2.65	\$3.42	\$3.42
141	Sep-37	Sep	2037	\$3.47	\$2.33	\$3.08	\$3.08
142	Oct-37	Oct	2037	\$3.53	\$2.18	\$2.95	\$2.95
143	Nov-37	Nov	2037	\$3.74	\$3.18	\$3.98	\$3.98
144	Dec-37	Dec	2037	\$4.17	\$5.26	\$6.15	\$6.15
145	Jan-38	Jan	2038			\$9.29	\$9.29
146	Feb-38	Feb	2038			\$7.96	\$7.96
147	Mar-38	Mar	2038			\$4.14	\$4.14
148	Apr-38	Apr	2038			\$3.31	\$3.31
149	May-38	May	2038			\$3.03	\$3.03
150	Jun-38	Jun	2038			\$3.19	\$3.19

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
151	Jul-38	Jul	2038			\$3.39	\$3.39
152	Aug-38	Aug	2038			\$3.35	\$3.35
153	Sep-38	Sep	2038			\$3.02	\$3.02
154	Oct-38	Oct	2038			\$2.88	\$2.88
155	Nov-38	Nov	2038			\$3.89	\$3.89
156	Dec-38	Dec	2038			\$6.02	\$6.02
157	Jan-39	Jan	2039			\$9.14	\$9.14
158	Feb-39	Feb	2039			\$7.83	\$7.83
159	Mar-39	Mar	2039			\$4.07	\$4.07
160	Apr-39	Apr	2039			\$3.25	\$3.25
161	May-39	May	2039			\$2.98	\$2.98
162	Jun-39	Jun	2039			\$3.14	\$3.14
163	Jul-39	Jul	2039			\$3.34	\$3.34
164	Aug-39	Aug	2039			\$3.30	\$3.30
165	Sep-39	Sep	2039			\$2.97	\$2.97
166	Oct-39	Oct	2039			\$2.84	\$2.84
167	Nov-39	Nov	2039			\$3.83	\$3.83
168	Dec-39	Dec	2039			\$5.92	\$5.92
169	Jan-40	Jan	2040			\$9.20	\$9.20
170	Feb-40	Feb	2040			\$7.88	\$7.88
171	Mar-40	Mar	2040			\$4.10	\$4.10
172	Apr-40	Apr	2040			\$3.28	\$3.28
173	May-40	May	2040			\$3.00	\$3.00
174	Jun-40	Jun	2040			\$3.16	\$3.16
175	Jul-40	Jul	2040			\$3.36	\$3.36
176	Aug-40	Aug	2040			\$3.32	\$3.32
177	Sep-40	Sep	2040			\$2.99	\$2.99
178	Oct-40	Oct	2040			\$2.86	\$2.86
179	Nov-40	Nov	2040			\$3.86	\$3.86
180	Dec-40	Dec	2040			\$5.96	\$5.96
181	Jan-41	Jan	2041			\$9.49	\$9.49
182	Feb-41	Feb	2041			\$8.13	\$8.13
183	Mar-41	Mar	2041			\$4.23	\$4.23
184	Apr-41	Apr	2041			\$3.38	\$3.38
185	May-41	May	2041			\$3.10	\$3.10
186	Jun-41	Jun	2041			\$3.26	\$3.26
187	Jul-41	Jul	2041			\$3.47	\$3.47
188	Aug-41	Aug	2041			\$3.42	\$3.42
189	Sep-41	Sep	2041			\$3.08	\$3.08
190	Oct-41	Oct	2041			\$2.95	\$2.95
191	Nov-41	Nov	2041			\$3.98	\$3.98
192	Dec-41	Dec	2041			\$6.15	\$6.15
193	Jan-42	Jan	2042			\$9.82	\$9.82
194	Feb-42	Feb	2042			\$8.41	\$8.41
195	Mar-42	Mar	2042			\$4.37	\$4.37
196	Apr-42	Apr	2042			\$3.50	\$3.50
197	May-42	May	2042			\$3.21	\$3.21
198	Jun-42	Jun	2042			\$3.38	\$3.38
199	Jul-42	Jul	2042			\$3.59	\$3.59
200	Aug-42	Aug	2042			\$3.54	\$3.54

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
201	Sep-42	Sep	2042			\$3.19	\$3.19
202	Oct-42	Oct	2042			\$3.05	\$3.05
203	Nov-42	Nov	2042			\$4.11	\$4.11
204	Dec-42	Dec	2042			\$6.37	\$6.37
205	Jan-43	Jan	2043			\$10.15	\$10.15
206	Feb-43	Feb	2043			\$8.70	\$8.70
207	Mar-43	Mar	2043			\$4.52	\$4.52
208	Apr-43	Apr	2043			\$3.62	\$3.62
209	May-43	May	2043			\$3.32	\$3.32
210	Jun-43	Jun	2043			\$3.49	\$3.49
211	Jul-43	Jul	2043			\$3.71	\$3.71
212	Aug-43	Aug	2043			\$3.66	\$3.66
213	Sep-43	Sep	2043			\$3.30	\$3.30
214	Oct-43	Oct	2043			\$3.15	\$3.15
215	Nov-43	Nov	2043			\$4.26	\$4.26
216	Dec-43	Dec	2043			\$6.58	\$6.58
217	Jan-44	Jan	2044			\$10.37	\$10.37
218	Feb-44	Feb	2044			\$8.88	\$8.88
219	Mar-44	Mar	2044			\$4.62	\$4.62
220	Apr-44	Apr	2044			\$3.69	\$3.69
221	May-44	May	2044			\$3.39	\$3.39
222	Jun-44	Jun	2044			\$3.56	\$3.56
223	Jul-44	Jul	2044			\$3.79	\$3.79
224	Aug-44	Aug	2044			\$3.74	\$3.74
225	Sep-44	Sep	2044			\$3.37	\$3.37
226	Oct-44	Oct	2044			\$3.22	\$3.22
227	Nov-44	Nov	2044			\$4.34	\$4.34
228	Dec-44	Dec	2044			\$6.72	\$6.72
229	Jan-45	Jan	2045			\$10.52	\$10.52
230	Feb-45	Feb	2045			\$9.01	\$9.01
231	Mar-45	Mar	2045			\$4.69	\$4.69
232	Apr-45	Apr	2045			\$3.75	\$3.75
233	May-45	May	2045			\$3.44	\$3.44
234	Jun-45	Jun	2045			\$3.62	\$3.62
235	Jul-45	Jul	2045			\$3.84	\$3.84
236	Aug-45	Aug	2045			\$3.79	\$3.79
237	Sep-45	Sep	2045			\$3.42	\$3.42
238	Oct-45	Oct	2045			\$3.27	\$3.27
239	Nov-45	Nov	2045			\$4.41	\$4.41
240	Dec-45	Dec	2045			\$6.82	\$6.82
241	Jan-46	Jan	2046			\$0.00	\$0.00
242	Feb-46	Feb	2046			\$0.00	\$0.00
243	Mar-46	Mar	2046			\$0.00	\$0.00
244	Apr-46	Apr	2046			\$0.00	\$0.00
245	May-46	May	2046			\$0.00	\$0.00
246	Jun-46	Jun	2046			\$0.00	\$0.00
247	Jul-46	Jul	2046			\$0.00	\$0.00
248	Aug-46	Aug	2046			\$0.00	\$0.00
249	Sep-46	Sep	2046			\$0.00	\$0.00
250	Oct-46	Oct	2046			\$0.00	\$0.00

Record Field	Period	Month	Year	NYMEX: Henry Hub Natural Gas Price (Nominal \$/MMBTU)	NYMEX: PECO Natural Gas Price (Nominal \$/MMBTU)	EIA AEO Gas Prices (Nominal \$/MMBTU)	PECO Natural Gas Price (Nominal \$/MMBTU)
251	Nov-46	Nov	2046			\$0.00	\$0.00
252	Dec-46	Dec	2046			\$0.00	\$0.00
253	Jan-47	Jan	2047			\$0.00	\$0.00
254	Feb-47	Feb	2047			\$0.00	\$0.00
255	Mar-47	Mar	2047			\$0.00	\$0.00
256	Apr-47	Apr	2047			\$0.00	\$0.00
257	May-47	May	2047			\$0.00	\$0.00
258	Jun-47	Jun	2047			\$0.00	\$0.00
259	Jul-47	Jul	2047			\$0.00	\$0.00
260	Aug-47	Aug	2047			\$0.00	\$0.00
261	Sep-47	Sep	2047			\$0.00	\$0.00
262	Oct-47	Oct	2047			\$0.00	\$0.00
263	Nov-47	Nov	2047			\$0.00	\$0.00
264	Dec-47	Dec	2047			\$0.00	\$0.00

Avoided AC

Record Field	Period	Month	Year	Season	PECO Zone Adjusted On-Peak (Nominal \$/MWh)	PECO Zone Adjusted Off-Peak (Nominal \$/MWh)	PECO Zone NG Converted On-Peak (Nominal \$/MWh)	PECO Zone NG Converted Off-Peak (Nominal \$/MWh)	PECO Zone Spark Spread On-Peak (Nominal \$/MWh)	PECO Zone Spark Spread Off-Peak (Nominal \$/MWh)	PECO Zone On-Peak (Nominal \$/MWh)	PECO Zone Off-Peak (Nominal \$/MWh)
1	Jan-26	Jan	2026	Winter	\$73.22	\$59.38	\$83.93	\$57.80	-\$10.70	\$158	\$73.22	\$59.38
2	Feb-26	Feb	2026	Winter	\$64.41	\$55.46	\$72.27	\$49.77	-\$7.86	\$5.69	\$64.41	\$55.46
3	Mar-26	Mar	2026	Shoulder	\$47.18	\$42.07	\$39.29	\$27.06	\$7.89	\$15.01	\$47.18	\$42.07
4	Apr-26	Apr	2026	Shoulder	\$45.18	\$34.28	\$35.20	\$24.24	\$9.98	\$10.04	\$45.18	\$34.28
5	May-26	May	2026	Summer	\$49.77	\$33.96	\$33.13	\$22.81	\$16.64	\$11.15	\$49.77	\$33.96
6	Jun-26	Jun	2026	Summer	\$51.06	\$32.85	\$34.88	\$24.02	\$16.18	\$8.83	\$51.06	\$32.85
7	Jul-26	Jul	2026	Summer	\$69.75	\$39.35	\$37.01	\$25.49	\$32.74	\$13.86	\$69.75	\$39.35
8	Aug-26	Aug	2026	Summer	\$61.87	\$36.77	\$36.55	\$25.17	\$25.32	\$11.59	\$61.87	\$36.77
9	Sep-26	Sep	2026	Summer	\$52.21	\$32.41	\$33.23	\$22.89	\$18.98	\$9.52	\$52.21	\$32.41
10	Oct-26	Oct	2026	Shoulder	\$47.18	\$34.10	\$31.81	\$21.91	\$15.37	\$12.19	\$47.18	\$34.10
11	Nov-26	Nov	2026	Shoulder	\$50.57	\$40.02	\$41.52	\$28.59	\$9.05	\$11.42	\$50.57	\$40.02
12	Dec-26	Dec	2026	Winter	\$62.23	\$52.44	\$61.70	\$42.49	\$0.53	\$9.95	\$62.23	\$52.44
13	Jan-27	Jan	2027	Winter	\$82.86	\$68.11	\$90.85	\$62.57	-\$9.19	\$5.54	\$82.86	\$68.11
14	Feb-27	Feb	2027	Winter	\$72.82	\$62.19	\$78.15	\$53.82	-\$5.33	\$8.37	\$72.82	\$62.19
15	Mar-27	Mar	2027	Shoulder	\$54.93	\$45.18	\$41.78	\$28.77	\$13.15	\$16.41	\$54.93	\$45.18
16	Apr-27	Apr	2027	Shoulder	\$49.41	\$36.23	\$34.24	\$23.58	\$15.17	\$12.66	\$49.41	\$36.23
17	May-27	May	2027	Summer	\$50.57	\$35.48	\$31.62	\$21.77	\$18.95	\$13.71	\$50.57	\$35.48
18	Jun-27	Jun	2027	Summer	\$51.95	\$34.36	\$32.96	\$22.70	\$18.99	\$11.67	\$51.95	\$34.36
19	Jul-27	Jul	2027	Summer	\$71.04	\$40.86	\$34.78	\$23.95	\$36.26	\$16.91	\$71.04	\$40.86
20	Aug-27	Aug	2027	Summer	\$62.85	\$37.88	\$34.37	\$23.67	\$28.48	\$14.21	\$62.85	\$37.88
21	Sep-27	Sep	2027	Summer	\$53.10	\$34.63	\$31.09	\$21.41	\$22.01	\$13.22	\$53.10	\$34.63
22	Oct-27	Oct	2027	Shoulder	\$48.03	\$35.48	\$29.86	\$20.56	\$18.17	\$14.91	\$48.03	\$35.48
23	Nov-27	Nov	2027	Shoulder	\$51.55	\$41.22	\$39.47	\$27.18	\$12.08	\$14.04	\$51.55	\$41.22
24	Dec-27	Dec	2027	Winter	\$63.30	\$54.66	\$59.60	\$41.04	\$3.70	\$13.62	\$63.30	\$54.66
25	Jan-28	Jan	2028	Winter	\$86.36	\$71.89	\$89.29	\$61.49	-\$2.93	\$10.40	\$86.36	\$71.89
26	Feb-28	Feb	2028	Winter	\$75.98	\$65.70	\$75.96	\$52.31	\$0.03	\$13.39	\$75.98	\$65.70
27	Mar-28	Mar	2028	Shoulder	\$57.29	\$47.94	\$39.95	\$27.51	\$17.34	\$20.43	\$57.29	\$47.94
28	Apr-28	Apr	2028	Shoulder	\$51.55	\$38.64	\$32.10	\$22.10	\$19.45	\$16.53	\$51.55	\$38.64
29	May-28	May	2028	Summer	\$52.84	\$37.57	\$29.53	\$20.34	\$23.31	\$17.23	\$52.84	\$37.57
30	Jun-28	Jun	2028	Summer	\$54.26	\$36.50	\$30.98	\$21.34	\$23.28	\$15.16	\$54.26	\$36.50
31	Jul-28	Jul	2028	Summer	\$74.20	\$43.36	\$32.31	\$22.66	\$41.30	\$20.69	\$74.20	\$43.36
32	Aug-28	Aug	2028	Summer	\$65.70	\$40.20	\$32.46	\$22.36	\$33.24	\$17.84	\$65.70	\$40.20
33	Sep-28	Sep	2028	Summer	\$55.46	\$36.86	\$29.31	\$20.18	\$26.16	\$16.67	\$55.46	\$36.86
34	Oct-28	Oct	2028	Shoulder	\$50.17	\$37.57	\$27.98	\$19.27	\$22.18	\$18.30	\$50.17	\$37.57
35	Nov-28	Nov	2028	Shoulder	\$53.73	\$42.87	\$37.47	\$25.81	\$16.25	\$17.06	\$53.73	\$42.87
36	Dec-28	Dec	2028	Winter	\$66.10	\$58.00	\$57.72	\$39.75	\$8.38	\$18.25	\$66.10	\$58.00
37	Jan-29	Jan	2029	Winter	\$89.34	\$74.07	\$87.25	\$60.08	\$2.09	\$13.99	\$89.34	\$74.07
38	Feb-29	Feb	2029	Winter	\$78.66	\$67.66	\$74.96	\$51.62	\$3.69	\$16.04	\$78.66	\$67.66
39	Mar-29	Mar	2029	Shoulder	\$59.29	\$49.37	\$38.21	\$26.31	\$21.08	\$23.05	\$59.29	\$49.37
40	Apr-29	Apr	2029	Shoulder	\$53.46	\$39.75	\$30.34	\$20.90	\$23.12	\$18.85	\$53.46	\$39.75
41	May-29	May	2029	Summer	\$54.66	\$38.77	\$27.81	\$19.15	\$26.95	\$19.62	\$54.66	\$38.77
42	Jun-29	Jun	2029	Summer	\$56.18	\$37.51	\$29.59	\$20.37	\$26.59	\$17.24	\$56.18	\$37.51
43	Jul-29	Jul	2029	Summer	\$76.83	\$44.85	\$31.67	\$21.81	\$45.16	\$22.82	\$76.83	\$44.85
44	Aug-29	Aug	2029	Summer	\$67.30	\$41.40	\$31.35	\$21.59	\$36.58	\$19.81	\$67.30	\$41.40
45	Sep-29	Sep	2029	Summer	\$57.42	\$37.97	\$28.27	\$19.47	\$23.15	\$18.50	\$57.42	\$37.97
46	Oct-29	Oct	2029	Shoulder	\$51.86	\$38.77	\$27.07	\$18.64	\$24.79	\$20.13	\$51.86	\$38.77
47	Nov-29	Nov	2029	Shoulder	\$55.69	\$44.16	\$36.57	\$25.18	\$19.12	\$18.97	\$55.69	\$44.16
48	Dec-29	Dec	2029	Winter	\$68.37	\$59.78	\$57.00	\$39.25	\$11.38	\$20.53	\$68.37	\$59.78
49	Jan-30	Jan	2030	Winter	\$77.63	\$53.46	\$87.20	\$60.05	-\$9.57	-\$6.59	\$77.63	\$53.46
50	Feb-30	Feb	2030	Winter	\$66.50	\$45.80	\$74.70	\$51.44	-\$8.20	-\$5.64	\$66.50	\$45.80

Record Field	Period	Month	Year	Season	PECO Zone Adjusted On-Peak (Nominal \$/MWh)	PECO Zone Adjusted Off-Peak (Nominal \$/MWh)	PECO Zone NG Converted On-Peak (Nominal \$/MWh)	PECO Zone NG Converted Off-Peak (Nominal \$/MWh)	PECO Zone Spark Spread On-Peak (Nominal \$/MWh)	PECO Zone Spark Spread Off-Peak (Nominal \$/MWh)	PECO Zone On-Peak (Nominal \$/MWh)	PECO Zone Off-Peak (Nominal \$/MWh)
51	Mar-30	Mar	2030	Shoulder	\$33.88	\$23.33	\$38.06	\$26.21	-\$4.18	-\$2.88	\$33.88	\$23.33
52	Apr-30	Apr	2030	Shoulder	\$26.35	\$18.14	\$29.59	\$20.38	-\$3.25	-\$2.24	\$26.35	\$18.14
53	May-30	May	2030	Summer	\$23.91	\$16.47	\$26.86	\$18.50	-\$2.95	-\$2.03	\$23.91	\$16.47
54	Jun-30	Jun	2030	Summer	\$25.28	\$17.41	\$28.40	\$19.56	-\$3.12	-\$2.15	\$25.28	\$17.41
55	Jul-30	Jul	2030	Summer	\$26.84	\$18.48	\$30.15	\$20.76	-\$3.31	-\$2.28	\$26.84	\$18.48
56	Aug-30	Aug	2030	Summer	\$26.46	\$18.22	\$29.72	\$20.47	-\$3.26	-\$2.25	\$26.46	\$18.22
57	Sep-30	Sep	2030	Summer	\$23.55	\$16.22	\$26.46	\$18.22	-\$2.90	-\$2.00	\$23.55	\$16.22
58	Oct-30	Oct	2030	Shoulder	\$22.42	\$15.44	\$25.18	\$17.34	-\$2.76	-\$1.90	\$22.42	\$15.44
59	Nov-30	Nov	2030	Shoulder	\$31.24	\$21.52	\$35.10	\$24.17	-\$3.85	-\$2.65	\$31.24	\$21.52
60	Dec-30	Dec	2030	V/inter	\$49.46	\$34.06	\$55.56	\$38.26	-\$6.10	-\$4.20	\$49.46	\$34.06
61	Jan-31	Jan	2031	V/inter	\$0.00	\$0.00	\$84.41	\$58.13	-\$4.55	\$5.95	\$79.86	\$64.09
62	Feb-31	Feb	2031	V/inter	\$0.00	\$0.00	\$72.12	\$49.67	-\$2.40	\$8.20	\$69.72	\$57.87
63	Mar-31	Mar	2031	Shoulder	\$0.00	\$0.00	\$35.90	\$24.73	\$12.09	\$14.55	\$48.00	\$39.27
64	Apr-31	Apr	2031	Shoulder	\$0.00	\$0.00	\$27.74	\$19.10	\$13.90	\$11.69	\$41.64	\$30.79
65	May-31	May	2031	Summer	\$0.00	\$0.00	\$25.18	\$17.34	\$16.88	\$12.38	\$42.07	\$29.73
66	Jun-31	Jun	2031	Summer	\$0.00	\$0.00	\$26.73	\$18.41	\$16.78	\$10.70	\$43.51	\$29.11
67	Jul-31	Jul	2031	Summer	\$0.00	\$0.00	\$28.54	\$19.65	\$30.47	\$14.84	\$59.01	\$34.49
68	Aug-31	Aug	2031	Summer	\$0.00	\$0.00	\$28.17	\$19.40	\$24.25	\$12.66	\$52.42	\$32.06
69	Sep-31	Sep	2031	Summer	\$0.00	\$0.00	\$24.91	\$17.16	\$18.99	\$11.84	\$43.90	\$28.99
70	Oct-31	Oct	2031	Shoulder	\$0.00	\$0.00	\$23.59	\$16.25	\$15.92	\$13.13	\$39.51	\$29.37
71	Nov-31	Nov	2031	Shoulder	\$0.00	\$0.00	\$33.25	\$22.90	\$11.13	\$12.10	\$44.38	\$35.00
72	Dec-31	Dec	2031	V/inter	\$0.00	\$0.00	\$53.65	\$36.95	\$4.43	\$12.30	\$58.08	\$49.24
73	Jan-32	Jan	2032	V/inter	\$0.00	\$0.00	\$86.21	\$59.37	-\$4.55	\$5.95	\$81.66	\$65.32
74	Feb-32	Feb	2032	V/inter	\$0.00	\$0.00	\$73.30	\$50.48	-\$2.40	\$8.20	\$70.90	\$58.68
75	Mar-32	Mar	2032	Shoulder	\$0.00	\$0.00	\$35.92	\$24.74	\$12.09	\$14.55	\$48.01	\$39.28
76	Apr-32	Apr	2032	Shoulder	\$0.00	\$0.00	\$27.75	\$19.11	\$13.90	\$11.69	\$41.66	\$30.80
77	May-32	May	2032	Summer	\$0.00	\$0.00	\$25.11	\$17.29	\$16.88	\$12.38	\$41.99	\$29.67
78	Jun-32	Jun	2032	Summer	\$0.00	\$0.00	\$26.74	\$18.42	\$16.78	\$10.70	\$43.52	\$29.12
79	Jul-32	Jul	2032	Summer	\$0.00	\$0.00	\$28.67	\$19.74	\$30.47	\$14.84	\$59.14	\$34.58
80	Aug-32	Aug	2032	Summer	\$0.00	\$0.00	\$28.23	\$19.44	\$24.25	\$12.66	\$52.48	\$32.10
81	Sep-32	Sep	2032	Summer	\$0.00	\$0.00	\$24.95	\$17.18	\$18.99	\$11.84	\$43.94	\$29.02
82	Oct-32	Oct	2032	Shoulder	\$0.00	\$0.00	\$23.71	\$16.33	\$15.92	\$13.13	\$39.62	\$29.45
83	Nov-32	Nov	2032	Shoulder	\$0.00	\$0.00	\$33.84	\$23.31	\$11.13	\$12.10	\$44.97	\$35.41
84	Dec-32	Dec	2032	V/inter	\$0.00	\$0.00	\$54.70	\$37.67	\$4.43	\$12.30	\$59.12	\$49.97
85	Jan-33	Jan	2033	V/inter	\$0.00	\$0.00	\$90.02	\$61.99	-\$4.55	\$5.95	\$85.47	\$67.95
86	Feb-33	Feb	2033	V/inter	\$0.00	\$0.00	\$76.83	\$52.91	-\$2.40	\$8.20	\$74.43	\$61.12
87	Mar-33	Mar	2033	Shoulder	\$0.00	\$0.00	\$38.09	\$26.23	\$12.09	\$14.55	\$50.18	\$40.78
88	Apr-33	Apr	2033	Shoulder	\$0.00	\$0.00	\$29.69	\$20.44	\$13.90	\$11.69	\$43.59	\$32.13
89	May-33	May	2033	Summer	\$0.00	\$0.00	\$27.20	\$18.73	\$16.88	\$12.38	\$44.09	\$31.12
90	Jun-33	Jun	2033	Summer	\$0.00	\$0.00	\$28.79	\$19.83	\$16.78	\$10.70	\$45.57	\$30.53
91	Jul-33	Jul	2033	Summer	\$0.00	\$0.00	\$30.76	\$21.18	\$30.47	\$14.84	\$61.23	\$36.02
92	Aug-33	Aug	2033	Summer	\$0.00	\$0.00	\$30.23	\$20.82	\$24.25	\$12.66	\$54.48	\$33.48
93	Sep-33	Sep	2033	Summer	\$0.00	\$0.00	\$26.81	\$18.46	\$18.99	\$11.84	\$45.80	\$30.30
94	Oct-33	Oct	2033	Shoulder	\$0.00	\$0.00	\$25.31	\$17.43	\$15.92	\$13.13	\$41.23	\$30.56
95	Nov-33	Nov	2033	Shoulder	\$0.00	\$0.00	\$36.00	\$24.79	\$11.13	\$12.10	\$47.12	\$36.89
96	Dec-33	Dec	2033	V/inter	\$0.00	\$0.00	\$57.53	\$39.62	\$4.43	\$12.30	\$61.96	\$51.92
97	Jan-34	Jan	2034	V/inter	\$0.00	\$0.00	\$94.68	\$65.20	-\$4.55	\$5.95	\$90.13	\$71.16
98	Feb-34	Feb	2034	V/inter	\$0.00	\$0.00	\$80.97	\$55.76	-\$2.40	\$8.20	\$78.57	\$63.97
99	Mar-34	Mar	2034	Shoulder	\$0.00	\$0.00	\$40.70	\$28.03	\$12.09	\$14.55	\$52.79	\$42.58
100	Apr-34	Apr	2034	Shoulder	\$0.00	\$0.00	\$32.20	\$22.18	\$13.90	\$11.69	\$46.11	\$33.87

Record Field	Period	Month	Year	Season	PECO Zone Adjusted On-Peak (Nominal \$/MWh)	PECO Zone Adjusted Off-Peak (Nominal \$/MWh)	PECO Zone NG Converted On-Peak (Nominal \$/MWh)	PECO Zone NG Converted Off-Peak (Nominal \$/MWh)	PECO Zone Spark Spread On-Peak (Nominal \$/MWh)	PECO Zone Spark Spread Off-Peak (Nominal \$/MWh)	PECO Zone On-Peak (Nominal \$/MWh)	PECO Zone Off-Peak (Nominal \$/MWh)
101	May-34	May	2034	Summer	\$0.00	\$0.00	\$29.52	\$20.33	\$16.88	\$12.38	\$46.41	\$32.72
102	Jun-34	Jun	2034	Summer	\$0.00	\$0.00	\$31.12	\$21.43	\$16.78	\$10.70	\$47.90	\$32.13
103	Jul-34	Jul	2034	Summer	\$0.00	\$0.00	\$33.08	\$22.78	\$30.47	\$14.84	\$63.55	\$37.62
104	Aug-34	Aug	2034	Summer	\$0.00	\$0.00	\$32.48	\$22.37	\$24.25	\$12.66	\$56.73	\$35.03
105	Sep-34	Sep	2034	Summer	\$0.00	\$0.00	\$23.11	\$20.05	\$18.99	\$11.84	\$48.10	\$31.89
106	Oct-34	Oct	2034	Shoulder	\$0.00	\$0.00	\$27.59	\$19.00	\$15.92	\$13.13	\$43.50	\$32.12
107	Nov-34	Nov	2034	Shoulder	\$0.00	\$0.00	\$38.49	\$26.51	\$11.13	\$12.10	\$49.62	\$38.61
108	Dec-34	Dec	2034	Winter	\$0.00	\$0.00	\$60.94	\$41.97	\$4.43	\$12.30	\$65.37	\$54.27
109	Jan-35	Jan	2035	Winter	\$0.00	\$0.00	\$99.17	\$68.30	-\$4.55	\$5.95	\$94.62	\$74.25
110	Feb-35	Feb	2035	Winter	\$0.00	\$0.00	\$84.85	\$58.44	-\$2.40	\$8.20	\$82.45	\$66.64
111	Mar-35	Mar	2035	Shoulder	\$0.00	\$0.00	\$43.67	\$30.07	\$12.09	\$14.55	\$55.76	\$44.62
112	Apr-35	Apr	2035	Shoulder	\$0.00	\$0.00	\$35.01	\$24.11	\$13.90	\$11.69	\$48.91	\$35.80
113	May-35	May	2035	Summer	\$0.00	\$0.00	\$31.99	\$22.03	\$16.88	\$12.38	\$46.87	\$34.41
114	Jun-35	Jun	2035	Summer	\$0.00	\$0.00	\$33.37	\$22.98	\$16.78	\$10.70	\$50.15	\$33.68
115	Jul-35	Jul	2035	Summer	\$0.00	\$0.00	\$35.11	\$24.10	\$30.47	\$14.84	\$65.58	\$39.02
116	Aug-35	Aug	2035	Summer	\$0.00	\$0.00	\$34.54	\$23.79	\$24.25	\$12.66	\$58.79	\$36.45
117	Sep-35	Sep	2035	Summer	\$0.00	\$0.00	\$30.98	\$21.34	\$18.99	\$11.84	\$49.97	\$33.18
118	Oct-35	Oct	2035	Shoulder	\$0.00	\$0.00	\$29.45	\$20.28	\$15.92	\$13.13	\$45.37	\$33.41
119	Nov-35	Nov	2035	Shoulder	\$0.00	\$0.00	\$40.52	\$27.91	\$11.13	\$12.10	\$51.65	\$40.01
120	Dec-35	Dec	2035	Winter	\$0.00	\$0.00	\$63.78	\$43.93	\$4.43	\$12.30	\$68.21	\$56.22
121	Jan-36	Jan	2036	Winter	\$0.00	\$0.00	\$103.41	\$71.22	-\$4.55	\$5.95	\$98.86	\$77.17
122	Feb-36	Feb	2036	Winter	\$0.00	\$0.00	\$88.53	\$60.96	-\$2.40	\$8.20	\$86.13	\$69.17
123	Mar-36	Mar	2036	Shoulder	\$0.00	\$0.00	\$45.70	\$31.47	\$12.09	\$14.55	\$57.79	\$46.02
124	Apr-36	Apr	2036	Shoulder	\$0.00	\$0.00	\$36.46	\$25.11	\$13.90	\$11.69	\$50.37	\$36.80
125	May-36	May	2036	Summer	\$0.00	\$0.00	\$33.41	\$23.01	\$16.88	\$12.38	\$50.29	\$35.39
126	Jun-36	Jun	2036	Summer	\$0.00	\$0.00	\$35.18	\$24.23	\$16.78	\$10.70	\$51.96	\$34.93
127	Jul-36	Jul	2036	Summer	\$0.00	\$0.00	\$37.36	\$25.73	\$30.47	\$14.84	\$67.83	\$40.57
128	Aug-36	Aug	2036	Summer	\$0.00	\$0.00	\$36.87	\$25.39	\$24.25	\$12.66	\$61.12	\$38.05
129	Sep-36	Sep	2036	Summer	\$0.00	\$0.00	\$33.11	\$22.80	\$18.99	\$11.84	\$52.10	\$34.64
130	Oct-36	Oct	2036	Shoulder	\$0.00	\$0.00	\$31.60	\$21.76	\$15.92	\$13.13	\$47.52	\$34.89
131	Nov-36	Nov	2036	Shoulder	\$0.00	\$0.00	\$42.97	\$29.59	\$11.13	\$12.10	\$54.09	\$41.69
132	Dec-36	Dec	2036	Winter	\$0.00	\$0.00	\$66.88	\$46.06	\$4.43	\$12.30	\$71.31	\$58.36
133	Jan-37	Jan	2037	Winter	\$0.00	\$0.00	\$104.63	\$72.05	-\$4.55	\$5.95	\$100.08	\$78.01
134	Feb-37	Feb	2037	Winter	\$0.00	\$0.00	\$89.63	\$61.73	-\$2.40	\$8.20	\$87.23	\$69.93
135	Mar-37	Mar	2037	Shoulder	\$0.00	\$0.00	\$46.62	\$32.11	\$12.09	\$14.55	\$58.72	\$46.66
136	Apr-37	Apr	2037	Shoulder	\$0.00	\$0.00	\$37.26	\$25.66	\$13.90	\$11.69	\$51.16	\$37.35
137	May-37	May	2037	Summer	\$0.00	\$0.00	\$34.17	\$23.53	\$16.88	\$12.38	\$51.06	\$35.92
138	Jun-37	Jun	2037	Summer	\$0.00	\$0.00	\$35.97	\$24.77	\$16.78	\$10.70	\$52.75	\$35.47
139	Jul-37	Jul	2037	Summer	\$0.00	\$0.00	\$38.22	\$26.32	\$30.47	\$14.84	\$68.69	\$41.16
140	Aug-37	Aug	2037	Summer	\$0.00	\$0.00	\$37.74	\$25.99	\$24.25	\$12.66	\$61.99	\$38.65
141	Sep-37	Sep	2037	Summer	\$0.00	\$0.00	\$33.97	\$23.39	\$18.99	\$11.84	\$52.96	\$35.23
142	Oct-37	Oct	2037	Shoulder	\$0.00	\$0.00	\$32.49	\$22.37	\$15.92	\$13.13	\$48.40	\$35.50
143	Nov-37	Nov	2037	Shoulder	\$0.00	\$0.00	\$43.85	\$30.20	\$11.13	\$12.10	\$54.98	\$42.30
144	Dec-37	Dec	2037	Winter	\$0.00	\$0.00	\$67.63	\$46.71	\$4.43	\$12.30	\$72.26	\$59.01
145	Jan-38	Jan	2038	Winter	\$0.00	\$0.00	\$102.44	\$70.54	-\$4.55	\$5.95	\$97.69	\$76.50
146	Feb-38	Feb	2038	Winter	\$0.00	\$0.00	\$87.75	\$60.43	-\$2.40	\$8.20	\$85.35	\$68.64
147	Mar-38	Mar	2038	Shoulder	\$0.00	\$0.00	\$45.64	\$31.43	\$12.09	\$14.55	\$57.74	\$45.98
148	Apr-38	Apr	2038	Shoulder	\$0.00	\$0.00	\$36.48	\$25.12	\$13.90	\$11.69	\$50.38	\$36.81
149	May-38	May	2038	Summer	\$0.00	\$0.00	\$33.46	\$23.04	\$16.88	\$12.38	\$50.34	\$35.42
150	Jun-38	Jun	2038	Summer	\$0.00	\$0.00	\$35.22	\$24.25	\$16.78	\$10.70	\$52.00	\$34.95

Record Field	Period	Month	Year	Season	PECO Zone Adjusted On-Peak (Nominal \$/MWh)	PECO Zone Adjusted Off-Peak (Nominal \$/MWh)	PECO Zone NG Converted On-Peak (Nominal \$/MWh)	PECO Zone NG Converted Off-Peak (Nominal \$/MWh)	PECO Zone Spark Spread On-Peak (Nominal \$/MWh)	PECO Zone Spark Spread Off-Peak (Nominal \$/MWh)	PECO Zone On-Peak (Nominal \$/MWh)	PECO Zone Off-Peak (Nominal \$/MWh)
151	Jul-38	Jul	2038	Summer	\$0.00	\$0.00	\$37.41	\$25.77	\$30.47	\$14.84	\$57.88	\$40.61
152	Aug-38	Aug	2038	Summer	\$0.00	\$0.00	\$36.95	\$25.45	\$24.25	\$12.66	\$61.20	\$38.11
153	Sep-38	Sep	2038	Summer	\$0.00	\$0.00	\$33.26	\$22.90	\$18.99	\$11.84	\$52.25	\$34.74
154	Oct-38	Oct	2038	Shoulder	\$0.00	\$0.00	\$31.81	\$21.90	\$15.92	\$13.13	\$47.72	\$35.03
155	Nov-38	Nov	2038	Shoulder	\$0.00	\$0.00	\$42.93	\$29.57	\$11.13	\$12.10	\$54.06	\$41.67
156	Dec-38	Dec	2038	Winter	\$0.00	\$0.00	\$66.41	\$45.73	\$4.43	\$12.30	\$70.84	\$58.03
157	Jan-39	Jan	2039	Winter	\$0.00	\$0.00	\$100.77	\$69.40	-\$4.55	\$5.95	\$96.22	\$75.35
158	Feb-39	Feb	2039	Winter	\$0.00	\$0.00	\$96.33	\$59.45	-\$2.40	\$8.20	\$93.93	\$67.66
159	Mar-39	Mar	2039	Shoulder	\$0.00	\$0.00	\$44.90	\$30.92	\$12.09	\$14.55	\$57.00	\$45.47
160	Apr-39	Apr	2039	Shoulder	\$0.00	\$0.00	\$35.89	\$24.71	\$13.90	\$11.69	\$49.79	\$36.40
161	May-39	May	2039	Summer	\$0.00	\$0.00	\$32.91	\$22.67	\$16.88	\$12.38	\$49.80	\$35.05
162	Jun-39	Jun	2039	Summer	\$0.00	\$0.00	\$34.65	\$23.86	\$16.78	\$10.70	\$51.43	\$34.56
163	Jul-39	Jul	2039	Summer	\$0.00	\$0.00	\$36.81	\$25.35	\$30.47	\$14.84	\$67.28	\$40.19
164	Aug-39	Aug	2039	Summer	\$0.00	\$0.00	\$36.35	\$25.03	\$24.25	\$12.66	\$60.60	\$37.69
165	Sep-39	Sep	2039	Summer	\$0.00	\$0.00	\$32.72	\$22.53	\$18.99	\$11.84	\$51.71	\$34.37
166	Oct-39	Oct	2039	Shoulder	\$0.00	\$0.00	\$31.29	\$21.55	\$15.92	\$13.13	\$47.21	\$34.67
167	Nov-39	Nov	2039	Shoulder	\$0.00	\$0.00	\$42.23	\$29.09	\$11.13	\$12.10	\$53.36	\$41.19
168	Dec-39	Dec	2039	Winter	\$0.00	\$0.00	\$55.33	\$44.99	\$4.43	\$12.30	\$63.76	\$57.23
169	Jan-40	Jan	2040	Winter	\$0.00	\$0.00	\$101.48	\$69.89	-\$4.55	\$5.95	\$96.93	\$75.94
170	Feb-40	Feb	2040	Winter	\$0.00	\$0.00	\$96.94	\$59.87	-\$2.40	\$8.20	\$94.54	\$68.08
171	Mar-40	Mar	2040	Shoulder	\$0.00	\$0.00	\$45.22	\$31.14	\$12.09	\$14.55	\$57.31	\$45.69
172	Apr-40	Apr	2040	Shoulder	\$0.00	\$0.00	\$36.14	\$24.89	\$13.90	\$11.69	\$50.04	\$36.58
173	May-40	May	2040	Summer	\$0.00	\$0.00	\$33.14	\$22.83	\$16.88	\$12.38	\$50.03	\$35.21
174	Jun-40	Jun	2040	Summer	\$0.00	\$0.00	\$34.89	\$24.03	\$16.78	\$10.70	\$51.67	\$34.73
175	Jul-40	Jul	2040	Summer	\$0.00	\$0.00	\$37.07	\$25.53	\$30.47	\$14.84	\$67.54	\$40.37
176	Aug-40	Aug	2040	Summer	\$0.00	\$0.00	\$36.60	\$25.21	\$24.25	\$12.66	\$60.86	\$37.87
177	Sep-40	Sep	2040	Summer	\$0.00	\$0.00	\$32.95	\$22.69	\$18.99	\$11.84	\$51.94	\$34.83
178	Oct-40	Oct	2040	Shoulder	\$0.00	\$0.00	\$31.51	\$21.70	\$15.92	\$13.13	\$47.43	\$34.53
179	Nov-40	Nov	2040	Shoulder	\$0.00	\$0.00	\$42.53	\$29.29	\$11.13	\$12.10	\$53.66	\$41.39
180	Dec-40	Dec	2040	Winter	\$0.00	\$0.00	\$65.79	\$45.31	\$4.43	\$12.30	\$70.22	\$57.61
181	Jan-41	Jan	2041	Winter	\$0.00	\$0.00	\$104.70	\$72.10	-\$4.55	\$5.95	\$100.15	\$78.06
182	Feb-41	Feb	2041	Winter	\$0.00	\$0.00	\$99.69	\$61.77	-\$2.40	\$8.20	\$97.29	\$69.97
183	Mar-41	Mar	2041	Shoulder	\$0.00	\$0.00	\$46.65	\$32.13	\$12.09	\$14.55	\$58.75	\$46.68
184	Apr-41	Apr	2041	Shoulder	\$0.00	\$0.00	\$37.28	\$25.68	\$13.90	\$11.69	\$51.19	\$37.37
185	May-41	May	2041	Summer	\$0.00	\$0.00	\$34.20	\$23.95	\$16.88	\$12.38	\$51.08	\$35.93
186	Jun-41	Jun	2041	Summer	\$0.00	\$0.00	\$36.00	\$24.79	\$16.78	\$10.70	\$52.78	\$35.49
187	Jul-41	Jul	2041	Summer	\$0.00	\$0.00	\$38.24	\$26.34	\$30.47	\$14.84	\$68.71	\$41.18
188	Aug-41	Aug	2041	Summer	\$0.00	\$0.00	\$37.77	\$26.01	\$24.25	\$12.66	\$62.02	\$38.67
189	Sep-41	Sep	2041	Summer	\$0.00	\$0.00	\$33.99	\$23.41	\$18.99	\$11.84	\$52.98	\$35.25
190	Oct-41	Oct	2041	Shoulder	\$0.00	\$0.00	\$32.51	\$22.39	\$15.92	\$13.13	\$48.43	\$35.51
191	Nov-41	Nov	2041	Shoulder	\$0.00	\$0.00	\$43.88	\$30.22	\$11.13	\$12.10	\$55.00	\$42.32
192	Dec-41	Dec	2041	Winter	\$0.00	\$0.00	\$67.88	\$46.74	\$4.43	\$12.30	\$72.31	\$59.04
193	Jan-42	Jan	2042	Winter	\$0.00	\$0.00	\$108.29	\$74.58	-\$4.55	\$5.95	\$103.74	\$80.53
194	Feb-42	Feb	2042	Winter	\$0.00	\$0.00	\$92.77	\$63.89	-\$2.40	\$8.20	\$90.37	\$72.09
195	Mar-42	Mar	2042	Shoulder	\$0.00	\$0.00	\$48.26	\$33.23	\$12.09	\$14.55	\$60.35	\$47.78
196	Apr-42	Apr	2042	Shoulder	\$0.00	\$0.00	\$38.56	\$26.56	\$13.90	\$11.69	\$52.47	\$38.25
197	May-42	May	2042	Summer	\$0.00	\$0.00	\$35.37	\$24.36	\$16.88	\$12.38	\$52.25	\$36.74
198	Jun-42	Jun	2042	Summer	\$0.00	\$0.00	\$37.23	\$25.64	\$16.78	\$10.70	\$54.01	\$36.34
199	Jul-42	Jul	2042	Summer	\$0.00	\$0.00	\$39.56	\$27.24	\$30.47	\$14.84	\$70.02	\$42.08
200	Aug-42	Aug	2042	Summer	\$0.00	\$0.00	\$39.06	\$26.90	\$24.25	\$12.66	\$63.32	\$39.56

Record Field	Period	Month	Year	Season	PECO Zone Adjusted On-Peak (\$/MWh)	PECO Zone Adjusted Off-Peak (\$/MWh)	PECO Zone NG Converted On-Peak (Nominal)	PECO Zone NG Converted Off-Peak (Nominal \$/MWh)	PECO Zone Spark Spread On-Peak (Nominal \$/MWh)	PECO Zone Spark Spread Off-Peak (Nominal \$/MWh)	PECO Zone On-Peak (\$/MWh)	PECO Zone Off-Peak (Nominal \$/MWh)
200	Aug-42	Aug	2042	Summer	\$0.00	\$0.00	\$39.06	\$26.30	\$24.25	\$12.66	\$63.32	\$39.56
201	Sep-42	Sep	2042	Summer	\$0.00	\$0.00	\$35.16	\$24.21	\$18.39	\$11.84	\$54.15	\$36.05
202	Oct-42	Oct	2042	Shoulder	\$0.00	\$0.00	\$33.62	\$23.16	\$15.32	\$13.13	\$49.54	\$36.28
203	Nov-42	Nov	2042	Shoulder	\$0.00	\$0.00	\$45.39	\$31.26	\$11.13	\$12.10	\$56.51	\$43.36
204	Dec-42	Dec	2042	Winter	\$0.00	\$0.00	\$70.21	\$48.35	\$4.43	\$12.30	\$74.64	\$60.65
205	Jan-43	Jan	2043	Winter	\$0.00	\$0.00	\$112.00	\$77.13	-\$4.55	\$5.35	\$107.44	\$83.08
206	Feb-43	Feb	2043	Winter	\$0.00	\$0.00	\$95.35	\$66.07	-\$2.40	\$8.20	\$93.55	\$74.28
207	Mar-43	Mar	2043	Shoulder	\$0.00	\$0.00	\$49.31	\$34.37	\$12.09	\$14.55	\$62.00	\$48.92
208	Apr-43	Apr	2043	Shoulder	\$0.00	\$0.00	\$39.88	\$27.47	\$13.30	\$11.63	\$53.79	\$39.16
209	May-43	May	2043	Summer	\$0.00	\$0.00	\$36.58	\$25.19	\$16.88	\$12.38	\$53.46	\$37.57
210	Jun-43	Jun	2043	Summer	\$0.00	\$0.00	\$38.51	\$26.52	\$16.78	\$10.70	\$55.29	\$37.22
211	Jul-43	Jul	2043	Summer	\$0.00	\$0.00	\$40.31	\$28.17	\$30.47	\$14.84	\$71.38	\$43.01
212	Aug-43	Aug	2043	Summer	\$0.00	\$0.00	\$40.40	\$27.82	\$24.25	\$12.66	\$64.65	\$40.48
213	Sep-43	Sep	2043	Summer	\$0.00	\$0.00	\$36.36	\$25.04	\$18.39	\$11.84	\$55.35	\$36.88
214	Oct-43	Oct	2043	Shoulder	\$0.00	\$0.00	\$34.77	\$23.35	\$15.32	\$13.13	\$50.69	\$37.07
215	Nov-43	Nov	2043	Shoulder	\$0.00	\$0.00	\$46.94	\$32.32	\$11.13	\$12.10	\$58.06	\$44.43
216	Dec-43	Dec	2043	Winter	\$0.00	\$0.00	\$72.61	\$50.00	\$4.43	\$12.30	\$77.04	\$62.30
217	Jan-44	Jan	2044	Winter	\$0.00	\$0.00	\$114.35	\$78.75	-\$4.55	\$5.35	\$109.79	\$84.70
218	Feb-44	Feb	2044	Winter	\$0.00	\$0.00	\$97.96	\$67.46	-\$2.40	\$8.20	\$95.56	\$75.66
219	Mar-44	Mar	2044	Shoulder	\$0.00	\$0.00	\$50.95	\$35.09	\$12.09	\$14.55	\$63.05	\$49.64
220	Apr-44	Apr	2044	Shoulder	\$0.00	\$0.00	\$40.72	\$28.04	\$13.30	\$11.63	\$54.62	\$39.73
221	May-44	May	2044	Summer	\$0.00	\$0.00	\$37.35	\$25.72	\$16.88	\$12.38	\$54.23	\$38.10
222	Jun-44	Jun	2044	Summer	\$0.00	\$0.00	\$39.32	\$27.08	\$16.78	\$10.70	\$56.09	\$37.77
223	Jul-44	Jul	2044	Summer	\$0.00	\$0.00	\$41.77	\$28.76	\$30.47	\$14.84	\$72.23	\$43.60
224	Aug-44	Aug	2044	Summer	\$0.00	\$0.00	\$41.25	\$28.40	\$24.25	\$12.66	\$65.50	\$41.07
225	Sep-44	Sep	2044	Summer	\$0.00	\$0.00	\$37.13	\$25.57	\$18.39	\$11.84	\$56.12	\$37.41
226	Oct-44	Oct	2044	Shoulder	\$0.00	\$0.00	\$35.50	\$24.45	\$15.32	\$13.13	\$51.42	\$37.58
227	Nov-44	Nov	2044	Shoulder	\$0.00	\$0.00	\$47.92	\$33.00	\$11.13	\$12.10	\$59.05	\$45.10
228	Dec-44	Dec	2044	Winter	\$0.00	\$0.00	\$74.13	\$51.05	\$4.43	\$12.30	\$78.56	\$63.35
229	Jan-45	Jan	2045	Winter	\$0.00	\$0.00	\$116.02	\$79.90	-\$4.55	\$5.35	\$111.46	\$85.85
230	Feb-45	Feb	2045	Winter	\$0.00	\$0.00	\$99.39	\$68.45	-\$2.40	\$8.20	\$96.99	\$76.65
231	Mar-45	Mar	2045	Shoulder	\$0.00	\$0.00	\$51.10	\$35.60	\$12.09	\$14.55	\$63.79	\$50.15
232	Apr-45	Apr	2045	Shoulder	\$0.00	\$0.00	\$41.31	\$28.45	\$13.30	\$11.63	\$55.22	\$40.14
233	May-45	May	2045	Summer	\$0.00	\$0.00	\$37.89	\$26.10	\$16.88	\$12.38	\$54.78	\$38.48
234	Jun-45	Jun	2045	Summer	\$0.00	\$0.00	\$39.83	\$27.47	\$16.78	\$10.70	\$56.67	\$38.17
235	Jul-45	Jul	2045	Summer	\$0.00	\$0.00	\$42.38	\$29.18	\$30.47	\$14.84	\$72.84	\$44.02
236	Aug-45	Aug	2045	Summer	\$0.00	\$0.00	\$41.85	\$28.82	\$24.25	\$12.66	\$66.10	\$41.48
237	Sep-45	Sep	2045	Summer	\$0.00	\$0.00	\$37.67	\$25.34	\$18.39	\$11.84	\$56.66	\$37.78
238	Oct-45	Oct	2045	Shoulder	\$0.00	\$0.00	\$36.02	\$24.81	\$15.32	\$13.13	\$51.94	\$37.93
239	Nov-45	Nov	2045	Shoulder	\$0.00	\$0.00	\$48.62	\$33.48	\$11.13	\$12.10	\$59.75	\$45.53
240	Dec-45	Dec	2045	Winter	\$0.00	\$0.00	\$75.21	\$51.80	\$4.43	\$12.30	\$79.64	\$64.10
241	Jan-46	Jan	2046	Winter	\$0.00	\$0.00	\$0.00	\$0.00	-\$4.55	\$5.35	-\$4.55	\$5.35
242	Feb-46	Feb	2046	Winter	\$0.00	\$0.00	\$0.00	\$0.00	-\$2.40	\$8.20	-\$2.40	\$8.20
243	Mar-46	Mar	2046	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$12.09	\$14.55	\$12.09	\$14.55
244	Apr-46	Apr	2046	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$13.30	\$11.63	\$13.30	\$11.63
245	May-46	May	2046	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$16.88	\$12.38	\$16.88	\$12.38
246	Jun-46	Jun	2046	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$16.78	\$10.70	\$16.78	\$10.70
247	Jul-46	Jul	2046	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$30.47	\$14.84	\$30.47	\$14.84
248	Aug-46	Aug	2046	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$24.25	\$12.66	\$24.25	\$12.66
249	Sep-46	Sep	2046	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$18.39	\$11.84	\$18.39	\$11.84
250	Oct-46	Oct	2046	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$15.32	\$13.13	\$15.32	\$13.13
251	Nov-46	Nov	2046	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$11.13	\$12.10	\$11.13	\$12.10
252	Dec-46	Dec	2046	Winter	\$0.00	\$0.00	\$0.00	\$0.00	\$4.43	\$12.30	\$4.43	\$12.30
253	Jan-47	Jan	2047	Winter	\$0.00	\$0.00	\$0.00	\$0.00	-\$4.55	\$5.35	-\$4.55	\$5.35
254	Feb-47	Feb	2047	Winter	\$0.00	\$0.00	\$0.00	\$0.00	-\$2.40	\$8.20	-\$2.40	\$8.20
255	Mar-47	Mar	2047	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$12.09	\$14.55	\$12.09	\$14.55
256	Apr-47	Apr	2047	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$13.30	\$11.63	\$13.30	\$11.63
257	May-47	May	2047	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$16.88	\$12.38	\$16.88	\$12.38
258	Jun-47	Jun	2047	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$16.78	\$10.70	\$16.78	\$10.70
259	Jul-47	Jul	2047	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$30.47	\$14.84	\$30.47	\$14.84
260	Aug-47	Aug	2047	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$24.25	\$12.66	\$24.25	\$12.66
261	Sep-47	Sep	2047	Summer	\$0.00	\$0.00	\$0.00	\$0.00	\$18.39	\$11.84	\$18.39	\$11.84
262	Oct-47	Oct	2047	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$15.32	\$13.13	\$15.32	\$13.13
263	Nov-47	Nov	2047	Shoulder	\$0.00	\$0.00	\$0.00	\$0.00	\$11.13	\$12.10	\$11.13	\$12.10
264	Dec-47	Dec	2047	Winter	\$0.00	\$0.00	\$0.00	\$0.00	\$4.43	\$12.30	\$4.43	\$12.30

Generation Capacity

Note: The 2027/2028 PJM Capacity Auction did not occur before the date of filing. Per discussion with the SWE, the established floor price of \$175/MW-day was used in the calculator in place of a settled value.

PJM BRA Results (Real \$/MW-day)											
EDC	Zone	Summer					Winter				
		2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028
PECO	PECO	\$34.13	\$28.92	\$269.92	\$329.17	\$175.00	\$34.13	\$28.92	\$269.92	\$329.17	\$175.00

EDC	Zone	Seasonally Adjusted BRA Results (Real \$/MW-day)									
		Summer					Winter				
		2025/2026	2025/2026	2025/2026	2026/2027	2027/2028	2021/2021	2021/2022	2025/2026	2026/2027	2027/2028
PECO	PECO	\$17.07	\$14.46	\$134.96	\$164.59	\$87.50	\$17.07	\$14.46	\$134.96	\$164.59	\$87.50

Seasonally Adjusted PJM BRA Results (Real \$/kW-year)											
Summer						Winter					
2020/2021	2021/2022	2025/2026	2026/2027	2027/2028	5-Year Average	2020/2021	2021/2022	2025/2026	2026/2027	2027/2028	5-Year Average
\$6.23	\$5.28	\$49.26	\$60.07	\$31.94	\$30.56	\$6.23	\$5.28	\$49.26	\$60.07	\$31.94	\$30.56

Avoided Generation Capacity Forecast in Nominal Dollars (Nominal \$/kW-year)																		
Act 129 PY	DYIPY Start	DYIPY End	Summer								Winter							
			DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn	DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn	Inflation Flag	Input Flag
18	2026	2027	\$0.00	\$0.00	\$60.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$60.07	\$0.00	\$0.00	\$0.00	\$0.00	0	annual
19	2027	2028	\$0.00	\$0.00	\$31.94	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.94	\$0.00	\$0.00	\$0.00	\$0.00	0	annual
20	2028	2029	\$0.00	\$0.00	\$30.56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.56	\$0.00	\$0.00	\$0.00	\$0.00	0	average
21	2029	2030	\$0.00	\$0.00	\$31.19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.19	\$0.00	\$0.00	\$0.00	\$0.00	1	average
22	2030	2031	\$0.00	\$0.00	\$31.83	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.83	\$0.00	\$0.00	\$0.00	\$0.00	1	average
23	2031	2032	\$0.00	\$0.00	\$32.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.49	\$0.00	\$0.00	\$0.00	\$0.00	1	average
24	2032	2033	\$0.00	\$0.00	\$33.17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.17	\$0.00	\$0.00	\$0.00	\$0.00	1	average
25	2033	2034	\$0.00	\$0.00	\$33.85	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.85	\$0.00	\$0.00	\$0.00	\$0.00	1	average
26	2034	2035	\$0.00	\$0.00	\$34.56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.56	\$0.00	\$0.00	\$0.00	\$0.00	1	average
27	2035	2036	\$0.00	\$0.00	\$35.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.27	\$0.00	\$0.00	\$0.00	\$0.00	1	average
28	2036	2037	\$0.00	\$0.00	\$36.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.00	\$0.00	\$0.00	\$0.00	\$0.00	1	average
29	2037	2038	\$0.00	\$0.00	\$36.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.75	\$0.00	\$0.00	\$0.00	\$0.00	1	average
30	2038	2039	\$0.00	\$0.00	\$37.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.51	\$0.00	\$0.00	\$0.00	\$0.00	1	average
31	2039	2040	\$0.00	\$0.00	\$38.29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.29	\$0.00	\$0.00	\$0.00	\$0.00	1	average
32	2040	2041	\$0.00	\$0.00	\$39.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.08	\$0.00	\$0.00	\$0.00	\$0.00	1	average
33	2041	2042	\$0.00	\$0.00	\$39.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.89	\$0.00	\$0.00	\$0.00	\$0.00	1	average
34	2042	2043	\$0.00	\$0.00	\$40.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.72	\$0.00	\$0.00	\$0.00	\$0.00	1	average
35	2043	2044	\$0.00	\$0.00	\$41.56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.56	\$0.00	\$0.00	\$0.00	\$0.00	1	average
36	2044	2045	\$0.00	\$0.00	\$42.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.42	\$0.00	\$0.00	\$0.00	\$0.00	1	average
37	2045	2046	\$0.00	\$0.00	\$43.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.30	\$0.00	\$0.00	\$0.00	\$0.00	1	average
38	2046	2047	\$0.00	\$0.00	\$44.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.20	\$0.00	\$0.00	\$0.00	\$0.00	1	average
39	2047	2048	\$0.00	\$0.00	\$45.11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.11	\$0.00	\$0.00	\$0.00	\$0.00	1	average

Avoided Transmission Capacity Forecast in Nominal Dollars (\$/KW-year) - Summer									
Act 129 PY	DY/PY Start	DY/PY End	DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn
18	2026	2027	\$61.07	\$58.92	\$22.48	\$44.19	\$77.10	\$48.00	\$8.83
19	2027	2028	\$62.33	\$60.14	\$22.94	\$45.10	\$78.69	\$48.99	\$9.01
20	2028	2029	\$63.62	\$61.38	\$23.42	\$46.04	\$80.32	\$50.00	\$9.20
21	2029	2030	\$64.94	\$62.66	\$23.90	\$46.99	\$81.99	\$51.04	\$9.39
22	2030	2031	\$66.29	\$63.95	\$24.40	\$47.97	\$83.69	\$52.10	\$9.58
23	2031	2032	\$67.66	\$65.28	\$24.90	\$48.96	\$85.42	\$53.18	\$9.78
24	2032	2033	\$69.06	\$66.63	\$25.42	\$49.97	\$87.19	\$54.28	\$9.98
25	2033	2034	\$70.49	\$68.01	\$25.95	\$51.01	\$88.99	\$55.40	\$10.19
26	2034	2035	\$71.95	\$69.42	\$26.48	\$52.07	\$90.84	\$56.55	\$10.40
27	2035	2036	\$73.44	\$70.86	\$27.03	\$53.14	\$92.72	\$57.72	\$10.62
28	2036	2037	\$74.96	\$72.33	\$27.59	\$54.24	\$94.64	\$58.92	\$10.84
29	2037	2038	\$76.52	\$73.82	\$28.16	\$55.37	\$96.60	\$60.14	\$11.06
30	2038	2039	\$78.10	\$75.35	\$28.75	\$56.52	\$98.60	\$61.38	\$11.29
31	2039	2040	\$79.72	\$76.92	\$29.34	\$57.69	\$100.64	\$62.66	\$11.53
32	2040	2041	\$81.37	\$78.51	\$29.95	\$58.88	\$102.73	\$63.95	\$11.76
33	2041	2042	\$83.06	\$80.13	\$30.57	\$60.10	\$104.86	\$65.28	\$12.01
34	2042	2043	\$84.78	\$81.79	\$31.20	\$61.35	\$107.03	\$66.63	\$12.26
35	2043	2044	\$86.53	\$83.49	\$31.85	\$62.62	\$109.25	\$68.01	\$12.51
36	2044	2045	\$88.33	\$85.22	\$32.51	\$63.91	\$111.51	\$69.42	\$12.77
37	2045	2046	\$90.16	\$86.98	\$33.18	\$65.24	\$113.82	\$70.86	\$13.03

Avoided Distribution Capacity Forecast in Nominal Dollars (\$/KW-year) - Summer									
DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn			
\$59.28	\$52.46	\$39.61	\$37.18	\$43.52	\$25.11	\$41.25			
\$64.43	\$55.82	\$47.21	\$42.64	\$45.52	\$26.68	\$46.27			
\$69.93	\$58.95	\$49.64	\$47.98	\$45.17	\$29.00	\$51.89			
\$76.21	\$62.16	\$51.04	\$53.05	\$45.79	\$31.55	\$56.92			
\$81.30	\$65.41	\$50.53	\$57.97	\$45.98	\$33.94	\$62.19			
\$82.99	\$66.77	\$51.57	\$59.17	\$46.93	\$34.64	\$63.48			
\$84.71	\$68.15	\$52.64	\$60.39	\$47.91	\$35.36	\$64.80			
\$86.46	\$69.56	\$53.73	\$61.65	\$48.90	\$36.09	\$66.14			
\$88.25	\$71.00	\$54.85	\$62.92	\$49.91	\$36.84	\$67.51			
\$90.08	\$72.47	\$55.98	\$64.23	\$50.94	\$37.60	\$68.91			
\$91.95	\$73.97	\$57.14	\$65.56	\$52.00	\$38.38	\$70.34			
\$93.85	\$75.51	\$58.33	\$66.91	\$53.08	\$39.17	\$71.79			
\$95.80	\$77.07	\$59.53	\$68.30	\$54.18	\$39.99	\$73.28			
\$97.78	\$78.67	\$60.77	\$69.72	\$55.30	\$40.81	\$74.80			
\$99.81	\$80.30	\$62.03	\$71.16	\$56.44	\$41.66	\$76.35			
\$101.87	\$81.96	\$63.31	\$72.63	\$57.61	\$42.52	\$77.93			
\$103.98	\$83.66	\$64.62	\$74.14	\$58.81	\$43.40	\$79.54			
\$106.14	\$85.39	\$65.96	\$75.67	\$60.03	\$44.30	\$81.19			
\$108.34	\$87.16	\$67.33	\$77.24	\$61.27	\$45.22	\$82.87			
\$110.58	\$88.97	\$68.72	\$78.84	\$62.54	\$46.16	\$84.59			

Avoided Transmission Capacity Forecast in Nominal Dollars (\$/KW-year) - Winter									
Act 129 PY	DY/PY Start	DY/PY End	DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn
18	2026	2027	\$0.00	\$0.00	\$0.00	\$14.73	\$0.00	\$48.00	\$8.83
19	2027	2028	\$0.00	\$0.00	\$0.00	\$15.03	\$0.00	\$48.99	\$9.01
20	2028	2029	\$0.00	\$0.00	\$0.00	\$15.35	\$0.00	\$50.00	\$9.20
21	2029	2030	\$0.00	\$0.00	\$0.00	\$15.66	\$0.00	\$51.04	\$9.39
22	2030	2031	\$0.00	\$0.00	\$0.00	\$15.99	\$0.00	\$52.10	\$9.58
23	2031	2032	\$0.00	\$0.00	\$0.00	\$16.32	\$0.00	\$53.18	\$9.78
24	2032	2033	\$0.00	\$0.00	\$0.00	\$16.66	\$0.00	\$54.28	\$9.98
25	2033	2034	\$0.00	\$0.00	\$0.00	\$17.00	\$0.00	\$55.40	\$10.19
26	2034	2035	\$0.00	\$0.00	\$0.00	\$17.36	\$0.00	\$56.55	\$10.40
27	2035	2036	\$0.00	\$0.00	\$0.00	\$17.71	\$0.00	\$57.72	\$10.62
28	2036	2037	\$0.00	\$0.00	\$0.00	\$18.08	\$0.00	\$58.92	\$10.84
29	2037	2038	\$0.00	\$0.00	\$0.00	\$18.46	\$0.00	\$60.14	\$11.06
30	2038	2039	\$0.00	\$0.00	\$0.00	\$18.84	\$0.00	\$61.38	\$11.29
31	2039	2040	\$0.00	\$0.00	\$0.00	\$19.23	\$0.00	\$62.66	\$11.53
32	2040	2041	\$0.00	\$0.00	\$0.00	\$19.63	\$0.00	\$63.95	\$11.76
33	2041	2042	\$0.00	\$0.00	\$0.00	\$20.03	\$0.00	\$65.28	\$12.01
34	2042	2043	\$0.00	\$0.00	\$0.00	\$20.45	\$0.00	\$66.63	\$12.26
35	2043	2044	\$0.00	\$0.00	\$0.00	\$20.87	\$0.00	\$68.01	\$12.51
36	2044	2045	\$0.00	\$0.00	\$0.00	\$21.30	\$0.00	\$69.42	\$12.77
37	2045	2046	\$0.00	\$0.00	\$0.00	\$21.75	\$0.00	\$70.86	\$13.03

Avoided Distribution Capacity Forecast in Nominal Dollars (\$/KW-year) - Winter									
DLC	Met-Ed	PECO	Penelec	Penn Power	PPL	West Penn			
\$0.11	\$6.70	\$10.26	\$5.79	\$16.27	\$32.44	\$5.05			
\$0.12	\$7.21	\$5.67	\$5.97	\$16.76	\$36.48	\$6.06			
\$0.18	\$8.16	\$5.54	\$6.24	\$19.33	\$39.40	\$7.01			
\$0.18	\$8.64	\$5.08	\$6.58	\$20.57	\$41.88	\$7.93			
\$0.29	\$9.68	\$7.16	\$7.24	\$22.70	\$44.30	\$9.02			
\$0.29	\$9.88	\$7.31	\$7.39	\$23.17	\$45.22	\$9.21			
\$0.30	\$10.09	\$7.46	\$7.54	\$23.65	\$46.16	\$9.40			
\$0.30	\$10.30	\$7.62	\$7.69	\$24.14	\$47.12	\$9.59			
\$0.31	\$10.51	\$7.78	\$7.85	\$24.64	\$48.09	\$9.79			
\$0.32	\$10.73	\$7.94	\$8.02	\$25.15	\$49.09	\$9.99			
\$0.32	\$10.95	\$8.10	\$8.18	\$25.67	\$50.10	\$10.20			
\$0.33	\$11.18	\$8.27	\$8.35	\$26.20	\$51.14	\$10.41			
\$0.34	\$11.41	\$8.44	\$8.53	\$26.74	\$52.20	\$10.63			
\$0.34	\$11.65	\$8.62	\$8.70	\$27.30	\$53.28	\$10.85			
\$0.35	\$11.89	\$8.80	\$8.88	\$27.86	\$54.39	\$11.07			
\$0.36	\$12.13	\$8.98	\$9.07	\$28.44	\$55.51	\$11.30			
\$0.37	\$12.39	\$9.16	\$9.25	\$29.03	\$56.66	\$11.53			
\$0.37	\$12.64	\$9.35	\$9.45	\$29.63	\$57.84	\$11.77			
\$0.38	\$12.90	\$9.55	\$9.64	\$30.25	\$59.04	\$12.02			
\$0.39	\$13.17	\$9.75	\$9.84	\$30.87	\$60.26	\$12.27			

Summer Transmission (\$/kW-year system-level)		
EDC	2026	Tool Lookup
PECO	\$22.48	PECO
PPL	\$48.00	PPL
Duquesne Light	\$61.07	DLC
FE: Met-Ed	\$58.92	Met-Ed
FE: Penelec	\$44.19	Penelec
FE: Penn Power	\$77.10	Penn Power
FE: West Penn Power	\$8.83	West Penn

Winter Transmission (\$/kW-year system-level)		
EDC	2026	Tool Lookup
PECO	\$0.00	PECO
PPL	\$48.00	PPL
Duquesne Light	\$0.00	DLC
FE: Met-Ed	\$0.00	Met-Ed
FE: Penelec	\$14.73	Penelec
FE: Penn Power	\$0.00	Penn Power
FE: West Penn Power	\$8.83	West Penn

Summer Distribution (\$/kW-year Nominal)						
EDC	2026	2027	2028	2029	2030	Tool Lookup
PECO	\$39.61	\$47.21	\$49.64	\$51.04	\$50.53	PECO
PPL	\$25.11	\$26.68	\$29.00	\$31.55	\$33.94	PPL
Duquesne Light	\$59.28	\$64.43	\$69.93	\$76.21	\$81.30	DLC
FE: Met-Ed	\$52.46	\$55.82	\$58.95	\$62.16	\$65.41	Met-Ed
FE: Penelec	\$37.18	\$42.64	\$47.98	\$53.05	\$57.97	Penelec
FE: Penn Power	\$43.52	\$45.52	\$45.17	\$45.79	\$45.98	Penn Power
FE: West Penn Power	\$41.25	\$46.27	\$51.89	\$56.92	\$62.19	West Penn

Winter Distribution (\$/kW-year Nominal)						
EDC	2026	2027	2028	2029	2030	Tool Lookup
PECO	\$10.26	\$5.67	\$5.54	\$5.08	\$7.16	PECO
PPL	\$32.44	\$36.48	\$39.40	\$41.88	\$44.30	PPL
Duquesne Light	\$0.21	\$0.12	\$0.18	\$0.18	\$0.29	DLC
FE: Met-Ed	\$6.70	\$7.21	\$8.16	\$8.64	\$9.68	Met-Ed
FE: Penelec	\$5.79	\$5.97	\$6.24	\$6.58	\$7.24	Penelec
FE: Penn Power	\$16.27	\$16.76	\$19.33	\$20.57	\$22.70	Penn Power
FE: West Penn Power	\$5.05	\$6.06	\$7.01	\$7.93	\$9.02	West Penn

Adjustments

Record Field	Period	Month	Year	Transco 6 (Non-NY)	Locational Gas Adjustment (\$/MMBtu)
1	Jan-26	Jan	2026	\$7.51	\$3.233
2	Feb-26	Feb	2026	\$6.39	\$2.343
3	Mar-26	Mar	2026	\$3.43	-\$0.263
4	Apr-26	Apr	2026	\$3.02	-\$0.580
5	May-26	May	2026	\$2.82	-\$0.806
6	Jun-26	Jun	2026	\$3.01	-\$0.778
7	Jul-26	Jul	2026	\$3.33	-\$0.642
8	Aug-26	Aug	2026	\$3.32	-\$0.713
9	Sep-26	Sep	2026	\$2.83	-\$1.155
10	Oct-26	Oct	2026	\$2.73	-\$1.308
11	Nov-26	Nov	2026	\$3.49	-\$0.756
12	Dec-26	Dec	2026	\$5.37	\$0.705
13	Jan-27	Jan	2027	\$8.06	\$3.154
14	Feb-27	Feb	2027	\$6.93	\$2.357
15	Mar-27	Mar	2027	\$3.64	-\$0.273
16	Apr-27	Apr	2027	\$3.07	-\$0.439
17	May-27	May	2027	\$2.74	-\$0.743
18	Jun-27	Jun	2027	\$2.94	-\$0.674
19	Jul-27	Jul	2027	\$3.14	-\$0.623
20	Aug-27	Aug	2027	\$3.10	-\$0.731
21	Sep-27	Sep	2027	\$2.77	-\$1.024
22	Oct-27	Oct	2027	\$2.66	-\$1.204
23	Nov-27	Nov	2027	\$3.69	-\$0.365
24	Dec-27	Dec	2027	\$5.51	\$1.039
25	Jan-28	Jan	2028	\$8.23	\$3.466
26	Feb-28	Feb	2028	\$7.04	\$2.658
27	Mar-28	Mar	2028	\$3.76	\$0.011
28	Apr-28	Apr	2028	\$2.90	-\$0.414
29	May-28	May	2028	\$2.73	-\$0.572
30	Jun-28	Jun	2028	\$2.80	-\$0.626
31	Jul-28	Jul	2028	\$2.89	-\$0.709
32	Aug-28	Aug	2028	\$2.84	-\$0.819
33	Sep-28	Sep	2028	\$2.67	-\$0.969
34	Oct-28	Oct	2028	\$2.54	-\$1.151
35	Nov-28	Nov	2028	\$3.52	-\$0.357
36	Dec-28	Dec	2028	\$5.36	\$1.050
37	Jan-29	Jan	2029	\$8.06	\$3.483
38	Feb-29	Feb	2029	\$6.96	\$2.672
39	Mar-29	Mar	2029	\$3.61	\$0.018
40	Apr-29	Apr	2029	\$2.97	-\$0.187
41	May-29	May	2029	\$2.78	-\$0.358
42	Jun-29	Jun	2029	\$2.90	-\$0.407
43	Jul-29	Jul	2029	\$3.00	-\$0.483
44	Aug-29	Aug	2029	\$2.96	-\$0.597
45	Sep-29	Sep	2029	\$2.78	-\$0.760
46	Oct-29	Oct	2029	\$2.66	-\$0.953
47	Nov-29	Nov	2029	\$3.35	-\$0.445
48	Dec-29	Dec	2029	\$5.16	\$0.920

Month	Locational Adjustment (\$/MMBtu)	Load Shape	Spark Spread On-Peak (\$/MWh)	Spark Spread Off-Peak (\$/MWh)		
Jan	\$3.33	208.4%	-\$4.65	\$5.83	Commentary: In some cases, the spark spread may be a negative monetary value. In the marketplace, this may occur for a short period, but usually for an entire month. However, this factor accounts for differences in the heat rate assumptions and the real market values. Escalation is later applied in a positive manner as not to over devalue future spark spreads.	
Feb	\$2.51	178.6%	-\$2.45	\$8.04		
Mar	-\$0.13	92.9%	\$11.85	\$14.25		
Apr	-\$0.40	74.2%	\$13.62	\$11.45		
May	-\$0.62	68.1%	\$16.54	\$12.13		
Jun	-\$0.62	71.7%	\$16.44	\$10.48		
Jul	-\$0.61	76.1%	\$29.85	\$14.54		
Aug	-\$0.71	75.2%	\$23.76	\$12.40		
Sep	-\$0.98	67.7%	\$18.60	\$11.60		
Oct	-\$1.15	64.7%	\$15.59	\$12.86		
Nov	-\$0.48	87.4%	\$10.90	\$11.85		
Dec	\$0.93	135.1%	\$4.34	\$12.05		

AEPS

Year	2026
Load (MWh)	1,000

Credit	Tier Req (weight)	Price	Required Credits	Cost
Solar	0.5%	\$37.25	5	\$186
Tier I	8.0%	\$34.20	80	\$2,736
Tier II	10.0%	\$39.63	100	\$3,963
			Total	185 \$6,885

Weighted Avg. Price (Per Credit)
\$37.21

Weighted Avg. Price (Per MWh)
\$6.88

Alternative Energy Credit Prices as of 05/01/24				
Tier	Reporting Year	Marex (Bid price)	Marex (Offer price)	Avg Price
Solar	2024	\$34.50	\$35.50	\$35.00
	2025	\$37.00	\$38.00	\$37.50
	2026	\$36.75	\$37.75	\$37.25
	2027	\$36.50	\$37.50	\$37.00
Tier I	2023	\$34.55	\$35.05	\$34.80
	2024	\$34.50	\$35.00	\$34.75
	2025	\$34.55	\$35.05	\$34.80
	2026	\$33.95	\$34.45	\$34.20
Tier II	2023	\$33.50	\$34.25	\$33.88
	2024	\$35.00	\$35.75	\$35.38
	2025	\$38.50	\$39.25	\$38.88
	2026	\$39.25	\$40.00	\$39.63

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY :
COMPANY FOR APPROVAL OF ITS :
ACT 129 PHASE V ENERGY : DOCKET NO. M-2025-3057328
EFFICIENCY AND CONSERVATION :
PLAN :

LIST OF PECO ENERGY COMPANY'S TESTIMONY & EXHIBITS

- PECO Energy Co. Statement No. 1 Direct Testimony of Urmila Dighe
- PECO Energy Co. Statement No. 2 Direct Testimony of Marina Geneles
(Corrected Version)
- PECO Energy Co. Statement No. 2-R Rebuttal Testimony of Marina Geneles
 - Exhibit MG-1 Corrected Phase V Plan Table 8, 20, and 32
 - Exhibit MG-2 Selected Discovery Responses From Other Parties
 - Exhibit MG-3 Portion of PECO's Response to CAUSE-PA-II-5
- PECO Energy Co. Statement No. 3 Direct Testimony of Mark van Eeghen
 - Exhibit MVE-1 Resume of Mark van Eeghen
- PECO Energy Co. Statement No. 3-R Rebuttal Testimony of Mark van Eeghen
- PECO Energy Co. Statement No. 4 Direct Testimony of Megan A. McDevitt
 - Exhibit MAM-1 Proposed Supplement Setting Forth Revisions to PECO's Electric Service Tariff (Clean and Redline)
 - Exhibit MAM-2 Program Costs by Rate Class
 - Exhibit MAM-3 Calculation of the Cost Recovery Charges by Rate Class for the First Year of PECO's Phase V EE&C Plan
 - Exhibit MAM-4 Responses to the Commission's Filing Requirements at 52 Pa. Code § 53.52

■ **PECO Exhibit No. 1**

**PECO Phase V Energy Efficiency and
Conservation Plan (Program Years 18-22)
and related Appendices**

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF PECO ENERGY)
COMPANY FOR APPROVAL OF ITS)
ACT 129 PHASE V ENERGY) DOCKET NO. M-2025-3057328
EFFICIENCY AND)
CONSERVATION PLAN)**

DIRECT TESTIMONY

OF

Zack Tyler

**ON BEHALF OF
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE**

January 20, 2026

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1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Zack Tyler. I am a Managing Consultant with Energy Futures Group
4 ("EFG"). EFG's office is located at 10298 Route 116, Hinesburg, Vermont 05461. EFG
5 provides expert consulting services related to the design, implementation, and evaluation of
6 programs and policies that promote investments in energy efficiency, renewable energy,
7 distributed energy resources, and strategic electrification.

8 **Q. ON WHOSE BEHALF ARE YOU APPEARING?**

9 A. I am presenting testimony on behalf of the Pennsylvania Office of Consumer
10 Advocate ("OCA").

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. On December 1, 2025, PECO Energy Company ("PECO" or "Company") filed a
13 *Petition for Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan*
14 ("Plan"). EFG was retained by the OCA to assist in the review of PECO's Plan. My testimony
15 addresses the Plan's compliance with the Phase V Implementation Order under Docket No. M-
16 2025-3052826, the composition of programs and measures included in the Plan, the savings
17 assumptions associated with those programs and measures, and the overall reasonableness of
18 the Plan from a ratepayer perspective.

19 **Q. PLEASE DESCRIBE YOUR QUALIFICATIONS, WORK EXPERIENCE,**
20 **AND EDUCATIONAL BACKGROUND.**

21 A. I have over 16 years of experience working with energy efficiency and demand
22 response programs. For approximately 14 years, I evaluated energy efficiency and demand
23 response programs across the United States and Canada. My experience includes extensive

1 work in Massachusetts, Connecticut, Vermont, Rhode Island, Illinois, Pennsylvania, and
2 Ontario.

3 Much of my evaluation experience was gained while working at NMR Group, the
4 current primary contractor serving as the Statewide Evaluator (“SWE”) under Act 129. My
5 work on Act 129 as part of the SWE team primarily focused on residential baseline research
6 and analyses.

7 I have held multiple professional certifications related to energy efficiency and demand
8 response, including Data Center Energy Practitioner (DCEP) – Generalist, Home Energy
9 Rating System (HERS) Rater, Certified Passive House Consultant (CPHC), BPI Multifamily
10 Building Analyst, Infrared Thermographer, and Residential Air Balancing and Diagnostic
11 Technician. I hold a Bachelor of Arts degree in Environmental Studies from the University of
12 Colorado at Boulder and a Master of Arts degree in Energy and Environmental Analysis from
13 Boston University. A summary of my qualifications is provided in my resume, included as
14 Attachment A.

15 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS**
16 **ON UTILITY ISSUES?**

17 A. No, I have not.

18

19 **II. OVERVIEW OF PECO’S PHASE V PLAN**

20 **Q. HAVE YOU REVIEWED THE PHASE V PLAN?**

21 A. Yes. I have reviewed the materials filed in support of the Company’s Phase V Energy
22 Efficiency and Conservation Plan, including the Direct Testimonies of Urmila Dighe, Marina
23 Geneles, Mark van Eeghen, and Megan A. McDevitt. I have also reviewed the Company’s

1 responses to Interrogatories submitted by the Tenant Union Representative Network
2 (“TURN”), the Coalition for Affordable Utility Services and Energy Efficiency in
3 Pennsylvania (“CAUSE-PA”), and the OCA.

4 **Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COMPANY’S**
5 **PLAN.**

6 A. PECO’s Phase V Plan includes three overarching energy efficiency programs: the
7 Residential Program, the Home Energy Reports (“HER”) Program, and the Non-Residential
8 Program. Collectively, these programs are designed to achieve approximately 1,458,060 MWh
9 of cumulative energy savings and 264.5 MW of peak demand reduction over the five-year
10 Phase V period. The Plan also includes a low-income energy savings target of 90,392 MWh.

11 The total projected cost of the Plan is \$427,385,830, which represents the maximum
12 spending level permitted under the Phase V Implementation Order. Within the three
13 overarching program categories, the Plan describes multiple subprograms, including income-
14 eligible offerings within the Residential and HER programs, as well as differentiated
15 approaches for small and large commercial and industrial (“C&I”) customers within the Non-
16 Residential Program.

17 The Phase V Plan has an overall benefit-cost ratio (“BCR”) of 1.3 using the TRC test,
18 including BCRs of 1.4 for both small and large C&I customers. In addition, the Plan is designed
19 to exceed the Phase V energy and peak demand reduction targets by a significant margin, with
20 estimated energy savings equal to 131 percent of the Phase V requirement and peak demand
21 reductions equal to 148 percent (summer) and 123 percent (winter) of the required targets.
22 Taken together, these factors indicate that PECO has sufficient flexibility within the existing

1 portfolio to accommodate additional investments in C&I DLS while continuing to meet or
2 exceed its overall Phase V goals.

3 That being said, the majority of the programs included in the Phase V Plan are
4 continuations of programs offered during Phase IV, although certain elements have been
5 modified. For example, residential upstream lighting incentives have been removed from the
6 portfolio, while daily load shifting (“DLS”) measures have been added.

7 **Q. DOES PECO’S PHASE V PLAN COMPLY WITH THE REQUIREMENTS OF**
8 **THE PHASE V IMPLEMENTATION ORDER?**

9 A. Yes. Based on my review, PECO’s Phase V Plan appears to be compliant with the
10 requirements of the Phase V Implementation Order. The Plan proposes energy and peak
11 demand reductions that exceed the targets established in the Implementation Order, includes a
12 variety of measures across customer classes, and is informed by the Phase V energy efficiency
13 and demand response market potential studies.

14 Although the Plan satisfies the Commission’s core compliance requirements,
15 compliance alone does not ensure that the portfolio is well designed or that it fully serves the
16 interests of consumers and program participants. The observations and recommendations
17 presented in this testimony demonstrate that meaningful improvements are warranted to
18 strengthen portfolio balance, improve the long-term durability of savings, and better position
19 the Plan to respond to evolving market conditions and policy objectives. The Commission
20 should therefore give serious consideration to the recommendations outlined herein when
21 evaluating and approving the Plan.

1 **III. SUMMARY OF KEY ISSUES**

2 **Q. PLEASE SUMMARIZE THE KEY ISSUES YOU IDENTIFIED IN YOUR**
3 **REVIEW OF PECO'S PHASE V PLAN.**

4 A. My review of PECO's Phase V Energy Efficiency and Conservation Plan identified
5 several issues related to program design and portfolio composition. At a high level, these issues
6 include the limited evolution of program offerings from Phase IV to Phase V, continued
7 reliance on certain mature or short-lived savings sources, and gaps in program targeting for
8 specific customer segments. These issues are summarized below and discussed in greater detail
9 in subsequent sections of my testimony.

10 First, PECO's Phase V portfolio appears, in many respects, to be a continuation of its
11 Phase IV program structure. While continuity can provide administrative and market stability,
12 the Phase V Plan provides limited explanation for why a largely unchanged program mix is
13 appropriate given new statutory requirements, updated market conditions, and findings from
14 the Phase V energy efficiency and demand response potential studies. The portfolio continues
15 to rely heavily on measures such as HER and non-residential lighting, raising questions about
16 long-term portfolio resilience and preparedness for future phases. Industry research on market
17 transformation emphasizes that programs can use strategic interventions to reduce market
18 barriers and accelerate adoption of newer, higher-impact measures so they become standard
19 practice over time. If the portfolio does not begin to invest more intentionally in comprehensive
20 measures while near-term savings from mature measures remain available, PECO may miss
21 an opportunity to "prime" customers and the trade/contractor market—building familiarity,
22 confidence, and delivery capacity—such that these measures can scale in future phases when
23 savings from mature measures become harder to acquire.

1 Second, the Phase V Plan relies heavily on residential behavior-based savings through
2 the HER Program. HER savings represent approximately 31 percent of PECO's residential
3 energy savings in Phase V, a higher share than in Phase IV. While HER programs can provide
4 cost-effective savings, they are characterized by savings that decay over time, require ongoing
5 program expenditures to maintain, and do not result in permanent physical improvements to
6 customer homes thus limiting persistent savings. Increased reliance on HER savings raises
7 questions regarding savings durability, portfolio risk, and the distribution of benefits across
8 customer income levels.

9 Third, the Plan continues to include residential lighting savings as a meaningful share
10 of the residential portfolio, despite findings in the Energy Efficiency and Peak Demand
11 Reduction Market Potential Study that assume virtually no remaining residential lighting
12 potential due to federal efficiency standards and market saturation. Continued reliance on
13 residential lighting savings raises concerns about the value of acquiring these savings and
14 whether these resources could be more effectively redirected toward measures with more
15 durable, long-term impacts or towards emerging technologies.

16 Fourth, the Phase V Plan does not include a targeted strategy for moderate-income
17 households that fall outside the low-income carve-out but may face similar affordability and
18 participation barriers. The absence of moderate-income-specific program design raises
19 questions about whether program benefits are being distributed as equitably as possible across
20 PECO's residential customer base and whether cost-effective savings opportunities among
21 these customers are being overlooked.

22 Fifth, with respect to non-residential programs, the Plan relies heavily on lighting
23 measures, which account for approximately 44 percent of projected non-residential energy

1 savings. At the same time, the Non-Residential Baseline Study indicates that LED lighting
2 saturation is already high and increasing. This reliance raises concerns about the risk of LED-
3 to-LED replacements, the sustainability of projected savings, and whether sufficient effort has
4 been made to diversify the non-residential portfolio by advancing alternative technologies
5 while lighting savings remain available.

6 Sixth, the Demand Response Market Potential Study identifies substantial cost-
7 effective potential for C&I DLS within PECO's service territory. However, the Phase V Plan
8 includes modest savings from C&I DLS and instead focuses DLS efforts primarily on the
9 residential sector. This raises questions about whether the Plan is fully aligned with the
10 Commission-directed potential study and whether opportunities to achieve peak demand
11 reduction in the C&I sector are being adequately explored. The Plan includes excess energy
12 savings and peak demand reductions, along with strong cost-effectiveness results, indicating
13 that the portfolio could accommodate additional investments in DLS while remaining in
14 compliance with the Implementation Order.

15 Seventh, the Plan includes relatively limited savings from multifamily customers,
16 particularly market-rate multifamily households.¹ The Energy Efficiency and Peak Demand
17 Reduction Market Potential Study identifies meaningful multifamily potential for both low-
18 income and non-low-income customers, yet the Phase V Plan proposes significantly lower
19 savings for market-rate multifamily customers. This disparity raises concerns regarding access,
20 equity, and the ability of the portfolio to capture durable savings in a segment with well-
21 documented participation barriers.

¹ Market-rate customers are those who will receive a rebate not based upon income eligibility.

1 Finally, the Plan does not meaningfully integrate energy efficiency or demand-side
2 resource engagement into PECO's interconnection process for new or expanding commercial
3 and industrial customers. PECO's discovery responses indicate that no energy efficiency
4 requirements are imposed at interconnection and that Act 129 program engagement is not
5 formally incorporated into this process. This approach may result in missed opportunities to
6 influence facility design decisions, promote cost-effective energy efficiency, demand response,
7 and load management measures, and reduce long-term system impacts—particularly for large
8 new loads where early engagement is critical.

9 10 **IV. PROGRAM DESIGN AND PORTFOLIO COMPOSITION ISSUES**

11 **Q. HOW DOES PECO'S PHASE V PROGRAM PORTFOLIO COMPARE, AT A** 12 **HIGH LEVEL, TO ITS PHASE IV PORTFOLIO?**

13 A. At a high level, PECO's Phase V portfolio retains the same overarching program
14 structure used in Phase IV, including residential, behavioral, and non-residential program
15 categories. Many of the core delivery mechanisms, program channels, and measure types
16 proposed in Phase V are continuations of those offered during Phase IV.

17 **Q. WERE ANY CHANGES MADE TO THE PROGRAM PORTFOLIO** 18 **BETWEEN PHASE IV AND PHASE V?**

19 A. Yes. PECO made certain changes between Phase IV and Phase V, including the
20 removal of residential upstream lighting incentives and the addition of DLS measures.
21 However, these changes largely reflect adjustments driven by updated technical reference
22 assumptions and market conditions—such as the required removal of residential upstream
23 lighting due to ongoing market transformation—rather than a fundamental redesign of the

1 portfolio. While daily load shifting represents a new program element in Phase V, it accounts
2 for only a modest share of total peak demand reductions, with the majority of demand impacts
3 continuing to be achieved through coincident peak reductions from energy efficiency
4 measures.

5 **Q. WHY DOES THE SIMILARITY BETWEEN THE PROGRAM PORTFOLIOS**
6 **USED IN PHASE IV AND THOSE PROPOSED IN PHASE V RAISE A CONCERN?**

7 A. While PECO's continued reliance on established programs such as HER and
8 non-residential lighting has provided cost-effective savings in prior phases, these measures
9 have inherent limitations that become more pronounced over time. Residential behavioral
10 savings are short-lived and less durable, requiring ongoing program expenditures to sustain
11 impacts, while non-residential lighting savings are expected to diminish as market saturation
12 increases. As a result, a portfolio that continues to rely heavily on these measures may face
13 increasing challenges in future phases, particularly if insufficient investment is made in
14 emerging or more comprehensive measures that require early program support to build
15 customer familiarity, trade capacity, and delivery infrastructure. Absent such market-priming
16 investments, PECO may have fewer scalable, durable savings options available when
17 opportunities from mature measures continue to decline.

18 Phase V therefore presents an opportunity to leverage the near-term stability provided
19 by these mature measures while beginning to shift greater emphasis toward more
20 comprehensive and durable strategies. In the residential sector, this includes deeper
21 investments in building envelope measures and residential heat pump technologies,
22 particularly where electric resistance heating is displaced. In the non-residential sector, it
23 includes expanding beyond lighting to more comprehensive measures such as weatherization,

building systems improvements, and heat pump technologies. The PUC’s own consumer-facing materials describe Act 129 programs as providing opportunities for consumers to *take energy efficiency and conservation to the next level*, which implies moving beyond baseline measures toward deeper, ongoing efficiency adoption.²

V. HOME ENERGY REPORTS

Q. WHAT ROLE DOES THE HOME ENERGY REPORTS PROGRAM PLAY IN PECO’S PHASE V RESIDENTIAL PORTFOLIO?

A. The HER program represents the largest single contributor to residential energy savings (30 percent of the residential portfolio) in PECO’s Phase V Plan and accounts for a greater share of residential savings than in Phase IV. Because of its scale within the portfolio and its behavioral nature, the HER program has a significant influence on the durability, risk profile, and long-term performance of the residential portfolio.

Q. HOW DO THE HER SAVINGS IN PHASE V COMPARE TO PHASE IV?

A. As shown in Table 1, PECO proposes higher non-low-income residential HER savings in Phase V than in Phase IV. In addition to increasing in absolute terms, HER savings also represent a larger share of the overall portfolio in Phase V relative to Phase IV.

Specifically, non-low-income residential HER savings increase from approximately 112,656 MWh in the Phase IV Plan to 142,549 MWh in the Phase V Plan. Over the same period, total portfolio savings targets declined, resulting in HER savings increasing from

² “Energy Efficiency & Conservation Information for Your Home,” Pennsylvania Public Utilities Commission, https://www.puc.pa.gov/General/consumer_ed/pdf/EEC_Home-FS.pdf?utm_source=chatgpt.com.

approximately 7 percent of total portfolio savings in Phase IV to approximately 10 percent in Phase V.

Table 1. Comparison of PECO Phase IV and Phase V Non-Low-Income HER Savings

	Phase IV Plan	Phase V Plan
Residential HER Savings	112,656	142,549
Residential Portfolio Target	447,160	481,845
Percent of Residential Portfolio	25%	30%
Total Portfolio Target	1,605,107	1,458,076
Percent of Total Portfolio	7%	10%
Source: PECO Phase IV Plan (see Direct Testimony of William R. Supple) and PECO Phase V Plan (see Direct Testimony of Mark Van Eeghan).		

Q. WHY IS THE INCREASED RELIANCE ON HER SAVINGS A CONCERN?

A. While the HER program has historically delivered cost-effective residential energy savings, increased reliance on HER savings in Phase V raises concerns related to savings durability and the magnitude of customer benefits. HER savings are behavioral in nature and do not result in permanent physical improvements to customer homes, which means that savings require ongoing program expenditures to sustain and do not provide the same long-term certainty as equipment-based or building envelope measures; measures such as heat pumps and insulation have 15-year measure lives providing an opportunity for greater lifetime savings. Moreover, due to the lack of physical improvements, HER savings do not persist across homeowners or tenants when occupancy changes within a housing unit.

In addition, the per-household energy savings associated with behavioral measures are generally modest relative to comprehensive efficiency upgrades. As a result, HER programs typically have a limited ability to meaningfully reduce household energy burden, particularly for customers facing high fixed energy costs or inefficient building conditions. Behavioral savings also tend to be driven disproportionately by higher-usage customers, which may affect how program benefits are distributed across income groups.

Q. WHAT ARE THE PORTFOLIO-LEVEL IMPLICATIONS OF INCREASED RELIANCE ON BEHAVIORAL SAVINGS SUCH AS HER?

A. From a portfolio perspective, increased reliance on behavioral savings concentrates a larger share of residential savings in measures with shorter effective lives and modest per participant savings. This concentration increases portfolio risk relative to portfolios with a higher share of long-lived, equipment-based savings and reduces flexibility if savings underperform or decay more rapidly than anticipated.

National best practice on energy efficiency portfolio design emphasizes the importance of balancing short-lived measures with longer-lived measures that deliver durable savings over time. Research by the American Council for an Energy-Efficient Economy (ACEEE) notes that portfolios overly oriented toward short-term savings may inadvertently prioritize measures that are cost-effective on a first-year basis but provide less cumulative value if lifetime savings are not explicitly considered.³ Given the fixed budgets associated with Act 129 programs, greater reliance on HER savings may therefore limit the extent to which program resources are directed toward more comprehensive residential strategies, such as building envelope improvements and residential heat pump technologies. Phase V presents an opportunity to leverage near-term behavioral savings while beginning to rebalance the residential portfolio toward more durable strategies that provide longer-lived savings and greater long-term value for ratepayers.

Q. WHAT CHANGES DO YOU RECOMMEND FOR THE HER PROGRAM?

A. As shown in Table 1, the Phase V Plan includes non-low-income HER savings represent approximately 30 percent of residential portfolio energy savings. This represents an

³ American Council for an Energy-Efficient Economy (ACEEE), *Measuring and Valuing Lifetime Energy Savings in Policy and Planning*, Report U1902 (2019).

1 increase from the Phase IV Plan, in which non-low-income HER savings comprised
2 approximately 25 percent of residential portfolio energy savings.

3 Therefore, should the Commission approve a Phase V plan that includes HER
4 reporting, I would recommend that the proportion of residential savings attributable to the non-
5 low-income HER program be reduced to 10 percent of the residential portfolio. I also
6 recommend that the HER program be limited to customers that use 7.7 kWh per square foot
7 per year.⁴ This is equivalent to 150% of the average home's energy usage in Pennsylvania per
8 the United States' Energy Information Administration's Residential Energy Consumption
9 Survey ("RECS") Dashboard.⁵ This approach would help ensure that the HER program targets
10 high usage customers that will generate deeper savings are more likely to participate in other
11 PECO programs. I further recommend that the associated program funding be reallocated to
12 the comprehensive market-rate residential program, which includes energy assessments and
13 direct-install opportunities. This reallocation would help further balance the residential
14 portfolio and direct more resources toward deeper energy efficiency measures that are more
15 likely to deliver durable savings and have a material impact on customers' utility bills. Based
16 on the overall cost-effectiveness and flexibility of the Phase V portfolio, I expect that this
17 adjustment could be accommodated while remaining compliant with the requirements of the
18 Implementation Order.

19 **Q. DO YOU RECOMMEND ANY CHANGES TO THE INCOME ELIGIBLE**
20 **HER PROGRAM?**

⁴ The threshold of 7.7 kWh per square foot per year was determined using the residential average site consumption per household of 10,248 kWh multiplied by 150% to ensure it encompassed high usage electric baseboard customers which are recognized as 125% of average electric users. Then the energy usage was divided by 1,991 which is the total RECS total square footage per housing unit for Pennsylvania.

⁵ U.S. Energy Information Administration, Residential Energy Consumption Survey Dashboard for Pennsylvania, <https://experience.arcgis.com/experience/cbf6875974554a74823232f84f563253>.

1 A. Yes. Consistent with my recommendation that the non-low income HER program focus
2 on customers with high electricity usage, I recommend that the Income Eligible HER program
3 be limited to customers with usage that qualifies for the Company's Low Income Usage
4 Reduction Program ("LIURP"), which applies to income qualified customers with annual
5 usage exceeding 7,200 kWh.

6
7
8 **VI. RESIDENTIAL LIGHTING**

9 **Q. WHAT ROLE DOES RESIDENTIAL LIGHTING PLAY IN PECO'S PHASE**
10 **V RESIDENTIAL PORTFOLIO, AND IS THE PROPOSED APPROACH**
11 **COMPLIANT WITH APPLICABLE REQUIREMENTS?**

12 A. According to PECO,⁶ residential lighting represents 2.4 percent of the total portfolio in
13 the Phase V Plan. While this is a small proportion of the overall portfolio, residential lighting
14 remains a material component of PECO's Phase V residential portfolio, accounting for
15 approximately 10 percent of projected residential energy savings. PECO proposes to achieve
16 these savings through direct installation of lighting products. This approach is compliant with
17 applicable requirements, and my concerns regarding residential lighting do not relate to
18 regulatory compliance or program eligibility.

19 **Q. WHY DOES CONTINUED PROGRAM SUPPORT FOR RESIDENTIAL**
20 **LIGHTING RAISE CONCERNS IN PHASE V?**

21 A. Residential lighting is a mature and highly saturated market, particularly following the
22 adoption of updated federal minimum efficiency standards for general service lamps. As a
23 result, many customers would likely install LED lighting absent program intervention, raising

⁶ See PECO Response to Discovery Request OCA-I-2.

1 concerns that a portion of claimed savings may reflect spillover or naturally occurring market
2 activity rather than incremental program influence. In addition, residential lighting is widely
3 viewed as a market that has largely achieved transformation, meaning continued program
4 funding is likely to yield diminishing returns over time. This is supported by the 2023
5 Pennsylvania Statewide Act 129 Residential Baseline Study, which found that LED lighting
6 accounts for approximately 59 percent of all residential sockets statewide, with LEDs
7 occupying 44 percent of sockets in the average Pennsylvania home, representing roughly a
8 doubling since the 2018 baseline study.⁷ LED penetration was found to be nearly universal,
9 with approximately 99 percent of homes containing at least one LED bulb, indicating a highly
10 saturated and largely transformed residential lighting market

11 **Q. WHAT ARE THE IMPLICATIONS OF CONTINUING TO SUPPORT**
12 **RESIDENTIAL LIGHTING FOR LONG-TERM PORTFOLIO STRATEGY?**

13 A. Continued investment in residential lighting limits the resources available for other
14 residential measures that offer more durable savings and greater long-term value, such as
15 building envelope improvements and residential heat pump technologies. While residential
16 lighting may continue to generate short-term savings, Phase V presents an opportunity to begin
17 shifting program focus away from highly saturated measures and toward strategies that better
18 position the residential portfolio for sustained savings and future phase requirements.

19 **Q. WHAT CHANGES DO YOU RECOMMEND FOR RESIDENTIAL LIGHTING**
20 **IN THE PHASE V PLAN?**

21 A. I recommend that residential lighting be removed from the Phase V Plan. While
22 PECO's residential lighting offerings comply with applicable federal efficiency standards and

⁷ NMR Group's 2023 Pennsylvania Statewide Act 129 Residential Baseline Study, accessible at https://www.puc.pa.gov/media/2883/2023_pa_residential_baseline_study.pdf

1 program requirements, residential lighting represents a highly saturated and largely
2 transformed market. This was shown in the most recent Act 129 Residential Baseline Study,
3 which showed LEDs account for 59 percent of all residential sockets statewide with 99 percent
4 of homes containing at least one LED. As a result, continued program support for residential
5 lighting is unlikely to produce incremental, durable savings and may largely reflect spillover
6 of naturally occurring market activity.

7 Given the maturity of the residential lighting market and the availability of other
8 residential measures with significantly greater savings durability and long-term value,
9 continued investment in residential lighting does not represent an effective use of limited Act
10 129 resources. Eliminating residential lighting would allow PECO to redirect program funding
11 toward more comprehensive residential measures, such as building envelope improvements
12 and residential heat pump technologies, that better support long-term portfolio performance
13 and future phase objectives.

14 15 **VII. SUPPORTING LOW-TO-MODERATE INCOME CUSTOMERS**

16 **Q. HOW MANY DIFFERENT CLASSES OF RESIDENTIAL CUSTOMERS ARE** 17 **INCLUDED IN PECO'S RESIDENTIAL PROGRAMS AND ASSOCIATED** 18 **INCENTIVE STRUCTURES?**

19 A. PECO's residential portfolio includes two primary incentive categories: one for
20 income-eligible customers and one for standard market-rate customers. Income-eligible
21 incentives and associated savings are attributed to the low-income carve-out, which is defined
22 under Act 129 as households with annual incomes at or below 150 percent of the Federal
23 Poverty Income Guidelines ("FPL").

1 **Q. DOES THE PHASE V PLAN INCLUDE A DISTINCT INCENTIVE OR**
2 **PROGRAM DESIGN TARGETED TO HOUSEHOLDS THAT EXCEED THE LOW-**
3 **INCOME THRESHOLD BUT MAY FACE SIMILAR AFFORDABILITY OR ACCESS**
4 **BARRIERS?**

5 A. No, the PECO plan does not include dedicated incentives or programs designed to
6 target moderate income customers that may face similar affordability or program access
7 barriers as low-income customers.

8 **Q. WHY IS THE ABSENCE OF A MODERATE-INCOME-SPECIFIC**
9 **STRATEGY A CONCERN?**

10 A. Households that exceed the low-income eligibility threshold may still face significant
11 barriers to participating in energy efficiency programs, including limited access to capital, high
12 upfront costs, and split incentives. Research on Asset Limited, Income Constrained, Employed
13 (“ALICE”) households, including work by CLEAResult, documents that these “working poor”
14 customers often experience affordability challenges similar to low-income households despite
15 being ineligible for income-qualified programs.⁸

16 Without a targeted approach for these customers, the residential portfolio may
17 underserve a meaningful segment of customers and miss opportunities to achieve durable, cost-
18 effective savings. In addition, recent federal initiatives, such as the U.S. Department of
19 Energy’s Home Energy Rebate programs established under the Inflation Reduction Act,
20 explicitly recognize the need for tiered incentive structures that provide enhanced support for
21 both low- and moderate-income households.⁹ These examples demonstrate that differentiated

⁸ CLEAResult, *Reaching Moderate-Income and ALICE Households with Energy Efficiency Programs* (documenting affordability and access barriers faced by households above traditional low-income thresholds).

⁹ U.S. Department of Energy, *Home Energy Rebate Programs (HOMES and HER)* (establishing tiered incentive structures for low- and moderate-income households under the Inflation Reduction Act).

1 incentive approaches can be used to bridge the gap between low-income and standard market-
2 rate programs while maintaining program integrity and cost-effectiveness.

3 **Q. HOW COULD A MODERATE-INCOME APPROACH COMPLEMENT,**
4 **RATHER THAN REPLACE, EXISTING LOW-INCOME PROGRAMS?**

5 A. A moderate-income approach could complement existing low-income programs by
6 targeting customers who are not eligible for the low-income carve-out but face similar barriers
7 to participation, without diluting resources intended for income-eligible households. Such an
8 approach could help broaden access to energy efficiency measures while maintaining
9 compliance with Act 129 requirements. Such an approach could target customers with annual
10 household incomes between 150 percent and 250 percent of the FPL to avoid overlapping with
11 the low-income carve out. These approaches could be implemented on a pilot basis and
12 evaluated for cost-effectiveness and participation outcomes before broader adoption.

13 **Q. DO YOU RECOMMEND ANY SPECIFIC CHANGES TO ADDRESS**
14 **MODERATE-INCOME CUSTOMERS IN THE PHASE V PLAN?**

15 A. Yes. I recommend that the Commission direct PECO to establish a moderate-income
16 pilot program during Phase V that provides enhanced incentives for customers whose
17 household incomes exceed the low-income eligibility threshold but who continue to face
18 affordability and access barriers to participation in market-rate energy efficiency programs.
19 This pilot would be intended to improve equitable access to comprehensive efficiency
20 measures for “working poor” households that are not currently well served by either low-
21 income or standard market-rate offerings.

22 As part of this pilot, PECO could dedicate 5 percent of the residential program budget
23 to offer incentives that are higher than standard market-rate levels but lower than low-income

1 incentives, with a focus on measures such as energy assessments, direct install measures, and
2 other comprehensive upgrades. This funding amount is only a recommendation but is based on
3 the principle that emerging strategies should be associated with a modest but meaningful share
4 of program budgets. Funding for this pilot should come from programs and incentives allocated
5 to market rate customers, particularly HER and residential lighting (those where I am
6 proposing reduced investments). If the pilot demonstrates strong participation, cost-
7 effectiveness, and customer benefits, PECO should be encouraged to expand the effort into a
8 broader moderate-income program by approximately the third year of Phase V.

9 **Q. WOULD A MODERATE-INCOME PILOT NEGATIVELY AFFECT COST-**
10 **EFFECTIVENESS FOR ADMINISTRATIVE EFFICIENCY?**

11 A. A well-designed moderate-income pilot is unlikely to negatively affect portfolio cost-
12 effectiveness or administrative efficiency. Because Act 129 evaluates cost-effectiveness using
13 the Total Resource Cost (“TRC”) test, increased incentives provided to moderate-income
14 customers are accounted for on both the cost and benefit sides of the test and therefore do not
15 inherently reduce cost-effectiveness. Moreover, moderate-income customers often have
16 substantial remaining efficiency potential, which can support strong lifetime savings relative
17 to program costs.

18 In addition, a moderate-income pilot could be implemented using existing program
19 delivery infrastructure, eligibility screening processes, and trade networks, limiting
20 incremental administrative burden. As a result, such a pilot can improve equitable access to
21 energy efficiency while remaining consistent with Act 129’s cost-effectiveness and
22 administrative efficiency objectives.

1

2 **VIII. NON-RESIDENTIAL LIGHTING**

3 **Q. WHAT ROLE DOES NON-RESIDENTIAL LIGHTING PLAY IN PECO'S**
4 **PHASE V PLAN, AND HOW DOES THIS COMPARE TO THE PHASE IV PLAN?**

5 A. Non-residential lighting represents a significant portion of the savings detailed in the
6 Phase V Plan. Analysis of *Table 9: Estimated Savings and Participation*, from PECO's
7 detailed workbooks, indicates that non-residential lighting accounts for approximately 29
8 percent of total portfolio savings and approximately 44 percent of non-residential sector
9 savings.

10 This represents a reduction from Phase IV but continues a pattern of substantial reliance
11 on non-residential lighting. Analysis of the Phase IV PECO Plan, specifically *Table 8E, Non-*
12 *Residential Program: Estimated Savings and Participation*, indicates that approximately 39
13 percent of total Phase IV portfolio savings were expected to come from non-residential
14 lighting, representing approximately 53 percent of non-residential savings

15 **Q. WHY DOES PECO'S CONTINUED RELIANCE ON NON-RESIDENTIAL**
16 **LIGHTING RAISE CONCERNS IN PHASE V?**

17 A. PECO has reduced the share of portfolio savings attributed to non-residential lighting
18 relative to Phase IV. In its response to OCA-I-3, PECO noted that midstream lighting is
19 expected to contribute less than 5 percent of total non-residential program savings in Phase V
20 and stated that the portfolio includes a broad mix of non-lighting measures, including HVAC
21 upgrades, building automation and controls, refrigeration improvements, and custom projects.
22 PECO also noted that lighting measures are only contributing a small fraction of the overall
23 portfolio savings.

1 While this represents a reduction from Phase IV, analysis of the Phase V savings
2 projections indicates that non-residential lighting measures still account for approximately 44
3 percent of non-residential savings. This level of reliance should be considered in the context
4 of statewide baseline findings showing rapid LED saturation in commercial buildings,
5 including approximately 82 percent of sites and 60 percent of installed fixtures utilizing LED
6 technology. As saturation increases, there is a growing risk that lighting programs may
7 incentivize LED-to-LED replacements, reducing incremental savings and increasing portfolio
8 risk.

9 PECO identified a series of quality assurance and quality control strategies intended to
10 mitigate this risk, including distributor point-of-sale screening. However, these approaches
11 rely in part on self-reported or distributor-collected information regarding existing lighting
12 conditions, which may limit their effectiveness in fully preventing LED-to-LED replacements.

13 **Q. WHAT ARE THE LONG-TERM PORTFOLIO IMPLICATIONS OF**
14 **CONTINUED HEAVY RELIANCE ON NON-RESIDENTIAL LIGHTING?**

15 A. Continued reliance on non-residential lighting concentrates a large share of non-
16 residential savings in a mature and increasingly saturated market, which may limit the
17 portfolio's ability to adapt as remaining lighting opportunities diminish. Thus, an EDC should
18 not rely heavily on non-residential lighting savings in its Act 129 portfolio because the market
19 for such measures is already approaching saturation, materially undermining both the
20 reliability and additionality of claimed savings. As saturation increases, lighting programs face
21 a growing risk of incentivizing LED-to-LED replacements or early retirements that yield
22 minimal incremental savings and inflate free-ridership. This overreliance exposes the portfolio
23 to heightened performance and compliance risk, as projected savings become increasingly

1 sensitive to baseline assumptions and evaluation adjustments. Moreover, continued
2 dependence on lighting diverts resources from other non-residential measures that offer more
3 durable, demonstrably incremental savings and greater long-term value. For these reasons,
4 heavy reliance on non-residential lighting savings is inconsistent with prudent portfolio design
5 and undermines the statutory objectives of Act 129. Phase V presents an opportunity to
6 leverage the near-term stability provided by lighting savings while beginning to shift greater
7 emphasis toward more comprehensive non-residential measures, such as building envelope
8 improvements, building systems optimization, and heat pump technologies. Redirecting a
9 portion of program focus toward these measures could help diversify the non-residential
10 portfolio, improve long-term savings durability, and reduce future portfolio risk.

11 **Q. WHAT CHANGES DO YOU RECOMMEND WITH RESPECT TO NON-**
12 **RESIDENTIAL LIGHTING IN THE PHASE V PLAN?**

13 A. I recommend that PECO modestly reduce the share of non-residential portfolio savings
14 attributed to lighting measures from approximately 44 percent to 35 percent of non-residential
15 savings. This adjustment would acknowledge the continued cost-effectiveness and near-term
16 value of non-residential lighting while beginning to reduce reliance on a mature measure
17 category with diminishing long-term potential as LED saturation continues to increase.

18 The savings and funding associated with this modest reduction could be reallocated, in
19 part, to support a pilot C&I DLS program and other non-lighting strategies. Rebalancing the
20 non-residential portfolio in this manner would help diversify savings sources, reduce long-term
21 portfolio risk, and allow PECO to begin developing and testing flexible demand resources
22 while maintaining overall portfolio performance and cost-effectiveness. Given the Phase V
23 Plan's strong benefit-cost ratios and its projected performance well in excess of required

energy and demand reduction targets, I expect that this adjustment could be accommodated without jeopardizing compliance with the Implementation Order.

IX. COMMERCIAL AND INDUSTRIAL DAILY LOAD SHIFTING

Q. WHAT ROLE DOES COMMERCIAL AND INDUSTRIAL DAILY LOAD SHIFTING PLAY IN PECO'S PHASE V PLAN?

A. PECO includes only a limited amount of C&I DLS in its Phase V Plan. Specifically, the Plan includes approximately 0.1 MW of DLS for small C&I customers and 0.4 MW for large C&I customers. The majority of PECO's DLS efforts in Phase V are focused on the residential sector.

Q. HOW DOES PECO EXPLAIN THE LIMITED INCLUSION OF COMMERCIAL AND INDUSTRIAL DAILY LOAD SHIFTING IN PHASE V?

A. PECO has indicated that its Phase V program design reflects feedback received through Conservation Service Provider ("CSP") solicitations, which suggested limited achievable C&I DLS potential within PECO's service territory. According to PECO, CSP responses to its requests for proposals did not support the level of C&I DLS potential identified in the Demand Response Market Potential Study, as evidenced by the small amount of C&I DLS proposed by respondents.¹⁰

Q. HOW DOES THIS APPROACH COMPARE TO THE FINDINGS OF THE DEMAND RESPONSE MARKET POTENTIAL STUDY?

A. The Demand Response Market Potential Study identifies substantially greater cost-effective C&I DLS potential for PECO, estimating average realistic achievable annual peak

¹⁰ See PECO Response to Discovery Request OCA-II-2.

1 demand reductions of 27.5 summer MW and 28.8 winter MW from C&I DLS; these reductions
2 are associated with a TRC test ratio of 1.40. While PECO has included a limited amount of
3 C&I DLS in Phase V, the level included represents only a small fraction of the potential
4 identified in the Commission-directed study.

5 **Q. WHY DOES THE LIMITED USE OF COMMERCIAL AND INDUSTRIAL**
6 **DAILY LOAD SHIFTING RAISE CONCERNS IN PHASE V?**

7 A. DLS provides a different set of system benefits than traditional event-based demand
8 response programs. Unlike event-based demand response, which is typically called only during
9 system emergencies or a limited number of peak days, DLS can provide regular, predictable
10 reductions during high-cost hours and help shape load on an ongoing basis. These
11 characteristics can improve system efficiency, support peak demand management, and
12 complement energy efficiency measures. Also, as noted in the Demand Response Market
13 Potential Study, DLS is different from the event-based demand response programs offered by
14 PJM and avoids concerns around dual participation.

15 Given these benefits, the limited inclusion of C&I DLS in Phase V raises questions
16 about whether the Plan fully leverages available demand-side flexibility opportunities,
17 particularly those identified as cost-effective in the Demand Response Market Potential Study.
18 Even limited pilots could help reconcile differences between CSP perceptions and the potential
19 study results by generating PECO-specific empirical evidence.

20 **Q. WHAT CHANGES DO YOU RECOMMEND WITH RESPECT TO**
21 **COMMERCIAL AND INDUSTRIAL DAILY LOAD SHIFTING IN THE PLAN?**

22 A. I recommend that PECO increase the planned demand reductions from DLS to at least
23 10 percent of the realistic achievable C&I DLS potential identified in the Demand Response

1 Market Potential Study. The current Plan includes approximately 2 percent of the realistic
2 achievable potential, which is the lowest share among the Electric Distribution Companies’
3 (“EDCs”) Phase V Plans.

4 As discussed earlier, the Phase V Plan has an overall benefit-cost ratio (“BCR”) of 1.3
5 using the TRC test, including BCRs of 1.4 for both small and large C&I customers. In addition,
6 the Plan is designed to exceed the Phase V energy and peak demand reduction targets by a
7 significant margin, with estimated energy savings equal to 131 percent of the Phase V
8 requirement and peak demand reductions equal to 148 percent (summer) and 123 percent
9 (winter) of the required targets. Taken together, these factors indicate that PECO has sufficient
10 flexibility within the existing portfolio to accommodate additional investments in C&I DLS
11 while continuing to meet or exceed its overall Phase V goals.

12
13 **X. MULTIFAMILY PROGRAMS**

14 **Q. WHAT LEVEL OF MULTIFAMILY SAVINGS ARE INCLUDED IN PECO’S**
15 **PHASE V PLAN?**

16 A. The Phase V Plan identifies approximately 1.5 GWh of non-low-income multifamily
17 savings and approximately 18 GWh of low-income multifamily savings within the Multifamily
18 program component. In response to OCA-I-4, PECO further clarified that the Multifamily
19 program component in Phase V is limited to master-metered multifamily buildings and their
20 occupants, representing a change from the Phase IV program design, which presumably
21 included individually metered multifamily housing units in the overall Multifamily program
22 reporting elements.

PECO also indicated that energy savings associated with individually metered multifamily occupants are not reflected in the Multifamily program totals. Instead, those customers are served through the Energy Assessments component of the Residential program or the Single-Family component of the Low-Income subprogram, with projected savings of approximately 10 GWh.

Q. DOES THIS CLARIFICATION ADDRESS CONCERNS REGARDING MULTIFAMILY SAVINGS IN THE PHASE V PLAN?

A. PECO's response to OCA-I-4 provides helpful clarification regarding how multifamily savings are categorized across program components and explains why some multifamily savings do not appear within the Multifamily program totals. To that extent, the clarification indicates that multifamily activity in Phase V is broader than the Multifamily program line item alone would suggest.

Q. WHY DO CONCERNS REGARDING MULTIFAMILY SAVINGS REMAIN?

A. Despite this clarification, the Phase V Plan does not clearly identify how the approximately 10 GWh of savings associated with individually metered multifamily occupants are allocated between low-income and non-low-income customers. As a result, it remains unclear whether these savings meaningfully increase participation among market-rate multifamily households, or whether they primarily and solely contribute to low-income program objectives.

In addition, even when accounting for these embedded savings, the level of explicitly identified non-low-income multifamily savings remains small relative to the multifamily potential identified in the Energy Efficiency and Peak Demand Reduction Market Potential

1 Study. This raises questions about whether the Phase V portfolio adequately captures cost-
2 effective multifamily opportunities outside the low-income carve-out.

3 **Q. WHAT CHANGES DO YOU RECOMMEND REGARDING MULTIFAMILY**
4 **PROGRAMS IN THE PHASE V PLAN?**

5 A. I recommend that PECO establish explicit non-low-income multifamily savings targets
6 within the Phase V portfolio and clarify how savings from individually metered multifamily
7 customers are attributed across income segments, consistent with the multifamily potential
8 identified in the Market Potential Study. It is not uncommon for programs to report program
9 goals and savings by building type separately for low income and market rate customers.¹¹

10 **XI. ACT 129 AND THE INTERCONNECTION PROCESS**

11 **Q. DO YOU BELIEVE THERE ARE MISSED OPPORTUNITIES FOR ACT 129**
12 **PROGRAMS?**

13 A. Yes, based on my review of the Plan and the Company's response to OCA-I-13, PECO
14 does not impose any energy efficiency requirements for new businesses seeking
15 interconnection and does not appear to formally integrate Act 129 program engagement into
16 the interconnection process. As a result, PECO may be missing an opportunity to promote
17 energy efficiency and demand-side resources at a point in time when customers are making
18 fundamental design and investment decisions.

19 When PECO assesses system capacity and infrastructure needs for new or expanding
20 customers, there is an opportunity to also highlight energy efficiency, demand reduction,
21 demand response, and interruptible load options that could reduce long-term system impacts
22 and customer costs. This could be accomplished in several incremental ways. First, PECO
23 could develop targeted engagement pathways for customer types that frequently seek

¹¹ See Table B1 in the Connecticut 2025-2027 C&LM Plan for an example of how this is done in Connecticut.
<https://app.box.com/s/wde22as035w0fx8qoux449a54bv7uiut>

1 interconnection, such as large commercial or industrial facilities, including data centers.
2 Second, PECO could establish a more formal connection between interconnection staff and
3 Act 129 program account managers to ensure that customers are made aware of available
4 efficiency and demand-side opportunities early in the project development process. Third, Act
5 129 program staff could coordinate more closely with PECO's economic development team,
6 or with state and regional economic development organizations, to ensure that energy
7 efficiency and demand-side resources are consistently included in discussions with prospective
8 customers.

9 Integrating Act 129 program engagement into the interconnection and economic
10 development process would help reduce missed opportunities to achieve cost-effective
11 efficiency and demand reductions, particularly for large new loads, while remaining consistent
12 with PECO's existing program offerings and the requirements of Act 129.
13

14 **XII. CONCLUSIONS AND RECOMMENDATIONS**

15 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING PECO'S** 16 **PHASE V PLAN.**

17 A. Based on my review, PECO's Phase V Energy Efficiency and Conservation Plan
18 generally complies with the requirements of Act 129 and the Phase V Implementation Order.
19 The Plan proposes energy and peak demand reductions that exceed Commission targets and
20 builds upon program structures that have historically delivered cost-effective savings.

21 At the same time, my review identifies several opportunities to improve the long-term
22 durability, balance, and strategic positioning of the portfolio. In particular, the Plan continues
23 to rely heavily on mature or short-lived savings sources, includes limited targeted strategies
24 for certain customer segments, and makes only modest use of demand-side flexibility
25 opportunities identified in Commission-directed potential studies. The recommendations

below are intended to be incremental, feasible within the existing Phase V framework, and consistent with maintaining overall portfolio cost-effectiveness and compliance.

Q. WHAT RECOMMENDATIONS DO YOU OFFER TO ADDRESS THESE ISSUES?

A. The recommendations summarized below are not new proposals but rather reflect recommendations that have been presented and discussed in detail in the preceding sections of this testimony. Each recommendation follows directly from the issue-specific analysis addressing portfolio composition, savings durability, equity considerations, and alignment with Commission-directed market potential studies.

These recommendations are intended to be incremental and practicable within the existing Phase V framework. In my judgment, the combination of the Plan's strong cost-effectiveness, the portfolio's projected energy and peak demand reductions in excess of the Implementation Order requirements, and the flexibility afforded by the five-year budget cap indicate that these adjustments can be accommodated while maintaining compliance with the Phase V Implementation Order.

1. Rebalance residential savings away from behavioral measures. Direct

PECO to reduce the share of residential savings attributable to the non-low-income HER program from approximately 30 percent to 10 percent of residential savings and reallocate those resources toward more comprehensive market-rate residential measures that deliver longer-lived savings and greater bill impacts.

2. Eliminate residential lighting from the Phase V portfolio.

Direct PECO to remove residential lighting measures from the Phase V portfolio and redirect associated funding toward residential measures with greater durability and

1 long-term value, such as building envelope improvements and residential heat pump
2 technologies.

3 **3. Improve targeting for moderate-income and multifamily customers.**

4 Encourage PECO to establish a moderate-income pilot program during Phase V,
5 dedicating approximately 5 percent of the residential program budget to enhanced
6 incentives for customers above the low-income threshold but facing similar
7 participation barriers, with the potential for expansion if successful. In addition, direct
8 PECO to clarify the allocation of multifamily savings across income segments and
9 explore strategies to increase participation among market-rate multifamily households.

10 **4. Reduce reliance on non-residential lighting savings.**

11 Direct PECO to modestly reduce the share of non-residential savings attributed to
12 lighting measures from approximately 44 percent to 35 percent of non-residential
13 savings and reallocate a portion of those resources toward non-lighting strategies.

14 **5. Pilot and expand commercial and industrial daily load shifting.**

15 Encourage PECO to develop and pilot targeted C&I DLS offerings during Phase V and
16 increase planned C&I DLS to at least 10 percent of the realistic achievable potential
17 identified in the Demand Response Market Potential Study.

18 **6. Integrate Act 129 program engagement into the interconnection process.**

19 Encourage PECO to incorporate early Act 129 program engagement into its
20 interconnection and economic development processes for new and expanding C&I
21 customers. This could include establishing formal coordination between
22 interconnection staff and Act 129 program account managers, developing targeted
23 engagement pathways for large or frequently interconnecting customer types, and

1 coordinating with economic development partners to ensure that energy efficiency,
2 demand response, and load management opportunities are presented during facility
3 design and planning. Integrating energy efficiency and demand-side resources at the
4 interconnection stage would help reduce missed opportunities for cost-effective
5 savings and demand reductions, particularly for large new loads, while remaining
6 consistent with PECO's existing program structure and Act 129 requirements.

7 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

8 A. Yes, it does.

ATTACHMENT A
QUALIFICATIONS OF
ZACK TYLER



Zack has 15 years of experience in the energy industry with a focus on demand side management (DSM), energy efficiency program evaluation, market research, and market transformation efforts. He specializes in building decarbonization and building energy codes, having held certifications as a HERS rater, Passive House Consultant, BPI MF Building analyst, and Infrared Thermographer. Zack works on a variety of projects ranging from support for building energy codes to DSM portfolio review. He holds a BA from the University of Colorado in Environmental Studies and an MA from Boston University in Energy and Environmental Analysis.

✉ ztyler@energyfuturesgroup.com ☎ (802) 305-0355 📍 Hinesburg, VT

EXPERIENCE

Managing Consultant
Energy Futures Group, Hinesburg, VT
2024 - Present

Senior Director
Opinion Dynamics, Waltham, MA
2023 - 2024

Director of Building Science
NMR Group, Somerville, MA
2017 - 2022

Research Associate → Senior Project
Manager
NMR Group, Somerville, MA
2009 - 2017

EDUCATION

Boston University
M.A., Energy & Environmental Analysis
2010

University of Colorado at Boulder
B.A., Environmental Studies
2008

CERTIFICATIONS

HERS Rater
RESNET, 2010-2022

Certified Passive House Consultant
PHIUS, 2019-2022

Multifamily Building Analyst
BPI, 2014-2017

Level I Certified Building Investigations
Infrared Thermographer
FLIR, 2012-2017

Residential Air Balancing & Diagnostic
Technician
National Comfort Institute, 2011-2013

Data Center Energy Practitioner (DCEP)
Generalist Certified
Center of Expertise for Data Center Energy

SELECT PROJECTS

Connecticut Energy Efficiency Board 2024 - Present

Serving as a member of the Technical Consultant team for the Energy Efficiency Board (EEB). Providing expert review of C&I program evaluations and ad hoc support to help oversee the implementation of residential and C&I DSM programs.

GridLab 2024 - Present

Working on a project to assess the resource adequacy (RA) value of energy efficiency by incorporating the time-based value of energy efficiency measures into the RA modeling process. Utilizing NREL's ResStock dataset and back-end energy model customization tools to simulate energy efficiency upgrades for custom jurisdictions, customer segments, and weather years.

Department of Energy 2024 - 2025

Served as the day-to-day manager for a Resilient and Efficient Codes Implementation (RECI) grant that is focused on increasing residential energy code compliance in Vermont. Coordinated partners to help increase code compliance and awareness through various training and education platforms.

Design Lights Consortium 2025

Developed a TRM workpaper template for Networked Lighting Controls (NLC) and Luminaire Level Lighting Controls (LLLC). The template was designed so that TRM administrators can easily incorporate these measures into their portfolio. Research tasks included reviewing key assumptions for these measures across jurisdictions and developing the TRM workpaper language and template.

(continued on next page)

SELECT PROJECTS (continued)

Conservation Law Foundation 2025

Provided comments on testimony that looked at the potential for DSM programs to eliminate the need for a mobile gas vaporization plant on Aquidneck Island in Rhode Island. Comments focused on the fact that a DSM plan was needed to be responsive to prior directives from the Energy Facility Siting Board (EFSB). Comments also noted that any DSM plan should account for legally binding climate goals, and most DSM activities would minimize the need for future operation of the mobile gas vaporization plant.

Vermont Department of Public Service 2024

Facilitated the Act 151 Energy Code Working Group for the Department of Public Service. Working group members included a diverse set of market actors engaged in the residential and commercial construction markets in Vermont. Activities included facilitating five working group sessions, presenting key research findings to working group members, providing meeting minutes, and drafting the overall report to the legislature.

GridLab 2024

Collaborated with the EFG Integrated Resource Planning (IRP) team to review the assumptions associated with energy efficiency (EE) and demand response (DR) portfolios for a South Carolina generation study. Explored additional levels of EE and DR that could be considered in IRP analyses.

Inclusive Prosperity Capital 2024

Developed measure-level savings for a wide range of energy efficiency measures based on relevant program data, technical resource manual (TRM) algorithms, and information from the U.S. Census Residential Energy Consumption Survey (RECS).

Southern Environmental Law Center 2024

Conducted a review of the most recent Tennessee Valley Authority (TVA) energy efficiency (EE) and demand response (DR) potential study. Conducted a program gap analysis of the current EE and DR programs offered by TVA.

California Public Utilities Commission 2023 - 2024

Led a study identifying the needs and costs associated with electrical infrastructure upgrades required for gas to electric space and water heating conversions in the residential and nonresidential building sectors.

California Public Utilities Commission 2023 - 2024

Served as the impact evaluation lead for the TECH Clean California building decarbonization pilot. Coordinated end-use metering and AMI consumption analysis activities.

Massachusetts Program Administrators 2012 - 2022

Served as the overall lead for all Residential new Construction (RNC) evaluations for a decade in Massachusetts. Evaluations included baseline studies, incremental cost studies, potential savings modeling, and net-to-gross evaluations, among others.

Massachusetts Program Administrators 2012 - 2022

Served as the overall lead for all Codes and Standards evaluations for a decade in Massachusetts. Evaluations include code compliance methodology development, compliance rate assessments, and compliance support training evaluations.

Vermont Department of Public Service 2013 - 2020

Led multiple rounds of residential baseline studies in Vermont. These included single-family and multifamily building types and covered both existing and new construction segments.

Connecticut Energy Efficiency Board 2013

Helped lead a study assessing baseline compliance with the state's weatherization standard among single-family homes.

SELECT PUBLICATIONS

Tyler, Zack, Jared Powell, Joseph Bocanegra, Philip Mosenthal, Ralph Prah, Bob Wirtshafter, Lisa Skumatz, Miles Ingram, and Tim Steis. 2019. Pushing the market: Measuring market effects in residential new construction. International Energy Program Evaluation Conference.

<http://www.nmrgroupinc.com/wp-content/uploads/2019/09/Pushing-the-market.pdf>

Na'im, Alyssa, Zack Tyler, Allen Lee, Jerica Stacey, Joseph Bocanegra, Philip Mosenthal, and Ralph Prah. 2019. *Giving credit where credit is due: Assessing attribution and savings from a building energy code compliance enhancement program*. International Energy Program Evaluation Conference.

<http://www.nmrgroupinc.com/wp-content/uploads/2019/09/Giving-credit.pdf>

Na'im, Alyssa, Zack Tyler, Katherine Weber, and Kevin Rose. 2018. *Polishing a hidden gem: A novel evaluation method for energy codes and standards*. ACEEE Summer Study.

http://www.nmrgroupinc.com/wp-content/uploads/2019/01/05-0194_0286_000042-Naim.pdf

Tyler, Zack, Tony Larson, and Bob Wirtshafter. 2017. *How's that for performance? Changes in new construction practices over time*. International Energy Program Evaluation Conference.

<http://www.nmrgroupinc.com/wp-content/uploads/2019/01/zacks-paper.pdf>

Tyler, Zack, William Blake, and Jerrad Pierce. 2016. How do enhanced code requirements influence compliance and building efficiency? A Massachusetts case study. ACEEE Summer Study.

https://www.aceee.org/files/proceedings/2016/data/papers/5_735.pdf

Tyler, Zack. 2015. Just what do you mean by "Weatherized"? Assessing and Achieving a Statewide Weatherization Target. DOE Building Technologies Office Peer Review Conference.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company for	:	
Approval of its Act 129 Phase V Energy	:	
Efficiency and Conservation plan	:	Docket No. M-2025-3057328
	:	
	:	

VERIFICATION

I, Zack Tyler, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 1, are true and correct to the best of my knowledge, information, belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 20, 2026

Signature: /s/ Zack Tyler
Zack Tyler

Address: 10298 Rte. 116
Suite B
Hinesburg, VT 05461

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company for
Approval of its Act 129 Phase V Energy
Efficiency and Conservation plan

:
:
:
:
:

Docket No. M-2025-3057328

**LIST OF TESTIMONY AND EXHIBITS FOR THE EVIDENTIARY RECORD
OF THE OFFICE OF CONSUMER ADVOCATE**

The Office of Consumer Advocate (OCA) intends to move for the admission of the following evidence into the evidentiary record in the above-captioned proceeding:

DIRECT TESTIMONY

OCA Statement 1

Direct Testimony of Zack Tyler with
Attachment A, and Verification.

ADDITIONAL EVIDENCE

OCA Hearing Exh. 1

List of Evidence to be Admitted into the
Evidentiary Record by the Office of
Consumer Advocate

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company	: Docket No. M-2025-3057328
for Approval of its Act 129	:
Phase V Energy Efficiency and	:
Conservation Plan	:

**OFFICE OF SMALL BUSINESS ADVOCATE’S
ADMITTED
TESTIMONY AND EXHIBITS**

The Office of Small Business Advocate (“OSBA”) admitted the enclosed testimony and exhibits, as evidence into the evidentiary record at the Evidentiary Hearing, held on February 2, 2026, in the above-captioned proceeding:

- Rebuttal Testimony of Justin B. Farr, labelled OSBA Statement No.1-R, with signed Verification of Justin B. Farr.

Date: February 2, 2026





COMMONWEALTH OF PENNSYLVANIA

January 30, 2026

The Honorable Marta Guhl
Administrative Law Judge
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
801 Market Street, Suite 4063
Philadelphia, PA 19107

Re: Petition of PECO Energy Company for Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan / Docket No. M-2025-3057328

Dear Judge Guhl:

Enclosed please find the Rebuttal Testimony of Justin B. Farr, labelled OSBA Statement No.1-R, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-referenced proceeding.

As evidenced by the enclosed Certificate of Service, all known parties will be served, as indicated.

If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney ID No. 77538

Enclosures

cc: PA PUC Secretary Matthew L. Homsher (Cover Letter & Certificate of Service)
Justin Farr
Kevin Higgins
Parties of Record

OSBA STATEMENT NO. 1-R

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company : Docket No. M-2025-3057328
for Approval of its Act 129 :
Phase V Energy Efficiency and :
Conservation Plan :

REBUTTAL TESTIMONY

of

JUSTIN FARR

on behalf of

Pennsylvania Office of Small Business Advocate

Topic:

**Support of Recommendation to Reduce Reliance
on Non-Residential Lighting**

Date Served: January 30, 2026

Date Submitted for the Record: _____

OSBA STATEMENT NO. 1-R

REBUTTAL TESTIMONY OF JUSTIN B. FARR

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Justin B. Farr. My business address is 111 East Broadway, Suite 1200, Salt Lake City, Utah, 84111.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a Director in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. My testimony is being sponsored by the Pennsylvania Office of Small Business Advocate (“OSBA”).

Q. HAVE YOU TESTIFIED BEFORE THIS COMMISSION BEFORE?

A. Yes. I have testified in several cases including the following dockets: P-2024-3049233, R-2025-3054392, R-2025-3054393, and R-2025-3054394.

Q. DID YOU PREFILE DIRECT TESTIMONY IN THIS DOCKET ON BEHALF OF THE PENNSYLVANIA OFFICE OF SMALL BUSINESS ADVOCATE (“OSBA”)?

A. No. I did not file direct testimony on behalf of the OSBA in this proceeding because PECO Energy Company’s (“PECO” or “Company”) Phase V Energy Efficiency and Conservation (“EE&C”) Plan, as filed, appeared reasonable and did not impose undue costs or risks on small commercial customers.

OSBA STATEMENT NO. 1-R

1 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

2 A. My rebuttal testimony is submitted for the limited purpose of supporting certain
3 recommendations made by other intervenors that may improve program
4 performance, risk management, and long-term value for small commercial
5 customers, without increasing their cost burden.

6

7 **SUPPORT FOR INTERVENOR RECOMMENDATIONS RELEVANT TO**
8 **SMALL COMMERCIAL CUSTOMERS**

9 **Q. DO YOU SUPPORT ANY OF THE RECOMMENDATIONS MADE BY**
10 **OTHER INTERVENORS IN DIRECT TESTIMONY?**

11 A. Yes. I support, in principle, the recommendation made by the Office of Consumer
12 Advocate (“OCA”) encouraging PECO to avoid over-reliance on non-residential
13 lighting measures and to continue diversifying its non-residential portfolio toward
14 non-lighting measures. While lighting measures have historically delivered cost-
15 effective savings, increased market saturation may heighten realization and
16 persistence risk over the Phase V period. Reducing the share of C&I portfolio
17 savings attributed to non-residential lighting from approximately 44 percent to 35
18 percent as recommended by OCA¹ may be too aggressive, but some level of
19 reduction and rebalancing seems reasonable.

20 **Q. IF THE COMMISSION ADOPTS THE RECOMMENDATION TO**
21 **REBALANCE NON-RESIDENTIAL PROGRAMS, WHAT LIMITATIONS**
22 **DOES OSBA BELIEVE ARE APPROPRIATE?**

¹ Direct Testimony of Zack Tyler, page 22.

OSBA STATEMENT NO. 1-R

1 A. The OSBA emphasizes that any such diversification and reallocation within the
2 non-residential programs should occur within the proposed respective portfolio
3 budgets and should not result in increased surcharges for small commercial
4 customers. To the extent program adjustments are made, the OSBA supports the
5 Commission ensuring that non-residential programs serving small commercial
6 customers continue to deliver net benefits.

7 **Q. PLEASE SUMMARIZE YOUR POSITION.**

8 A. I support OCA's recommendation to improve non-residential program balance,
9 reduce performance risk, and promote long-term value without increasing costs or
10 reallocating financial responsibility to small commercial customers.

11 The OSBA does not oppose approval of PECO's Phase V EE&C Plan and
12 offers this rebuttal testimony solely to reinforce OCA's recommendation that will
13 enhance program effectiveness and durability for small commercial customers.

14 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

15 A. Yes, it does.

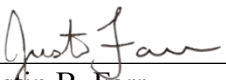
**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company : **Docket No. M-2025-3057328**
for Approval of its Act 129 :
Phase V Energy Efficiency and :
Conservation Plan :

VERIFICATION

I, Justin B. Farr, hereby state that the facts set forth in my Rebuttal Testimony, labelled OSBA Statement No. 1-R, are true and correct to the best of my knowledge, information, and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements made herein are subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: January 29, 2026



Justin B. Farr

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company : Docket No. M-2025-3057328
for Approval of its Act 129 :
Phase V Energy Efficiency and :
Conservation Plan :

CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served via email (*unless otherwise noted below*) upon the following persons, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

The Honorable Marta Guhl
Administrative Law Judge
Pennsylvania Public Utility Commission
Philadelphia District Office
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Philadelphia, PA 19107
mguhl@pa.gov

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Philadelphia, PA 19147
jcarpenter@keealliance.org

Date: January 30, 2026

/s/ Steven C. Gray
Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney ID No. 77538



COMMONWEALTH OF PENNSYLVANIA

January 30, 2026

The Honorable Marta Guhl
Administrative Law Judge
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
801 Market Street, Suite 4063
Philadelphia, PA 19107

Re: Petition of PECO Energy Company for Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan / Docket No. M-2025-3057328

Dear Judge Guhl:

Enclosed please find the Rebuttal Testimony of Justin B. Farr, labelled OSBA Statement No.1-R, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-referenced proceeding.

As evidenced by the enclosed Certificate of Service, all known parties will be served, as indicated.

If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney ID No. 77538

Enclosures

cc: PA PUC Secretary Matthew L. Homsher (Cover Letter & Certificate of Service)
Justin Farr
Kevin Higgins
Parties of Record

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company	: Docket No. M-2025-3057328
for Approval of its Act 129	:
Phase V Energy Efficiency and	:
Conservation Plan	:

**OFFICE OF SMALL BUSINESS ADVOCATE'S
ADMITTED
TESTIMONY AND EXHIBITS**

The Office of Small Business Advocate ("OSBA") admitted the enclosed testimony and exhibits, as evidence into the evidentiary record at the Evidentiary Hearing, held on February 2, 2026, in the above-captioned proceeding:

- Rebuttal Testimony of Justin B. Farr, labelled OSBA Statement No.1-R, with signed Verification of Justin B. Farr.

Date: February 2, 2026

EXHIBIT
OSBA
1A

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company	:	
for Approval of Its Act 129 Phase V	:	Docket No. M-2025-3057328
Energy Efficiency and Conservation Plan	:	

DIRECT TESTIMONY OF JIM GREVATT
ON BEHALF OF
THE COALITION FOR AFFORDABLE UTILITY SERVICES AND
ENERGY EFFICIENCY IN PENNSYLVANIA (CAUSE-PA)

AND

THE TENANT UNION REPRESENTATIVE NETWORK (TURN)

January 20, 2026

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I. INTRODUCTION

Q. Please state your name, title, and employer.

A. My name is Jim Grevatt. I am a Managing Consultant at Energy Futures Group, located at 10298 Route 116, Hinesburg, VT 05461.

Q. Please describe Energy Futures Group.

A. EFG is a clean-energy consulting firm headquartered in Hinesburg, Vermont, with offices in New York. EFG designs, implements, and evaluates programs and policies to promote equitable investments in efficiency, renewable energy, other distributed resources, and strategic electrification, with a significant focus on the sufficiency of programs that specifically benefit lower income households and vulnerable communities. EFG staff have delivered projects on behalf of energy regulators, government agencies, utilities, and advocacy organizations in forty states, eight Canadian provinces, and several countries in Europe.

EFG brings to its work a unique combination of technical, economic, program, and policy expertise. EFG staff have critically evaluated hundreds of efficiency and renewable energy programs, playing key roles in developing many that have subsequently won awards for excellence. Recent work involves efficiency program portfolios and policies in each of the fifteen highest-ranking states on the American Council for an Energy-Efficient Economy (ACEEE) State Energy Efficiency Scorecard, as well as in Ontario, Manitoba, and British Columbia. EFG staff have provided expert witness testimony on efficiency programs, integrated resource planning, and related policy issues in regulatory proceedings in twenty states and five Canadian provinces.

1 **Q. Please summarize your professional and educational experience.**

2 A. I have worked in the energy efficiency industry since 1991 in a wide variety of roles. Prior
3 to joining EFG, I served as the Director of Residential Energy Services at Efficiency Vermont and
4 the District of Columbia Sustainable Energy Utility. In both of those roles I oversaw planning and
5 delivery of programs for residential customers including those serving income-qualified
6 households. I also served as the Manager of Energy Services at Vermont Gas Systems, managing
7 both residential and commercial energy efficiency programs. I have extensive hands-on experience
8 conducting hundreds of energy audits for Vermont's Low-Income Weatherization Assistance
9 Program and Vermont Gas Systems' DSM programs.

10 In my current role as Managing Consultant at EFG, I have advised regulators, utilities and
11 other energy efficiency program administrators, environmental organizations, and low-income and
12 affordable housing advocates in over twenty states and Canadian provinces, and I have provided
13 expert witness testimony in fourteen of those jurisdictions. My work, including as an expert
14 witness in litigated proceedings in South Carolina¹ and West Virginia,² among others, frequently
15 focuses on the disproportionate energy burdens experienced by lower income households and the
16 sufficiency of utility programs to address those burdens. For example, I co-authored an Energy
17 Efficiency Action Plan for the Southeast Florida Regional Climate Change Compact which
18 provided recommendations to county governments for local and regional actions to increase the

¹ See Direct Testimony of Jim Grevatt on behalf of S.C. Coastal Conservation League, Southern Alliance for Clean Energy, and Voter Solar, Application of Duke Energy Progress, LLC for Increase in Electric Rates, Adjustments in Electric Rate Schedules and Tariffs, and Request for an Accounting Order, Docket No. 2022-254-E, S.C. Pub. Serv. Comm'n (Dec. 1, 2022), <https://dms.psc.sc.gov/Web/Dockets/Detail/118289>.

² See Direct Testimony of Jim Grevatt on behalf of West Virginia Citizen Action Group, Solar United Neighbors, and Energy Efficient West Virginia, Application of Appalachian Power Company and Wheeling Power Company for Review of Energy Efficiency and Demand Response Programs and Approval of Rider Rates, Case No. 24-0332-E-P, W.Va. Pub. Serv. Comm'n (July 10, 2024), <https://www.psc.state.wv.us/scripts/WebDocket/ViewDocument.cfm?CaseActivityID=625266&NotType=WebDocket>.

1 availability of energy efficiency for vulnerable communities in that region.³ I received a B.F.A.
2 from the University of Illinois. My resume, attached as Attachment A, provides additional detail
3 regarding my professional and educational experience.

4 **Q. Have you previously testified in any proceeding before the Pennsylvania Public**
5 **Utilities Commission?**

6 A. Yes, I have testified on behalf of the Coalition for Affordable Utility Services and Energy
7 Efficiency in Pennsylvania (CAUSE-PA) in Docket Nos. P-2014-2459362,⁴ M-2020-3020820, M-
8 2020-3020821, M-2020-3020822, M-2020-3020823, M-2020-3020818, and M-2020-3020830. I
9 have also testified before utility commissions in Colorado, Florida, Illinois, Iowa, Indiana,
10 Kentucky, Maryland, Nevada, North Carolina, South Carolina, Vermont, Virginia, and West
11 Virginia, as well as in the Canadian provinces of British Columbia and Manitoba.

12 **Q. On whose behalf are you testifying in this case?**

13 A. I am testifying on behalf of the Coalition for Affordable Utility Services and Energy
14 Efficiency in Pennsylvania (CAUSE-PA) and the Tenant Union Representative Network (TURN).

15 **Q. What is the purpose of your testimony?**

16 A. The purpose of my testimony is to offer observations on the portfolio of energy efficiency
17 programs that PECO Energy Company (PECO or the Company) proposes in hopes that I may
18 inform the Commission's consideration of the Company's Petition. The Company filed a Petition
19 for Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan (Phase V Plan) on
20 December 1, 2025 with the Pennsylvania Public Utility Commission (Commission). The Phase V

³ Russell Paez, et al., Energy Efficiency Action Plan (Oct. 21, 2022), https://southeastfloridaclimatecompact.org/wp-content/uploads/2022/12/Energy-Efficiency-Action-Plan_Final2022.pdf.

⁴ I have testified on behalf of CAUSE-PA in Docket No. P-2014-2459362, including proceedings regarding both the Petition of Philadelphia Gas Works for Approval of Demand Side Management Plan for FY 2016-2020 and the Petition of Philadelphia Gas Works for Approval of Demand Side Management Plan for FY 2025-2029.

Plan was filed pursuant to the requirements of Act 129 and the Commission's Implementation Order for Phase V of the Act 129 Energy Efficiency and Conservation Program, entered on June 18, 2025, at Docket No. M-2025-3052826 (Phase V Implementation Order). Specifically, I discuss the sufficiency of the Company's approach to programs that are intended to reduce the energy bills of those customers who lack the financial means to make investments in energy efficiency, i.e. low-income households. Throughout this testimony, the term "low income" as applied to persons or households will refer to those individuals and/or households whose income is at or below 150% FPL, consistent with the Commission's definition of that term.⁵

Q. What are your principal observations about the Company's filing?

A. My principal observations are as follows:

1. PECO reports that the Commission established Phase V requirements for it to achieve 1,111,685 MWh in gross annual electric energy savings and 194.8 MW of peak day reductions (PDR).⁶ It is also required to achieve no less than "74,456 MWh of savings from programming solely directed at low-income customers or low-income-verified participants in multifamily housing programs."⁷
2. The Company's plan includes only three energy efficiency (EE) programs. These are the Residential Program, the Residential HER program, and the Non-Residential program. Both the Residential program and the Residential HER program contain low-income subprograms. While PECO does not use the term "umbrella program," both the Residential

⁵ Phase V Implementation Order at 53-54. There are many households with income above this threshold that also lack adequate means to invest in energy efficiency measures for their home; however, for the purposes of this testimony, I am applying the definition of low income utilized by the Public Utility Commission for the purposes of establishing a low income program sector.

⁶ PECO St. 1 at 6:7-8.

⁷ Id. at 6:12-14.

1 program and Non-Residential program clearly meet the meaning of that term as described
 2 in the Commission's Phase V Energy Efficiency and Conservation Plan Template: "e.g., a
 3 wide-ranging residential program that includes upstream measures, home energy reports,
 4 appliance recycling, kits, efficient product rebates, and new construction."⁸ In PECO's
 5 terms, "[t]he Residential and Non-Residential Programs each provide customers with
 6 comprehensive opportunities to save energy across all electric end-uses."⁹

7 3. PECO indicates that the Residential Program in its entirety will be "administered by a CSP
 8 and a team of partners with a proven record"¹⁰ and that it will include numerous
 9 subcomponents:

- 10 a. **In-Home Assessments:** Offers in-home or virtual assessments.
- 11 b. **Appliance Recycling:** Offers responsible recycling of refrigerators, freezers,
 12 dehumidifiers, and room AC units.
- 13 c. **Rebates:** Provides rebates for energy efficient measures.
- 14 d. **Online Marketplace:** Provides a one-stop shopping experience for instant rebates
 15 on efficient products.
- 16 e. **New Construction:** Promotes building homes that are more comfortable, durable,
 17 and energy efficient than those built to code.
- 18 f. **Daily Load Shifting (DLS):** Delivers peak demand reduction on non-holiday
 19 weekdays in summer and winter (January and February) by shifting load from on-
 20 peak to off peak hours. Includes Managed EV Charging, Thermostat Optimization,
 21 and Bring-Your-Own-Battery.

⁸ See Final Phase V EE&C Plan Template, Section 3.2.

⁹ PECO St. 2 10:16-17.

¹⁰ PECO Phase V EE&C Plan (Plan), p. 26.

g. **Multifamily:** Provides in-unit and common area upgrades in multifamily buildings.¹¹

4. PECO states “[t]he objective of the Residential Low-Income subprogram is to increase energy efficiency and address health and safety barriers for low-income customers...[a]iming to reduce household energy costs for residential customers with a household income less than or equal to 150% of federal poverty level.”¹² The program will also address “health and safety barriers in single-family low-income homes to enable installation of energy efficiency measures and improve overall comfort and well-being.”¹³

5. The proposed Residential Low-Income (RLI) program includes the following components:

a. **Low-Income Single Family:** Enhances energy efficiency in single family homes for eligible customers, reducing electric bills and increasing comfort.

b. **Appliance Recycling:** Offers responsible recycling of refrigerators, freezers, dehumidifiers, and room AC units via drop-off locations/events or pick-ups.¹⁴

c. **New Construction:** Promotes building affordable housing that is more comfortable, durable, and energy efficient.

d. **DLS:** Delivers peak demand reduction on non-holiday weekdays in summer and winter by shifting load from on-peak to off peak hours.

¹¹ Plan, pp. 27-28.

¹² Id. p. 68.

¹³ Id.

¹⁴ While PECO’s Plan references pick-ups for appliance recycling, PECO indicated in discovery that it would not be doing any pickups. See Response to TURN II-12; Response to CAUSE-PA 3-9. I recommend PECO include pickups in its program implementation to ensure the service is available to seniors, people with disabilities, and those without access to a car.

1 e. **Multifamily:** Provides in-unit and common area upgrades in multifamily
2 buildings.¹⁵

3 However, the appliance recycling component of the RLI does not appear to differ from the
4 general residential appliance recycling subcomponent of offerings in a way that would
5 indicate that it would qualify as a program “solely directed at low-income customers or
6 low-income-verified participants in multifamily housing programs.”¹⁶

7 6. Nearly 37% of forecast savings for the RLI program will come from lighting measures and
8 lighting fixture removal, and most of the lighting savings (76%) are forecast to come from
9 screw-based LED bulbs. Nearly 10% of the forecast savings will come from power strips,
10 roughly 9% will come from low flow showerheads and faucet aerators, and over 11% will
11 come from air purifiers. Combined, these “shallow saving” measures will yield over three-
12 quarters of the savings the Company proposes to provide for low-income households.¹⁷

13 7. PECO “defines a comprehensive program as a program that includes measures that meet
14 the Commission’s definition of comprehensive.”¹⁸ This suggests that PECO believes its LI
15 program is comprehensive simply because it offers a variety of measures, and not because
16 it focuses on achieving a meaningful portion of its energy savings targets by delivering
17 long-lived measures that save energy across multiple end uses. In fact, only 6% of the
18 forecast savings are expected to result from building shell improvements, including
19 insulation and air sealing, and another 4% will come from heat pump water heaters, but
20 only 2% of the low-income savings will come from efficient heat pumps. Therefore, despite

¹⁵ Plan, pp. 69-70.

¹⁶ Phase V Implementation Order at 55.

¹⁷ Plan, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation, pp. 79-90.

¹⁸ PECO Response to CAUSE-PA 1-16 (All cited discovery responses are attached hereto at Appendix B).

1 the Company's statement that the "foundational element of the [low-income] subprogram
 2 is a direct install whole home solution" the evidence PECO provides shows that most of
 3 the savings will come from shallow saving measures rather than from whole-home
 4 solutions.

5 8. PECO proposes to fund health and safety remediation in low-income households where
 6 "[t]he H&S condition must directly prevent installation of EE measures" with prioritization
 7 of "[t]reatments enabling high-impact energy efficiency (EE) measures."¹⁹ This is an
 8 important step that will enable more households with significant need to receive the benefit
 9 of energy efficiency savings.

10 9. PECO reports that "[c]ustomers may receive coordinated services funded through the
 11 company's LIURP and the company's low-income EE&C program" and that "[e]ligible
 12 customers receive simultaneous services; no separate program application is required."²⁰
 13 Streamlining the coordination between these two low-income programs increases the
 14 benefits provided to households and decreases the complexity of participation. That said,
 15 there is much more the Company must do to implement an effective system of coordination
 16 with other programs that serve low-income customers in its service territory, including but
 17 not limited to Built to Last, Basic Systems Repair, and Weatherization Assistance.

18 10. PECO states "[t]he Residential HER program is divided into two subprograms, one for
 19 market-rate customers and one for low-income customers."²¹ PECO says that both the HER
 20 program and the Low-Income HER program leverage "the power of social norms and

¹⁹ PECO Response to CAUSE-PA 1-17.

²⁰ PECO Response to CAUSE-PA 1-33.

²¹ Plan, p. 57.

1 education “coaching” to drive persistent energy savings through smart energy practices.”²²

2 The distinctions between the residential HER and LI HER appear to be modest at best.

3 PECO states that “[t]he key difference is that the behavioral data and program content for

4 the HER LI subprogram are tailored specifically to low-income customers, reflecting the

5 unique program offerings and opportunities available to this segment.”²³ As with the low-

6 income appliance recycling subcomponent, it is not apparent that LI HER differs from the

7 general residential HER in a way that would qualify it as a program “solely directed at low-

8 income customers or low-income-verified participants in multifamily housing programs.”²⁴

9 11. PECO proposes a single Non-Residential program that serves both small and large

10 commercial/industrial customers.²⁵ The objective of the program “is to increase energy

11 efficiency for its non-residential customers across the SCI, LCI, and Municipal Lighting

12 rate classes.”²⁶ The program consist of the following components:

13 a. **Strategic Energy Management (SEM):** Implements practices, policies, and

14 processes across an organization or facility that create persistent energy savings.

15 a. **Existing Buildings:** Provides incentives to customers who install energy efficient

16 equipment.

17 a. **Building Optimization:** Includes assessments and implementing measures to

18 optimize energy use in an existing building.

²² Plan, p. 57 and p. 95.

²³ PECO Response to CAUSE-PA 1-39.

²⁴ Phase V Implementation Order at 55.

²⁵ Plan, p. 105.

²⁶ Id. p. 106.

a. **Distributed Energy Resources (DER):** Incentivizes the installation of energy generation and storage systems at customer sites, either behind the meter or with connection to the local grid.

a. **Small Business Solutions:** Works with small businesses and trade allies to install a prescribed list of energy-saving measures.

a. **New Construction:** Partners with design firms and builders to facilitate construction projects (e.g., new facility builds, additions, significant remodels) that are designed, built, and operated at a high level of efficiency.²⁷

Q. What are your recommendations for the Commission?

A. To improve the availability of meaningful energy efficiency opportunities for the Company's low-income customers, I recommend the Commission take the following steps prior to its approval of the Company's Plan:

1. Most fundamentally, PECO must increase its prioritization of deep savings measures that will meaningfully reduce energy burdens for participating households. I recommend the Commission order the Company to revise its Plan to rebalance its proposed measure mix in the RLI program such that a combination of building insulation and air sealing measures and efficient heat pumps and heat pump water heaters comprise 25% of the low-income portfolio savings for Phase V, roughly doubling what the Company has currently proposed.
2. Of the 25% of low income program savings that comes from heat pumps, heat pump water heaters, and building insulation and air sealing, I recommend that PECO set a goal in the Phase V Plan to annually target, at a minimum, 250 CAP customers with inefficient electric resistance heat for the installation of high efficiency heat pumps and/or other deep saving

²⁷ Plan, p. 107.

1 efficiency measures. PECO should specifically target CAP customers who would
2 otherwise be at risk of exceeding maximum CAP credit limits. PECO should also track the
3 types of low income measures installed by rate classification and CAP enrollment in order
4 to improve reporting and inform its practices.

- 5 3. Disallow savings from the proposed LI-HER and LI Appliance recycling subcomponents
6 from being counted towards achievement of PECO's low-income savings requirement.
7 PECO has not demonstrated that either of these subcomponents would be "solely directed
8 at low-income customers or low-income-verified participants in multifamily housing
9 programs." However, I recommend that the Company continue with its proposed focused
10 outreach to low-income customers as part of its general residential subprograms.

- 11 4. Direct PECO to implement protocols to undertake specific outreach to CAP customers who
12 have exhausted, or are at risk of exhausting, their CAP credits to enroll them in RLI and/or
13 LIURP.

- 14 5. Require Act 129 program auditors who identify permanently installed electric heating
15 systems for residential customers during Energy Checkups to provide information to the
16 customer about the availability of PECO's discounted electric heating rate, Rate RH, and
17 require PECO to accept the audit information as sufficient basis to perform the rate switch.

- 18 6. To ensure meaningful collaboration with local programs, the Commission should require
19 PECO to work with potential partners to adopt concrete coordination mechanisms. At a
20 minimum, as discussed in more detail in Section IV.E, PECO should be directed to
21 establish formal referral protocols with major home repair and weatherization program
22 administrators, develop data-sharing agreements that allow for timely identification of
23 eligible homes, define clear scopes of work and sequencing standards identifying which

types of repairs PECO will refer to others, create a process flow chart illustrating the customer journey, develop and implement data tracking tools and protocols, establish project coordination check-ins with partner programs, and report regularly on coordination outcomes.

I discuss my recommendations in detail below.

II. BACKGROUND OF ACT 129 PROGRAMMING

Q. Please summarize the low income energy savings requirements for Phases I, II, III, and IV of Act 129.

A. Act 129 requires that each Electric Distribution Company (EDC) include in its Energy Efficiency and Conservation (EE&C) Plan specific energy efficiency measures for low income households in proportion to that sector's share of the total energy usage in a given service territory.²⁸ In Phase II, the Commission added a requirement that each EDC obtain a minimum of four-and-a-half percent (4.5%) of its overall consumption reduction requirements from the low-income sector.²⁹ To meet the low income consumption reduction target, the Commission allowed EDCs to include all savings achieved through dedicated low-income programs, as well as a portion of savings achieved through non-low income programs based on estimated low income participation.³⁰

In Phase III, the Commission increased the low-income consumption reduction requirement to five-and-a-half percent (5.5%) of the overall electric consumption savings achieved.³¹ The Commission required that "[s]avings counted towards the 5.5% target may only

²⁸ 66 Pa. C.S. §2806.1(b)(1)(i)(G).

²⁹ Phase II Implementation Order at 55, Docket No. M-2012-2289411.

³⁰ *Id.* at 58.

³¹ Phase III Implementation Order at 69, Docket No. M-2014-2424864.

1 come from specific low-income programs or low-income verified participants in multifamily
 2 housing programs.”³² In other words, for Phase III, deemed savings from non-low-income
 3 programs were no longer permitted to be counted for compliance with the low income
 4 consumption reduction target. In addition to the specific savings carve-out and elimination of the
 5 prior deemed savings policy, the Commission further directed that “low-income savings should
 6 primarily come from measures that are directly provided to low-income households” – as opposed
 7 to upstream rebates or other indirect programming.³³

8 In Phase IV, the Commission increased the percentage of total consumption reduction it
 9 required PECO to achieve from the low income sector to 5.8% and maintained its requirement
 10 from Phase III that low income savings be derived from programs “solely directed at low-income
 11 customers or low-income-verified participants in multifamily housing programs.” Notably,
 12 however, while the 5.8% savings requirement was higher in terms of the percentage of overall
 13 savings, the actual MWh savings requirement from the low-income customer segment was lower
 14 in Phase IV than in Phase III because the overall portfolio savings targets were lower.³⁴

15 In Phases II, III, and IV of Act 129, the Commission allowed EDCs to carry over savings
 16 achieved in the prior phase that exceeded the overall portfolio and low income consumption
 17 reduction targets and apply carried over savings toward savings targets in the subsequent phase.³⁵
 18 The Commission’s permissive carryover policy allowed EDCs to rely on carryover savings to meet
 19 their portfolio and low-income savings targets, resulting in EDCs dramatically underspending
 20 EE&C program budgets intended to help Pennsylvanians access energy efficiency and

³² Phase III Implementation Order at 69, Docket No. M-2014-2424864.

³³ Id. at 69.

³⁴ Id. at 36.

³⁵ Phase II Implementation Order at 58-60, Docket No. M-2012-2289411; Phase III Implementation Order at 83-86, Docket No. M-2014-2424864; Phase IV Implementation Order at 42-45, Docket No. M-2020-3015228.

1 conservation measures. The results of Phase III illustrate the impact of the Commission's carryover
 2 policy. EDCs ended Phase III with carryover savings averaging 28% toward their respective Phase
 3 IV low income savings targets while over \$149 million dollars intended to be utilized to help
 4 Pennsylvanians save energy went unspent.³⁶ While it is critical that funds be spent wisely, leaving
 5 these funds unspent robs utility customers of vital opportunities to better manage their household
 6 costs through increased energy efficiency.

7 **Q. Please summarize the low income energy savings requirements for Phase V of Act**
 8 **129.**

9 For Phase V, the Commission has set the percentage of total consumption reduction it
 10 requires each EDC to achieve from the low income sector to targets ranging from 6.7% to 7.9%,
 11 representing 7.5% of the statewide MWh savings target in aggregate.³⁷ The Commission derived
 12 these percentages by "allocating 13% of each EDC's Act 129 budget to programs solely directed
 13 at low-income customers or low-income-verified participants in multifamily housing programs."³⁸
 14 The Commission maintained the requirement from Phases III and IV that "[s]avings from non-
 15 low-income programs, such as general residential programs, would not be counted toward these
 16 targets."³⁹

17 Phase V total portfolio savings targets for each EDC are lower than they were in Phase
 18 IV.⁴⁰ As such, although the Phase V low income savings targets are higher as a percentage of
 19 overall portfolio savings, the actual MWh savings requirement is again *lower* in Phase V than it
 20 was in Phase IV for all EDCs except for Duquesne Light Company, which had its low-income

³⁶ SWE Final Annual Report Act 129 Program Year 16 (2025) at 8; SWE Phase III Final Report at 50.

³⁷ Phase V Implementation Order at 69.

³⁸ Id.

³⁹ Phase V Implementation Order at 55.

⁴⁰ Compare Id. at 48; Phase IV Implementation Order at 18.

savings target increased slightly, by 367 MWh.⁴¹ For Phase V, the Commission set PECO's low income savings target at 74,456 MWh, representing 6.7% of the Company's overall portfolio consumption reduction target.⁴² Significantly, this is a full 35% less savings than were required in Phase III and the lowest low-income target for PECO since the PUC introduced the low-income target requirement in Phase II:

Table 1: PECO Low Income Target in Each Phase⁴³

Phase	Low-Income Target
Phase II	50,663 MWh
Phase III	114,430 MWh
Phase IV	80,089 MWh
Phase V	74,456 MWh

In its Implementation Order, the Commission also directed 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."⁴⁴ Further, the Commission capped the amount of energy savings achieved during Phase IV that EDCs can carry over and apply toward their Phase V overall and low-income targets to 20% of the Phase V targets.⁴⁵ The Commission made clear, however, "that EDCs can, and should,

⁴¹ Phase V Implementation Order at 55, 68.

⁴² Id. at 55, 68, 48 (74,456 MWh is 6.7% of the final 1,111,685 MWh Phase V portfolio savings target for PECO).

⁴³ Phase II Implementation Order at 24, 54, Docket No. M-2012-2289411; Phase III Implementation Order at 63, Docket No. M-2014-2424864; Phase IV Implementation Order at 35, Docket No. M-2020-3015228; Phase V Implementation Order at 55, Docket No. M-2025-3052826.

⁴⁴ Phase V Implementation Order at 72.

⁴⁵ Id. at 84, 241.

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.”⁴⁶

III. THE NEED FOR LOW INCOME ENERGY EFFICIENCY

Q. What level of income qualifies a household as “low-income”?

A. Generally, the Commission considers a “low income” customer to be any residential customer whose income is at or below 150% of the Federal Poverty Level (FPL).⁴⁷ Low income energy assistance programs generally require eligible households to have income at or below 150% FPL – for instance, PECO’s Customer Assistance Program (CAP) requires households to have income that is not greater than 150% FPL to qualify.⁴⁸ Act 129 specifically mandates that EDCs’ EE&C Plans contain specific energy efficiency measures for households at or below 150% FPL.⁴⁹ PECO customers at or below 150% FPL would be eligible for the company’s Residential e Subprogram and Residential Low Income HER Subprogram, outlined in its proposed Phase V EE&C Plan, and are eligible for the Income-Eligible Program and Income-Eligible Home Energy Reports Program under the company’s existing Phase IV EE&C Plan.⁵⁰

As a baseline, a family of four with a household income at or below 150% FPL has a maximum gross annual income of \$48,225 (\$4,018/month).⁵¹ Table 2 provides a breakdown of the 2025 household income by FPL and household size:

⁴⁶ Phase V Implementation Order at 85.

⁴⁷ See 52 Pa. Code § 54.72 (Defining low-income customers for the purposes of EDC Universal Service programs and reporting).

⁴⁸ PECO Energy Company, Universal Service and Energy Conservation Plan 2019 to 2028, Docket No. M-2018-3005795, at 3 (Fifth Amended Plan Sept. 17, 2025) (hereinafter PECO USECP).

⁴⁹ 66 Pa. C.S. § 2806.1(b)(1)(i)(G).

⁵⁰ Plan, pp. 68, 95; PECO Revised Phase IV EE&C Plan (Mar. 04, 2024) at 52, 71.

⁵¹ See US Dept. of Health & Human Services, 2025 Poverty Guidelines, <https://aspe.hhs.gov/sites/default/files/documents/dd73d4f00d8a819d10b2fdb70d254f7b/detailed-guidelines-2025.pdf>.

Table 2: 2025 Federal Poverty Levels by Household Size and Annual Income⁵²

Household/Family Size	50%	100%	150%	175%	200%	250%
1	\$7,825	\$15,650	\$23,475	\$27,388	\$31,300	\$39,125
2	\$10,575	\$21,150	\$31,725	\$37,013	\$42,300	\$52,875
3	\$13,325	\$26,650	\$39,975	\$46,638	\$53,300	\$66,625
4	\$16,075	\$32,150	\$48,225	\$56,263	\$64,300	\$80,375
5	\$18,825	\$37,650	\$56,475	\$65,888	\$75,300	\$94,125

Q. How many low income customers does PECO have?

A. Like other large regulated public utilities in Pennsylvania, PECO must track its low income customer population in two ways: “*estimated low income customers*” and “*confirmed low income customers*.”⁵³ The “estimated low-income” customer number is derived using local census data, scaled against residential customer counts in a given geographic area, to approximate the percentage of low-income households in a utility’s service territory.⁵⁴ The “confirmed low-income” number is a count of those customers for whom the Company has obtained information that would reasonably indicate that the customer’s income is at or below 150% of the federal poverty level (FPL).⁵⁵ In 2024, PECO Electric reported 1,535,532 total residential customers, of which 142,541 (9.3%) were confirmed low income.⁵⁶ However its number of estimated low income customers was much higher: 372,543 (24.3%).⁵⁷

Many of PECO’s low income customers have household income that is significantly below 150% FPL. As of December 2025, the average annual income for PECO’s confirmed low-income

⁵² US Dept. of Health & Human Services, 2025 Poverty Guidelines, The U.S. Department of Health and Human Services updates these numbers every year, and the 2026 numbers will likely be released in the next few weeks.

⁵³ See Pa. PUC, BCS, 2024 Report on Universal Service Programs & Collections Performance (2024 Universal Service Report), at 5-7, <https://www.puc.pa.gov/media/3771/2024-universal-service-report-final.pdf>.

⁵⁴ Id. at 7.

⁵⁵ Id. at 2.

⁵⁶ Id. at 5-6.

⁵⁷ Id. at 8.

customers is \$14,039.04.⁵⁸ In 2024, the average household income for electric customers throughout the state who participated in LIURP was \$21,580.⁵⁹ The average household income for CAP customers was \$16,031.⁶⁰ In 2025, a household of two with an income of \$16,031 was at approximately 76% FPL.⁶¹ In other words, the average income of households that are eligible to participate in the low-income programs is approximately half of the qualifying income level. These customers have far less than the amount needed to be financially self-sufficient and live without financial assistance.

Q. Do the “confirmed low income” and “estimated low income” customer counts in the Universal Service Report accurately capture all of the Company’s low income customers?

PECO’s estimated low income customer count provides a more realistic assessment of the number of low income households served by PECO than the confirmed low income count. Unlike the census-based estimated count, PECO’s confirmed low income customer count only includes customers whose income PECO has recently verified.

PECO’s definition is also narrower than the Commission’s regulatory definition for confirmed low income customers. The Commission defines a “confirmed low-income residential account” as an account “where the EDC has obtained information that would reasonably place the customer in a low income designation.”⁶² PECO, however, defines a confirmed low income customer as a customer who “(1) is enrolled in CAP, (2) has received LIHEAP in the prior 2 years, or (3) has verified household income of 150% FPL or less within the last 2 years.”⁶³ PECO’s

⁵⁸ PECO Response to CAUSE-PA 3-8.

⁵⁹ 2024 Universal Service Report at 48.

⁶⁰ *Id.*

⁶¹ US Dept. of Health & Human Services, 2025 Poverty Guidelines, <https://aspe.hhs.gov/sites/default/files/documents/dd73d4f00d8a819d10b2fdb70d254f7b/detailed-guidelines-2025.pdf>.

⁶² 52 Pa. Code § 54.72.

⁶³ PECO Response to CAUSE-PA 1-1.

1 narrow definition excludes those customers for whom the company has information that would
 2 reasonably place the customer in a low income designation unless the company has verified the
 3 customer's income. The confirmed low income customer count therefore provides an inaccurately
 4 low assessment of the number of PECO's customers who have low income. The BCS census-based
 5 estimated low-income count, which is collected and published by the federal government, is a
 6 more accurate tool for assessing the number of eligible customers in PECO's service territory.⁶⁴

7 **Q. How does the cost of energy impact low income households?**

8 A: To contextualize the impact of energy costs on low income households, it is helpful to
 9 understand the relative energy burden shouldered by low income ratepayers as compared to other
 10 Pennsylvanians. A household's energy burden is the percentage of household income required to
 11 pay for energy services.⁶⁵ According to the federal Department of Housing and Urban
 12 Development, a household's total housing costs – *including utility costs* – should not exceed 30%
 13 of the household's total income.⁶⁶ According to formal Commission policy, to be considered
 14 affordable, a household's combined energy burden (electric and gas) should not exceed 6% of
 15 household income for those with incomes between 0-50% FPL, or 10% of household income for
 16 those with income between 51-150% FPL.⁶⁷ But across Pennsylvania, households with income at
 17 or below 150% FPL spend as much as 30% of their income on energy costs alone.⁶⁸ By

⁶⁴ See Pa. PUC v. Philadelphia Gas Works, Docket No. R-2023-3037933, Opinion and Order at 221-222 (Entered Nov. 9, 2023).

⁶⁵ 2019 Amendments to Policy Statement on Customer Assistance Program, 52 Pa. Code § 69.261-69.267, Final Policy Statement and Order, Docket No. M-2019-3012599, (Final Policy Statement entered Nov. 5, 2019) at 3.

⁶⁶ U.S. Census Bureau, Nearly Half of Renter Households Are Cost-Burdened, Proportions Differ by Race, <https://www.census.gov/newsroom/press-releases/2024/renter-households-cost-burdened-race.html>.

⁶⁷ 2019 Amendments to Policy Statement on Customer Assistance Program, 52 Pa. Code § 69.261-69.267, Final Policy Statement and Order, Docket No. M-2019-3012599, (Final Policy Statement entered Nov. 5, 2019).

⁶⁸ See Fisher, Sheehan & Colton, The Home Energy Affordability Gap: Pennsylvania (April 2023), retrieved from <http://www.homeenergyaffordabilitygap.com/index.html>.

1 comparison, the Bureau of Consumer Services (BCS) estimates that the energy burden of
 2 Pennsylvania's residential customers as a whole (exclusive of those enrolled in a Customer
 3 Assistance Program (CAP)) is roughly 4%.⁶⁹ The overwhelming energy burdens on low-income
 4 households leave families with insufficient funds to pay for housing, water costs, food, medicine,
 5 childcare, and other basic needs and pose significant obstacles for low income families to afford
 6 their monthly bills and stay connected to essential energy services in their homes.

7 Home energy prices are higher than they have been in a decade, and are projected to
 8 continue rising.⁷⁰ Energy insecurity resulting from high energy burdens impacts roughly 1 in 4
 9 Pennsylvania households.⁷¹ According to the United States Census Bureau's Household Pulse
 10 Survey, roughly 24.4% of Pennsylvania households were unable to afford their home energy bills
 11 in 2024, compared to 23% nationwide.⁷² Nearly 1 in 20 Pennsylvania households have past-due
 12 energy utility debt, with an average overdue balance exceeding \$1,200, far above the national
 13 average of \$789.⁷³ According to the Energy Information Administration (EIA) Residential Energy
 14 Consumption Survey (RECS), 33.6% of United States residents reported experiencing energy
 15 insecurity; 24.6% reported reducing or forgoing food or medicine to pay for energy costs; and

⁶⁹ Energy Affordability for Low income Customers, Docket No. M-2017-2587711, Order at 8 (Jan. 17, 2019).

⁷⁰ National Energy Assistance Directors Association, Winter Heating Costs Expected to Jump 9.2%, Putting Millions of Families at Risk, (Dec. 12, 2025), <https://neada.org/wp-content/uploads/2025/12/winterheatingdec25PR.pdf>

⁷¹ US Census Bureau, Household Pulse Survey: Pennsylvania, Unable to Pay Energy Bill (Aug. 20 – Sept. 16, 2024), https://www.census.gov/data-tools/demo/hhp/#/?measures=ENERGYBILL&s_state=00042. Energy insecurity is the inability to adequately meet home energy needs. There are three dimensions to energy insecurity: economic (disproportionately high energy costs (burden) as percentage of income); physical (housing deficiencies / inefficiencies); and coping (strategies to cope with economic and physical hardships associated with energy insecurity). See Columbia Univ. Ctr. on Global Energy Policy, Energy Insecurity in the United States, <https://www.energypolicy.columbia.edu/publications/energy-insecurity-in-the-united-states/>.

⁷² US Census Bureau, Household Pulse Survey: Pennsylvania, Unable to Pay Energy Bill (April 9-29 2024), https://www.census.gov/data-tools/demo/hhp/#/?measures=ENERGYBILL&s_state=00042.

⁷³ The Century Foundation, Fueling Debt: How Rising Utility Costs are Overwhelming American Families (Nov. 17, 2025), <https://tcf.org/content/commentary/fueling-debt-how-rising-utility-costs-are-overwhelming-american-families/>.

1 12.2% reported leaving their homes at unhealthy temperatures because they could not afford to
 2 pay for energy.⁷⁴ Energy insecurity is more pronounced for low income Black families. EIA's
 3 RECS data revealed that 52% of Black and African American households experience energy
 4 insecurity, compared to 23.2% of white households.⁷⁵

5 According to a study of the National Energy Assistance Directors Association and the
 6 Center for Energy Poverty and Climate, in February 2024, 51.9% of households with income under
 7 \$50,000 reported at least one month where they reduced or went without food, medicine, and other
 8 basic needs in order to pay an energy bill.⁷⁶ In addition, 34% kept their home at a temperature that
 9 felt unsafe or unhealthy in order to save money on energy bills.⁷⁷ The data reviewed in the study
 10 found that, far and away, the greatest increase in energy insecurity in 2024 was among households
 11 with children.⁷⁸ As recent research and data has continually showed, vulnerable low-income
 12 families simply cannot afford the cost of energy services.

13 **Q. Is there other evidence that the Company's low income customers struggle to afford**
 14 **electricity service?**

15 A. Yes. PECO's confirmed low income customers are typically terminated for nonpayment at
 16 *more than triple the rate* of residential customers overall. In 2022, the termination rate for PECO's
 17 residential customers was 5.0%, while the rate for PECO's confirmed low income customers was
 18 18.7%.⁷⁹ In 2023, the termination rate for PECO's residential customers was 5.7%, while the rate

⁷⁴ United States Energy Information Administration, 2020 Residential Energy Consumptions Survey, Table HC11.1 Household energy insecurity, 2020, <https://www.eia.gov/consumption/residential/data/2020/hc/pdf/HC%2011.1.pdf>.

⁷⁵ U.S. Energy Information Admin., In 2020, 27% of U.S. households had difficulty meeting their energy needs - U.S. Energy Information Administration (EIA), <https://www.eia.gov/todayinenergy/detail.php?id=51979>.

⁷⁶ Nat'l Energy Assistance Dir. Assoc. (NEADA), Center for Energy Poverty & Climate, Energy Hardship Report, slide 10 (April 2024), <https://neada.org/wp-content/uploads/2024/04/neadahardshipreportAPR24.pdf>.

⁷⁷ Id.

⁷⁸ Id.

⁷⁹ 2024 Universal Service Report at 11-12.

for PECO's confirmed low income customers was 18.2%.⁸⁰ This means that in 2022 and 2023, about one in every five confirmed low income households in PECO's service territory was forced to go without service. PECO suspended terminations for several months during 2024 to implement a new operating system, but data from prior years under ordinary conditions demonstrates that PECO's low income customers have their service terminated at disproportionate rates.⁸¹

Q. What are the consequences of utility termination for low-income households?

A. Utility termination has severe, destabilizing impacts on low-income households. Involuntary loss of electricity has a deep and lasting impact on the health and well-being of an entire household – as well as the community. The loss of electric service can often mean that a household is unable to use their primary heating source in the winter, even if that heating source is non-electric. When a household is unable to use a primary or secondary heating system, they often resort to dangerous and/or high-cost heating, cooking, and lighting alternatives – such as the use of alternate fuels or portable generators – which increases the risk of carbon monoxide poisoning and home fires.

The loss of electric service can also have a significant impact on the ability of vulnerable populations to manage medical conditions and is particularly dangerous for certain groups – including seniors, families with young children, and individuals with a disability – each of whom are more likely than other residential households to experience poverty and income insecurity.⁸² Furthermore, utility insecurity and resulting payment trouble is increasingly recognized as a

⁸⁰ 2024 Universal Service Report at 11-12.

⁸¹ Id.

⁸² Charlie Harak, Olivia Wein, NCLC, Protecting Seriously Ill Consumers from Utility Disconnections: What States Can Do to Save Lives Now (Sept. 29 2022), at 5-6, <https://www.nclc.org/resources/report-protecting-seriously-ill-consumers-from-utility-disconnections-what-states-can-do-to-save-lives-now/>.

1 predictor of first-time homelessness.⁸³ Involuntary loss of electric service is often a contributing
 2 factor leading to family separation through the child welfare system.⁸⁴

3 **Q. Does the Company's customer assistance program (CAP) alleviate these struggles?**

4 While CAP provides critically important rate assistance to low income customers, the
 5 program does not fully insulate low income customers from struggling with affordability and only
 6 a small percentage of the estimated eligible population is enrolled. In 2024, 120,273 PECO
 7 customers were enrolled in CAP.⁸⁵ While this number accounts for 84.4% of confirmed low
 8 income customers, *it accounts for only 32.3% of estimated low income customers.*⁸⁶ Thus, as much
 9 as 65.6% of low income customers are not enrolled in CAP and are charged the full residential
 10 rate.

11 Further, CAP participants are subject to a tiered maximum annual CAP credit limit.⁸⁷
 12 Customers that reach the applicable maximum CAP credit limit before the end of the 12-month
 13 program period must pay the full tariff rate until the credit limit resets at the beginning of the next
 14 12-month program period.⁸⁸

⁸³ Colin Middleton, Kim Boynton, David Lewis & Andrew M. Oster, The Value of Utility Payment History in Predicting Homelessness, PLOS (Oct. 9, 2023), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0292305>.

⁸⁴ See Review of Universal Service and Energy Conservation Programs, Docket No. M-2017-2596907, Comments of Cynthia Figueroa, Commissioner of the Philadelphia Dept. of Human Services at p. 2-4 (submitted Aug. 8, 2017), <https://www.puc.pa.gov/pcdocs/1532245.pdf>.

⁸⁵ 2024 Universal Service Report at 56.

⁸⁶ Id. at 7. As discussed above, PECO's narrow definition of "confirmed low-income customer" limits this category to customers whose income has been recently verified. Therefore while 84.4% of customers whose income has been recently verified are enrolled in CAP, this percentage does not represent the true proportion of potentially eligible low-income customers enrolled in CAP.

⁸⁷ PECO USECP at 5.

⁸⁸ Id.

Q. What is the relationship between energy efficiency and CAP?

A. CAP costs are recovered through a rider assessed to all residential customers; thus, lowering energy costs for CAP participants brings down the cost of service for other ratepayers.⁸⁹ The Commission has acknowledged the financial savings potential available through low-income energy efficiency improvements, stating in its 2026 TRC Test Final Order that:

Utilities can realize financial savings from their low-income EE programs. The efficient technologies installed by EE programs often result in reduced energy bills for participants, which can decrease the likelihood that customers will experience difficulties paying their utility bills. In turn, utilities may realize reduced costs associated with arrearages and late payments, uncollectible bills and bad debt write-offs, service terminations and reconnections, bill-related customer calls, and the bill collections process.⁹⁰

Energy efficiency enables CAP customers to reduce their usage and thereby reduce the amount of CAP credit utilized each month. Providing comprehensive and effective EE&C programing to CAP customers helps them afford their bills and helps control costs for all ratepayers. The greater the energy savings in each participating household, the greater the cost savings in reduced CAP expenditures will be for the customer base as a whole.

Q. What is the relationship between poverty and home energy efficiency?

A. Energy insecurity is rooted in the interconnection of poverty and housing deficiencies.⁹¹ Low-income consumers are far more likely to live in aging, inefficient, and potentially unsafe housing.⁹² Low-income consumers are more likely to live in housing with poor quality insulation

⁸⁹ PECO Tariff Electric-Pa. P.U.C. No. 8 (Supp. 17) at 80.

⁹⁰ 2026 TRC Test Final Order at 56.

⁹¹ Hernandez, Diana, Energy Insecurity and Health: America's Hidden Hardship, Health Affairs Health Policy Brief, June 29, 2023, <https://www.healthaffairs.org/doi/10.1377/hpb20230518.472953/>.

⁹² American Council for an Energy-Efficient Economy, Study: One in Four Low-Income Households Spend Over 15% of Income on Energy Bills (Sep. 11, 2024), <https://www.aceee.org/press-release/2024/09/study-one-four-low-income-households-spend-over-15-income-energy-bills>.

or no insulation at all.⁹³ Many low-income households are unable to afford the costs of repairs and improvements necessary to stem high consumption as a result of inefficiencies or other factors in their homes. As a result, households that experience energy insecurity spend 26.5% more per square foot on energy costs than households that do not experience energy insecurity.⁹⁴ Remediating housing deficiencies, such as health and safety barriers, is thus critical to ensuring the effective delivery of energy efficiency improvements to low-income households.

Further, the intersection of poverty and racism produces a pronounced disparity in energy burdens across low-income communities of color, driven primarily by historic inequities in housing and community investment.⁹⁵ Census tracts with higher concentrations of Black households have disproportionately high energy use intensity, reflective of the greater energy inefficiency of housing in these areas.⁹⁶ Housing in predominantly Black neighborhoods is less energy efficient than housing in predominantly white neighborhoods because of the legacy of discriminatory housing and development policies, such as redlining, which drove decades of disinvestment.⁹⁷

⁹³ Nat'l Energy Assistance Directors' Ass'n (NEADA), Energy Hardship Report at 16 (Aug. 2024), <https://neada.org/wp-content/uploads/2024/08/August-Summer-Hardship-Report-Final.pdf>.

⁹⁴ U.S. Energy Information Administration, U.S. Energy Insecure Households were Billed More for Energy Than Other Households (May 30, 2023), <https://www.eia.gov/todayinenergy/detail.php?id=56640>.

⁹⁵ Stephens, H., Donoghoe, M., and Perry, A.M., How Extreme Heat Threatens Black Renters, and What Policymakers Can do to Fix It (Sept. 6, 2023), <https://www.brookings.edu/articles/how-extreme-heat-threatens-black-renters-and-what-policymakers-can-do-to-fix-it>; see also Carolyn B. Swope, Diana Hernández, Housing as a Determinant of Health Equity: A Conceptual Model, SOCIAL SCIENCE & MEDICINE, vol. 243 (Dec. 2019), <https://www.sciencedirect.com/science/article/pii/S0277953619305659>.

⁹⁶ Hernandez, Diana, Energy Insecurity and Health: America's Hidden Hardship, Health Affairs Health Policy Brief, June 29, 2023, <https://www.healthaffairs.org/doi/10.1377/hpb20230518.472953/>.

⁹⁷ Benjamin Goldstein, Tony G. Reames, & Joshua P. Newell, Racial Inequity in Household Energy Efficiency and Carbon Emissions in the United States: An Emissions Paradox, 84 ENERGY RESEARCH & SOCIAL SCIENCE at 5 (2022), <https://www.sciencedirect.com/science/article/pii/S2214629621004552>.

1 **Q. Does the Company's Low Income Usage Reduction Program (LIURP) satisfy the**
 2 **need for low income energy efficiency programming?**

3 A. LIURP is a vital program, but it cannot, by itself, satisfy the need for low income energy
 4 efficiency programming. While there are substantial similarities between Act 129 and LIURP, each
 5 of the two programs provides distinct and important benefits to low income households.
 6 Specifically, Act 129 programs allow any low income household to access energy efficiency
 7 measures without being subject to the LIURP minimum usage threshold. This benefit is
 8 particularly important for low income residents in multifamily buildings and small single family
 9 homes, who may have relatively high usage but may not meet the usage threshold to qualify for
 10 LIURP.⁹⁸ LIURP, on the other hand, is specifically designed to target the very highest users to
 11 help reduce collections and universal service costs.⁹⁹ But even for those low income customers
 12 who meet LIURP's usage threshold, LIURP on its own is unable to meet the need for low income
 13 energy efficiency services across PECO's service territory under the current program budget. In
 14 PECO's 2021 update to its Universal Service Needs Assessment, PECO estimated that 193,240
 15 households were income-eligible for LIURP and likely to meet the high usage requirement.¹⁰⁰
 16 Under PECO's current LIURP budget, with 3,700 to 4,200 projected participants per year, it would
 17 take roughly 50 years to treat every potential participant.¹⁰¹ Act 129 provides critical additional
 18 funds to help meet the need for low income energy efficiency in PECO's service territory.

19 While it is imperative that the two programs work in close coordination to effectively
 20 leverage impact, the Company must be careful that coordination between Act 129 and LIURP

⁹⁸ PECO USECP. at 15 (PECO requires a monthly average usage levels that exceed 600 kWh per month for electric base load customers, 1,400 kWh per month for electric heat customers, and 500 kWh for CAP customers).

⁹⁹ See Id.

¹⁰⁰ Id. at 60.

¹⁰¹ Id. at 15.

programs does not compromise the integrity of the distinct program budgets. I understand from counsel that Act 129 requires that EDC's respective Act 129 low income expenditures be *in addition to* LIURP expenditures.¹⁰² It is thus crucial that the integrity of each program be maintained – even as we recommend harmonizing the two programs to streamline services and delivery to low-income consumers.

IV. PHASE V LOW INCOME PROGRAMS

A. Comprehensive Savings Opportunities for Low-Income Customers

Q. Please summarize the Company's low-income offerings in its proposed Phase V Plan.

A. As noted in my introduction, PECO proposes a Residential Low-Income (RLI) program that includes the following components:

- a. **Low-Income Single Family:** Enhances energy efficiency in single family homes for eligible customers, reducing electric bills and increasing comfort.
- b. **Appliance Recycling:** Offers responsible recycling of refrigerators, freezers, dehumidifiers, and room AC units via drop-off locations/events.¹⁰³
- c. **New Construction:** Promotes building affordable housing that is more comfortable, durable, and energy efficient.
- d. **DLS:** Delivers peak demand reduction on non-holiday weekdays in summer and winter by shifting load from on-peak to off peak hours.

¹⁰² 66 Pa. C.S. § 2806.1(b)(i)(G).

¹⁰³ While PECO's Plan references pick-ups for appliance recycling, PECO indicated in discovery that it would not be doing any pickups. See Response to TURN II-12; Response to CAUSE-PA 3-9. I recommend PECO include pickups in its program implementation to ensure the service is available to seniors, people with disabilities, and those without access to a car.

e. **Multifamily:** Provides in-unit and common area upgrades in multifamily buildings.¹⁰⁴

Overall, the evidence the Company includes in its filing points to a focus on shallow savings that fail to provide meaningful bill reductions for participants.

Q. What do you mean by the term “shallow savings”?

A. I use this, and the contrasting term “deep savings” because I find that the use of the term “comprehensive” in the context of Act 129 has, over time, been assigned differing definitions in the multiple EDC plan filings to the extent that it has lost meaning. In the FIO, the Commission states, “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.”¹⁰⁵ The Commission has set out a list of measures it deems “comprehensive” in the EE&C Plan template.¹⁰⁶ But PECO’s proposed plan filing identifies several measures that I consider to be shallow saving measures, such as advanced power strips and low-flow faucet aerators, as “comprehensive,” even as the Commission has expressly indicated that it does not consider such measures to be “comprehensive.”¹⁰⁷ As used in several of the EDC’s Phase V EE&C plans, including PECO’s Phase V Plan, “comprehensive” now seems to indicate only the availability of many different measures without regard for how they are bundled together and whether they produce significant energy and bill savings for participants.

I suggest the term “comprehensive” be discarded in favor of the terms “shallow savings” to describe measures and projects that have a small effect in reducing energy use and “deep

¹⁰⁴ Plan, pp. 69-70.

¹⁰⁵ Phase V Implementation Order at 11.

¹⁰⁶ See Final Phase V EE&C Plan Template, Table 8 Addendum.

¹⁰⁷ Plan, pp. 73, 75.

savings” to describe measures and projects that have a significant effect in reducing overall energy use, especially when those savings are expected to last for ten to fifteen years or more. I define a shallow measure as a measure that provides only a small amount of savings compared to overall household electricity use – effectively a measure that will not in and of itself materially reduce energy burdens for participating households. For example, in the 2026 TRM a Tier 1 advanced power strip is estimated to save around 74 kWh per year.¹⁰⁸ Compared with the average low-income PECO customer’s annual electricity use of over 14,000 kWh¹⁰⁹ for customers with electric heat, this power strip provides only shallow savings – roughly 0.75% of total electricity use. This modest amount of savings will not substantively reduce the energy burden of households who receive one, in contrast with the measure “High Efficiency Equipment: ASHP” that the Company estimates will save 1,224 kWh per installation.¹¹⁰ That would cause roughly a 9% annual savings for the same average customer – over 15 times the savings that the smart strip would cause. Combining a heat pump installation with a heat pump water heater and building insulation and air sealing could save even more, dramatically reducing household energy costs.

Here, I use the term “average” low-income customer as a quick reference. It would be incorrect and unreasonable to assume that “average” is representative of the electricity use of most low-income customers. By definition, some customers would use less, but some would use more – potentially far more – than average. Consider a customer who has electric heat and uses 25% more than the average low-income electric heating customer. This customer would only see a bill reduction of 0.52% from the same advanced power strip – a savings that would hardly be

¹⁰⁸ 2026 TRM Vol. 2, p. 170, specific use unspecified.

¹⁰⁹ Attachment to PECO Response to CAUSE-PA 1-2(a-e), most recent twelve months.

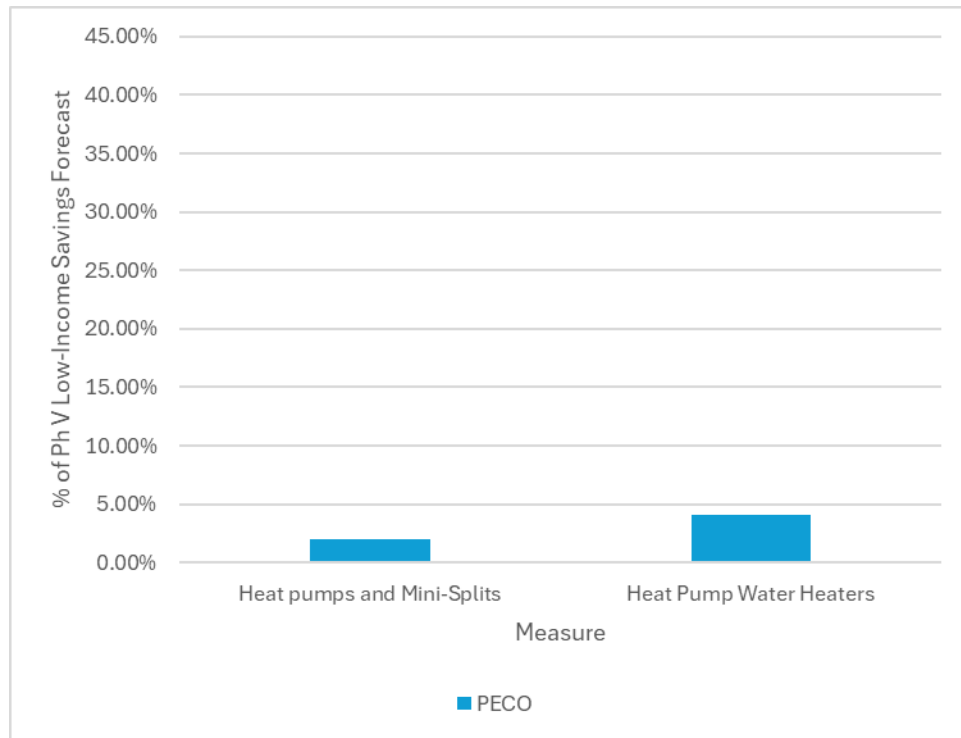
¹¹⁰ Plan, Table 21.

noticeable in comparison to the large bills the household would receive. For low-income customers who use more electricity than average, the relative benefit provided by such shallow measures would be small, though the need for savings would be much greater.

Q. Does the Company provide information about the level of emphasis it will place on deep savings measures such as heat pumps, heat pump water heaters, and building insulation and air sealing measures?

A. Yes. PECO's Table 21: Residential Low-Income Subprogram Estimated Savings and Participation provides forecasts by year, by measure, of the savings and participation expected to result from each measure in the low income portfolio. Ranking the measures according to the total aggregate savings each is forecast to achieve shows how the savings each measure is expected to produce compare with all of the other measures in the portfolio. For example, *Figure 1* shows the amount of savings PECO forecasts for Phase V heat pumps and heat pump water heaters. Roughly 2% of total LI portfolio savings will come from heat pumps, and around 4% will come from heat pump water heaters over the five years of Phase V.

Figure 1: Heat Pump and Heat Pump Water Heater Contribution to Low-Income Savings¹¹¹



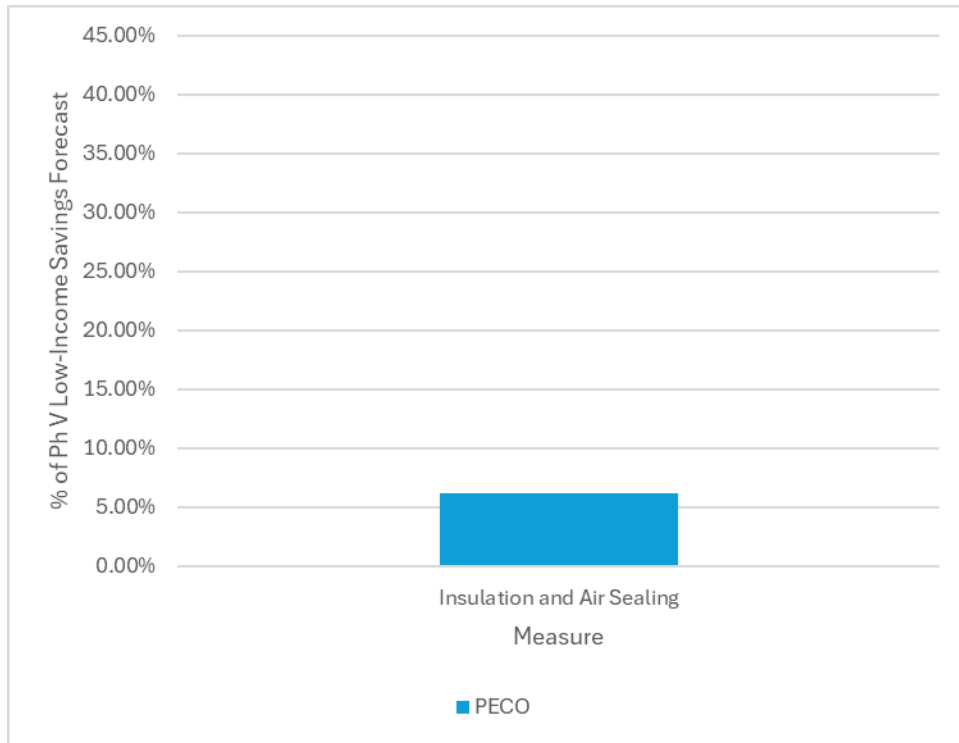
Q. Does PECO provide evidence of the amount of air sealing and building insulation savings it forecasts to achieve for low-income households?

A. Yes – and it is very small. As with its proposals for heat pumps and heat pump water heaters, the evidence provided by the Company starkly contradicts its assertion that “The foundational element of the [Residential Low-Income] subprogram is a direct install whole home solution, which provides in-home audits and education as well as the direct installation of EE measures at no charge to the participant.”¹¹² The relative prioritization of insulation and air sealing measures is shown in **Figure 2**, and is not consistent with a program that is primarily focused on whole-home solutions that reduce bills for participants.

¹¹¹ Plan, Table 21, Residential Low-Income Subprogram Estimated Savings and Participation.

¹¹² Plan, p. 9.

Figure 2: Insulation and Air Sealing Contribution to Low-Income Savings¹¹³



Q. In aggregate, what is the combined impact of the Company’s forecast of heat pumps, heat pump water heaters, and building air sealing and insulation measures?

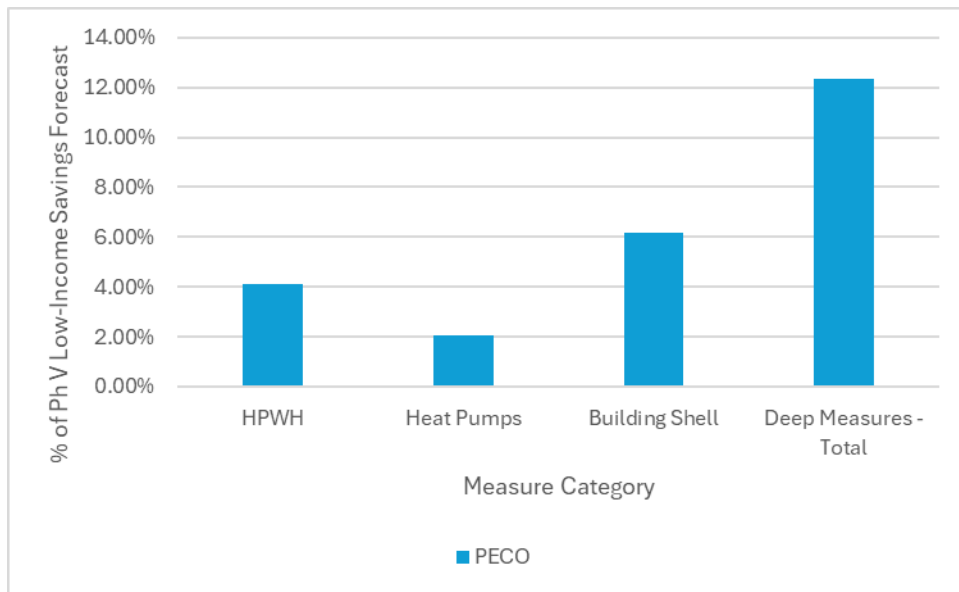
A. The results of this estimation are shown in **Figure 3**, where I show the savings that are forecast to result from these “deep saving” measures all together in Phase V. For PECO this is around 12% of the total low-income MWh savings forecast. This is less than half of what CAUSE-PA and TURN recommended in comments on the Commission’s Tentative Implementation Order, where they recommended that the Commission take steps to ensure the installation of longer-lived, deeper-savings measures through the EDCs’ low-income programs.¹¹⁴ This recommendation included requiring the EDCs to achieve at least 25% of the low-income savings goal through

¹¹³ Plan, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation.

¹¹⁴ Act 129 EE&C Program – Phase V, Docket No. M-2025-3052826, Joint Comments of CAUSE-PA and TURN at p. 19-20, 22, 32 37, 42, 67 (submitted Apr. 7, 2025).

comprehensive whole-home program measures that prioritize direct installation of appliances, envelope measures such as air sealing and insulation, and heating and cooling equipment.¹¹⁵ Clearly, in the absence of such a requirement, PECO plans to simply continue to meet its savings goal through promotion of measures that will have little impact in reducing energy burdens for individual participants.

Figure 3: Deep-Saving Measures Contribution to Low-Income Savings¹¹⁶



Q. With barely more than 10% of low-income savings forecast to result from the installation of deep-savings measures, where will the Company obtain its required low-income savings?

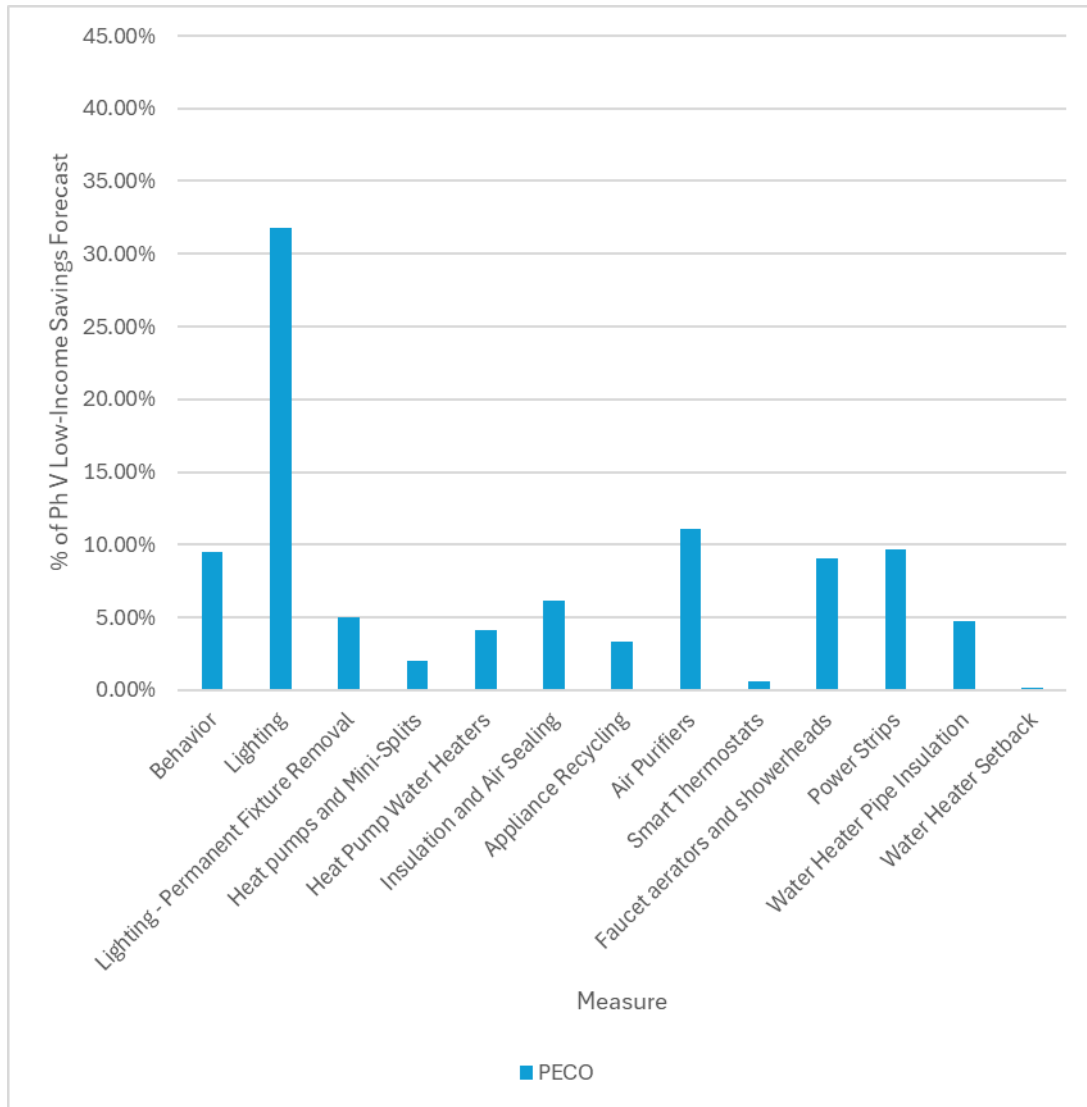
A. As illustrated in Figure 4, PECO expects to promote a variety of different measures, but most of them will not on their own result in long-lived, deep savings for participants. As the figure shows, over 30% of total savings will come from lighting, and another 5% will come from the

¹¹⁵ Act 129 EE&C Program – Phase V, Docket No. M-2025-3052826, Joint Comments of CAUSE-PA and TURN at p. 19-20 (submitted Apr. 7, 2025).

¹¹⁶ Plan, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation.

removal of existing lighting fixtures. Nearly 10% will come from Home Energy Reports, 9% from faucet aerators and shower heads, and nearly 10% from advanced power strips. In addition, 11% of the forecast savings would come from air purifiers. As I noted above, the Company provides no evidence that its proposed low-income program is, in fact, a “whole home solution.”

Figure 4: Overall Measures Contribution to Low-Income Savings¹¹⁷



¹¹⁷ Plan, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation.

Q. You mention air purifiers above. Can you explain how air purifiers save energy for low-income households?

A. As is the case for many energy efficient appliances, an efficient air purifier will use less energy than an inefficient air purifier. According to the United States Environmental Protection Agency, “[a] standard room air cleaner, operating continuously, uses approximately 501 kWh per year in electricity...ENERGY STAR certified room air cleaners are up to 56% more energy-efficient than standard models, saving consumers about 211 kWh/year in energy.”¹¹⁸ However, the Company says that “Air purifiers can be installed to replace existing inefficient air purifiers or where no air purifier currently exists.”¹¹⁹ If the Company provides an air purifier to replace an existing air purifier the household will use less electricity, but if no air purifier exists prior to the Company providing one, then energy use for that household will increase.¹²⁰ What is more, the Company devotes roughly 20% of its forecast low income budget to this measure, when it is not clear it will reduce electricity bills.¹²¹

Q. Do low-income efficiency programs in other jurisdictions focus on deep-savings measures?

A. Definitely. Consider the EmPOWER Maryland limited-income energy efficiency programs as implemented on behalf of the utility companies by Maryland’s Department of Housing

¹¹⁸ Energy Star, “Air Cleaners,” https://www.energystar.gov/products/air_cleaners.

¹¹⁹ PECO Response to CAUSE-PA 2-18 (d). Underline added.

¹²⁰ I note that I don’t, per se, object to providing air purifiers to households where they will improve health, but it is hard for me to accept that thousands of low-income households either already have inefficient air purifiers or would purchase them absent the intervention of the Company.

¹²¹ See PECO Response to TURN III-14 (a). PECO projects that 35,714 air purifiers will be directly installed during Phase V. Plan at Table 21. The incremental cost of providing these units is \$300 per unit, meaning these measures will cost approximately \$10,714,200 total in Phase V. Plan at 75. With total estimated expenditures for the low-income residential subprogram at \$55.2 million, this puts the allocation for air purifiers at just under 20% of the total budget. Direct Testimony of Mark van Eeghen at Table 3.

and Community Development (DHCD). In its 2024-2026 program plan, DHCD described its core single family energy efficiency program:

The Whole Home Efficiency program originated as LIEEP in 2012 and has been DHCD's comprehensive energy program for individual households since then. Through this program, participants receive comprehensive energy retrofits directly from a pre-selected and qualified Network Partner. Network Partners can be private home improvement contractors as well as non-profits and local governments. They are selected through competitive bidding procedures that ensure high quality of services at the best prices. Network Partners receive extensive training from DHCD and have national credentials. They communicate with the clients, conduct comprehensive home energy audits, identify all eligible measures and programs, and install the eligible measures for each participant.¹²²

Participants in this core program were forecast to experience an average energy savings of over 2,000 kWh per year.¹²³ Importantly, this is an average – many customers will save considerably more than this, and it is because DHCD places a strong emphasis on comprehensive installation of deep-saving measures to provide substantive bill relief to participating households.

Q. Does the Company provide evidence that the low-income appliance recycling subcomponent is a distinct program that is “solely directed at low-income customers or low-income-verified participants in multifamily housing programs.”¹²⁴

A. No. In fact the Company explicitly states

There is no difference between the appliance recycling component of the residential program and that of the low-income residential sub-program from the customer's perspective. During appliance recycling drop-off events, PECO collects account information from all participating customers. If a customer is verified as low-income, that customer is then placed in the low-income sub-

¹²² EmPOWER Maryland Limited Income Program 2024-2026 Program Plan, p. 50, <https://webpscxb.psc.state.md.us/DMS/case/9705>, ML 311369 (underline added).

¹²³ EmPOWER Maryland Limited Income Program 2024-2026 Program Plan, Table ES-1, 2024-2026 Forecast Metrics, p. 82, <https://webpscxb.psc.state.md.us/DMS/case/9705>, ML 304379.

¹²⁴ Phase V Implementation Order at 55.

1 *program for tracking and incentive funding purposes, and the associated energy*
 2 *savings are allocated to the Low-Income carve-out.*¹²⁵

3 The residential and low-income appliance recycling programs are identical, and therefore
 4 it is not reasonable for the Commission to allow PECO to simply gather information from
 5 participants and count the savings from low-income households towards the low-income savings
 6 requirement. I recommend the Commission disallow PECO from treating appliance recycling as a
 7 low-income program. Instead, it should maintain appliance recycling as a residential program and
 8 ensure that all residential customers are informed of the opportunities it provides. In addition,
 9 PECO indicated in response to discovery requests that it would not include appliance recycling
 10 pickups for customers lacking vehicle access, disabled customers, or seniors.¹²⁶ Regardless of
 11 whether appliance recycling is directed towards low-income or general residential customers, the
 12 Company should include an appliance pickup option to ensure that seniors, people with disabilities,
 13 and those without access to a car can still participate in the program.

14 **Q. Do you agree with the Company that the low-income Home Energy Reports program**
 15 **subcomponent is a distinct program that is “solely directed at low-income customers or low-**
 16 **income-verified participants in multifamily housing programs”?**¹²⁷

17 A. No. The Company states that “[t]here are no major differences in the core offerings
 18 between the Residential Home Energy Reports (HER) program and the Residential HER Low-
 19 Income (LI) subprogram.”¹²⁸ The Company indicates that “The key difference is that the
 20 behavioral data and program content for the HER LI subprogram are tailored specifically to low-
 21 income customers, reflecting the unique program offerings and opportunities available to this

¹²⁵ PECO Response to CAUSE PA-3-9.

¹²⁶ PECO Response to TURN II-12; Response to CAUSE-PA 3-9.

¹²⁷ Phase V Implementation Order at 55.

¹²⁸ PECO Response to CAUSE-PA 1-39.

1 segment.”¹²⁹ While I appreciate that the Company recognizes the value in tailoring messaging to
2 low-income households I do not feel that this meets the bar of being a program that is solely
3 directed at low-income customers. I recommend the Commission disallow PECO from treating
4 HER LI as a low-income program. Instead, it should maintain LI targeting within the Residential
5 HER and thereby ensure that all residential customers are informed of the opportunities the HER
6 program provides. As noted above, PECO’s confirmed low income customer base is just a small
7 percentage of the estimated low income customers in its service territory. This makes it all the
8 more critical that residential outreach include information to reach the tens of thousands of low
9 income households PECO has not already identified as low income.

10 **Q. Do you recommend the Commission approve the Company’s proposal to count the**
11 **savings from these two subcomponents towards its low-income savings requirement?**

12 A. No. I do not believe that PECO has provided evidence to support its contention that the
13 proposed subcomponents are solely directed at low-income customers.

14 **Q. Are the forecasts of deep saving measures in PECO’s low-income savings portfolio**
15 **sufficient to meet the needs of its low-income customers?**

16 A. No. PECO focuses its low-income program on shallow savings that will do little to reduce
17 the energy burdens of low-income customers.

18 **Q. Do you recommend the Commission approve the measure forecasts in PECO’s Plan**
19 **as filed?**

20 A. No. I recommend the Commission reject the Plan, and instead order the Company to
21 rebalance its proposed measure mix in the RLI program such that a combination of building

¹²⁹ PECO Response to CAUSE-PA 1-39.

insulation and air sealing measures and efficient heat pumps and heat pump water heaters comprise 25% of the low-income portfolio savings for Phase V.

B. Targeting Programming to High Use CAP Customers

Q. Are there opportunities to improve the effectiveness of PECO's Customer Assistance Program through Act 129?

A. Yes. As noted above, CAP customers are subject to annual limitations on the amount of bill credits they can receive.¹³⁰ Under PECO's USECP, "[a]t a minimum, PECO will issue letters notifying customers when they have received 75% and 90% of their annual credit amount."¹³¹ Given the resource constraints of low income households, I am concerned that most high usage CAP participants are unable to reduce their usage in response to these notices through efficiency and conservation – ultimately forcing deprivation.

Q. What happens when a CAP customer reaches the maximum CAP credit limit?

A. Once the maximum CAP credit limit is reached, the CAP customer is no longer provided a discount on their monthly PECO bills.¹³² The CAP customer remains enrolled in CAP, but is required to pay full, undiscounted PECO bills for the balance of the year of CAP enrollment. CAP credits are applied on an annual basis, so the CAP participant "restarts" receipt of credits, up to the maximum CAP credit limit, each year of CAP participation.¹³³

Q. Do maximum CAP credits adjust based on the cost of default service provided by PECO?

A. No, I am advised by Counsel that they do not.

¹³⁰ See PECO USECP at 5. As set forth in PECO's USECP, the maximum CAP credit amounts are subject to increase in the event of distribution rate increases.

¹³¹ Id.

¹³² Id.

¹³³ Id.

1 **Q. Has PECO’s default service price increased in recent years?**

2 A. Yes. PECO’s default service price as of December 1, 2025 is 11.024 cents per kWh.¹³⁴ By
3 contrast, in December 2023, PECO’s default service price was 8.917 cents per kWh.¹³⁵

4 **Q. Are maximum CAP credit limits adjusted based on the amount of energy used?**

5 A. No. Maximum CAP credits limits are determined as annual fixed dollar amounts, as set
6 forth in PECO’s USECP, based on income and heating type.¹³⁶ The fixed threshold is not adjusted
7 to account for actual energy usage throughout the year or from one year to the next. As explained
8 above, the fixed credit thresholds are only adjusted to account for changes in PECO’s base rates.

9 **Q. Please describe CAP customers’ recent winter energy demands.**

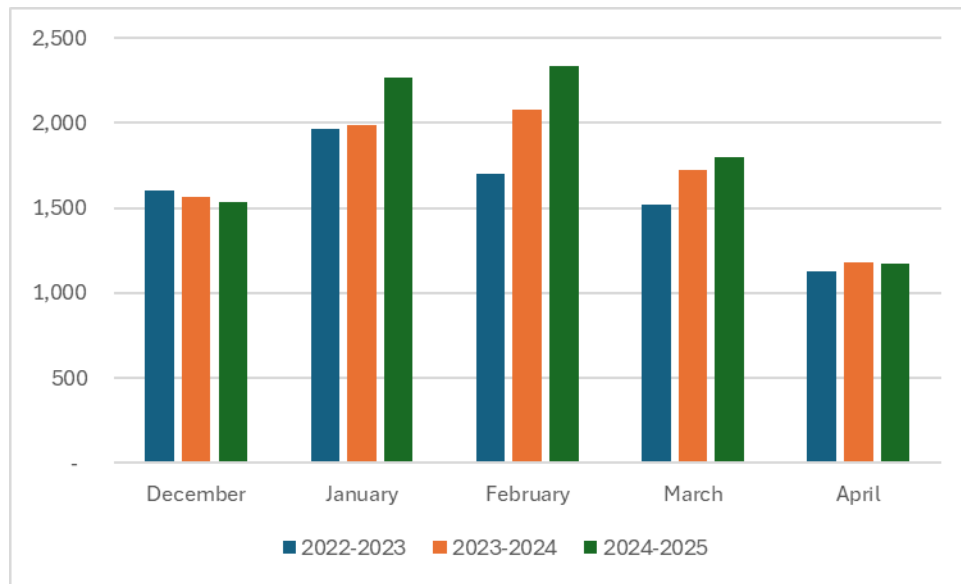
10 A. PECO reports that average winter energy use among CAP customers has increased over
11 the past three full heating seasons, both for those customers on rate RH, who utilize electricity as
12 their primary source of heat, and those on rate R. The trend for electric heating customers is
13 illustrated in Figure 5 below.

¹³⁴ PA PUC, “PUC Alerts Consumers of December 1 Electric Price Changes,” (Nov. 24, 2025)
<https://www.puc.pa.gov/press-release/2025/puc-alerts-consumers-of-december-1-electric-price-changes-11242025>.

¹³⁵ PA PUC, “PUC Reminds Consumers of December 1 Energy Price Changes,” (Nov. 29, 2023),
<https://www.puc.pa.gov/press-release/2023/puc-reminds-consumers-of-december-1-energy-price-changes>.

¹³⁶ PECO USECP at 5.

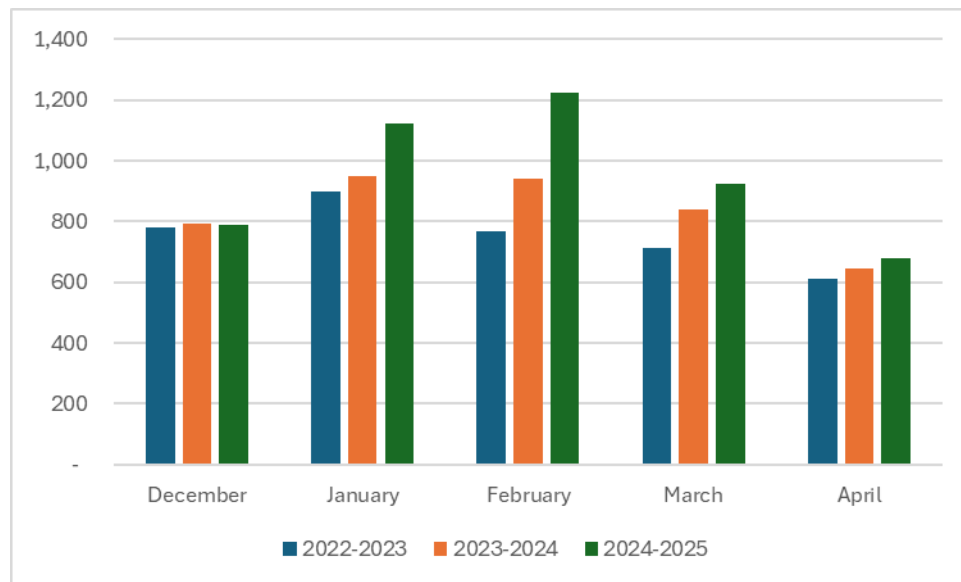
Figure 5: Winter Months Average Usage Trends (kWh) – CAP Electric Heating¹³⁷



Q. Is the increased usage trend similar for CAP non-heating customers?

A. Yes. Figure 6 shows a similar increased winter usage trend for non-heating customers.

Figure 6: Winter Months Average Usage Trends (kWh) – CAP Non-Heating¹³⁸



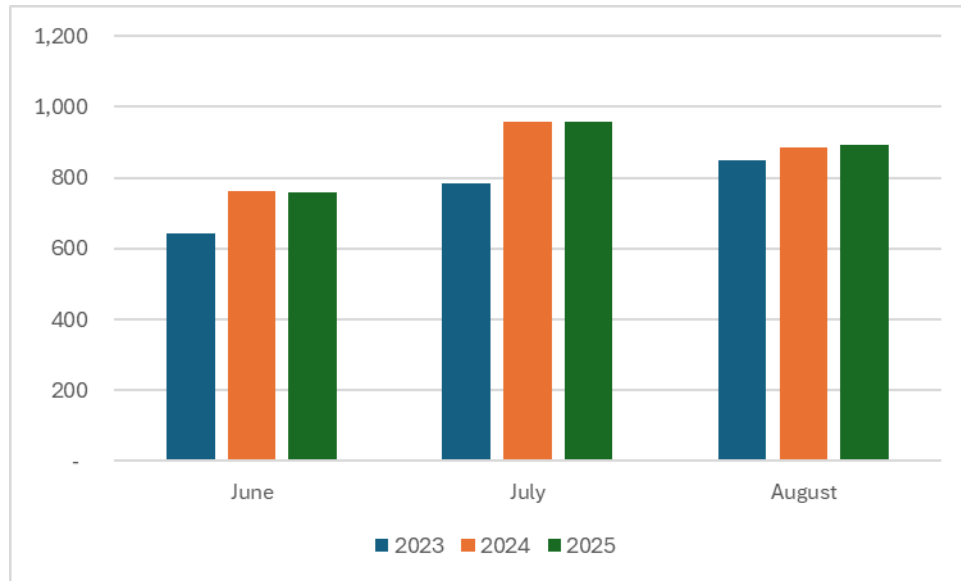
¹³⁷ PECO Response to CAUSE-PA 1-2.

¹³⁸ PECO Response to CAUSE-PA 1-3.

1 **Q. Has CAP customers' recent summer energy use also increased?**

2 A. Although less pronounced, summer energy demands for CAP customers have also
3 increased over the same three year period. The average summer usage trend for CAP customers
4 on Rate RH is shown below in Figure 7.

5 *Figure 7: Summer Months Average Usage Trends (kWh) – CAP Electric Heating¹³⁹*

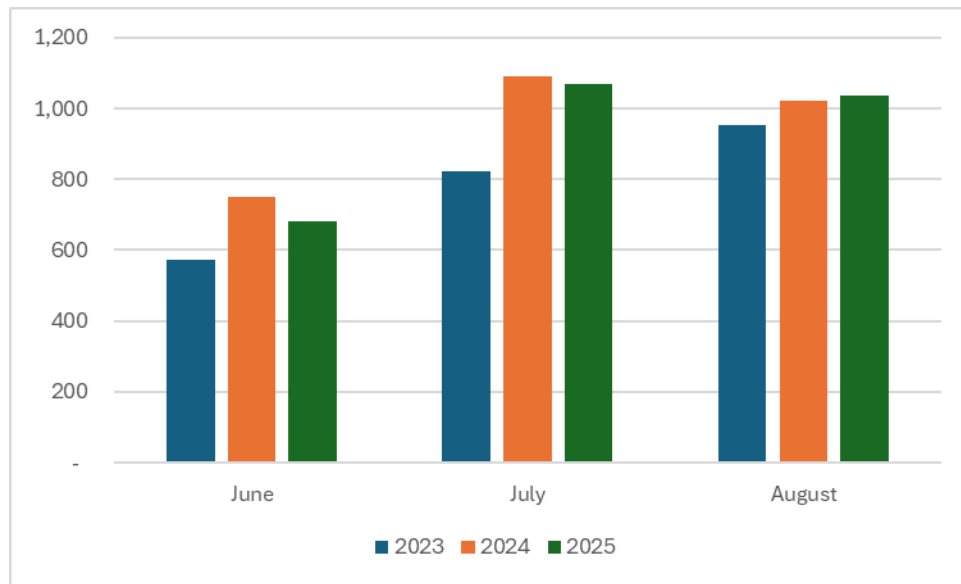


6
7 **Q. Has the average summer usage for CAP customers on Rate R similarly increased in**
8 **recent years?**

9 A. Yes. The average summer usage trend for CAP customers on Rate R is shown below in
10 Figure 8.

¹³⁹ PECO Response to CAUSE-PA 1-2.

Figure 8: Summer Months Average Usage Trends (kWh) – CAP Non-Heating¹⁴⁰



Q. How do default service prices and increasing energy use affect CAP customers?

A. Because PECO's maximum CAP credits do not adjust or respond to cost impacts other than increased distribution rates, higher prices for electricity can cause CAP participants to deplete their CAP credits more rapidly than they otherwise would. Furthermore, increased usage due to higher demand for heating and cooling can compound the impact on CAP credits, causing the CAP customers to exhaust credits more rapidly due to both commodity costs and distribution rates. During the period 2023-2025 PECO's default service pricing remained high and CAP customers experienced increased energy use. As a result CAP participants increasingly exhausted their maximum CAP credits. As shown in the table below, both CAP non-heating and CAP heating customers are increasingly exhausting CAP credits, resulting in them being charged the full tariff rates for PECO service for some portion of the CAP year.

¹⁴⁰ PECO Response to CAUSE-PA 1-3.

Table 3: Number of Customers Exhausting CAP Credits by Year¹⁴¹

	CAP Rate R	CAP Rate RH
2023	6,368	389
2024	7,672	26
2025	8,590	1,293

I note that the data for 2025 is incomplete and only includes year-to-date information through November – but even with only eleven months of data for 2025 there is a 35% increase in the number of CAP non-heating customers who exceeded their max credit in 2025 compared with 2023, and a 232% in CAP heating customers who reached their max credit. The final number of CAP customers exhausting CAP credits in 2025 will be even higher than shown above when data are finalized. Notably, in 2024, of the customers who exceeded their maximum CAP credits, 3,671 (48%) were subsequently issued termination notices and 1,243 (16%) were terminated for nonpayment.¹⁴²

Q. Does PECO currently target any efficiency services to households that are at risk of exceeding their maximum CAP credit limits?

A. Not directly, or at least not deliberately. My understanding is that PECO does not currently track CAP customers who are referred to LIURP, nor is there a formal referral process for Act 129 services.¹⁴³ Furthermore, CAP customers referred to LIURP are identified based on high usage,¹⁴⁴ but there is no deliberate process to identify and serve CAP customers at risk of exceeding maximum CAP credit limits.

¹⁴¹ PECO Response to TURN I-6 (a), (b), (c).

¹⁴² PECO Response to CAUSE-PA 4-2, Attachment (d-f).

¹⁴³ PECO Response to TURN I-3 (b); see also, PECO Responses to TURN I-5, I-7, I-8 and I-9.

¹⁴⁴ PECO Response to TURN I-3 (b).

1 **Q. What is your recommendation to the Commission?**

2 A. PECO should undertake specific outreach to CAP customers who have exhausted, or are
3 at risk of exhausting, their CAP credits to enroll them in RLI and/or LIURP. Deliberately targeting
4 CAP customers at greatest risk of exceeding maximum CAP credits for deep measure EE&C
5 offerings would benefit the Company's most vulnerable customers and potentially provide multi-
6 layered benefits to PECO by reducing arrearages and disconnections. It is clear that CAP
7 customers exceeding maximum CAP credit limits have high usage that could be reduced consistent
8 with the purposes of the Phase V Plan and Act 129.

9 **Q. Are there particular low-income program measures or services that would provide**
10 **the most value to struggling households?**

11 A. Yes. As discussed above, deep-saving measures will provide the greatest benefit to
12 participating households by significantly reducing their electricity bills on a sustained basis. At the
13 same time, providing measures to CAP customers who are most at risk of exceeding CAP credit
14 maximums promotes affordability. By utilizing Phase V program services in this way, PECO can
15 help ensure that CAP customers do not face unaffordable, full-tariff rates, and do not fall behind
16 on their bills. Ultimately, to the extent CAP customers cannot afford to pay their PECO bills, their
17 nonpayment will contribute to uncollectible expenses that may contribute to higher base rates in
18 the future.

19 Low-income customers who rely on electric resistance baseboard heaters or electric
20 furnaces are likely to be among the most energy burdened households due to the high cost and
21 relative inefficiency of electric resistance heat. Therefore, in addition to targeted outreach, I
22 recommend that PECO set a goal in the Phase V Plan to annually target, at a minimum, 250 CAP
23 customers with inefficient electric resistance heat for the installation of high efficiency heat pumps

and/or other deep saving efficiency measures. PECO should specifically target CAP customers who would otherwise be at risk of exceeding maximum CAP credit limits. PECO should also track the types of low income measures installed by rate classification and CAP enrollment in order to improve reporting and inform its practices.

C. Maximizing Benefits for PECO's Customers: Rate RH

Q. What are the different Residential rates that PECO offers to its residential customers?

A. PECO has two different residential rates: Rate R, which is electric baseload (non-heating) service, and Rate RH, which is electric heating service.¹⁴⁵ Households are eligible for Rate RH if they heat completely with permanently connected electric resistance heaters, or heat partially or fully with an electric heat pump.¹⁴⁶ In the non-summer months (October through May), Rate RH customers' volumetric distribution charge is lower than that of Rate R customers by more than two cents per kWh. The Rate RH non-summer distribution charge is \$0.07923 per kWh, while the Rate R distribution charge is \$0.10276 per kWh.¹⁴⁷

Both Rate R and Rate RH customers can enroll in CAP. A CAP customer's bill on Rate R is 2-4% of their monthly income, a CAP customer's bill on Rate RH is 6-10% of their monthly

¹⁴⁵ PECO Energy Company Electric Service Tariff, Supplement No. 21 to Tariff Electric Pa. P.U.C. No. 8 (Dec. 209, 2025) (hereinafter "PECO Tariff") at 52, 53. PECO also has a net metering rate for solar customers that layers on top of these two residential rate classes. Id. at 54-56.

¹⁴⁶ PECO Tariff at 53. The tariff specifies:

The systems eligible for this rate are (a) permanently connected electric resistance heaters where such heaters supply all of the heating requirements of the dwelling, (b) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by electric resistance heaters, and (c) heat pump installations where the heat pump serves as the heating system for the dwelling and all of the supplementary heating required is supplied by non electric energy sources.

¹⁴⁷ PECO Tariff at 52, 53.

income.¹⁴⁸ However, CAP customers on Rate RH have a higher CAP credit maximum than CAP customers on Rate R.¹⁴⁹

Q. What is the importance of the distinction between Rate R and Rate RH for this proceeding?

A. Households with electric heating typically use more electricity than those that heat with other fuels, and often have greater electric savings potential. PECO's proposed plan includes both Free Energy Check Up and Free Energy Check Up Plus assessments.¹⁵⁰ Free Energy Check Up Plus assessments include the elements of a regular Free Energy Check Up, but add "an in-depth building science approach that mirrors PECO LIURP and meets BPI standards."¹⁵¹ According to PECO, rate class does not determine whether a low income customer receives a Free Energy Check Up Plus instead of a Free Energy Check Up.¹⁵² Instead, a customer's heating type is determined through the intake process, and customers who have primary and/or permanently installed electric heating systems are eligible for a Free Energy Check Up Plus appointment.¹⁵³ PECO also states that all Residential Low-Income Subprogram Eligible Measures are available to both Rate R and Rate RH customers.¹⁵⁴ I support this approach. Where appointment type and potential measures are determined by whether the customer heats with electricity, this determination should be made based on actual heating system type rather than whether the customer is on Rate R or Rate RH.

¹⁴⁸ PECO USECP at 4.

¹⁴⁹ Id. at 5.

¹⁵⁰ Plan, p. 70.

¹⁵¹ Id.

¹⁵² PECO Response to TURN I-10.

¹⁵³ PECO Response to TURN II-9.

¹⁵⁴ PECO Response to TURN I-1.

Q. Do the auditors who conduct these assessments provide households that use electricity for heat with information about saving money by signing up for Rate RH?

A. According to PECO,

Act 129 auditors...conduct visual inspections of all HVAC equipment during the Energy Checkup. During the checkup, the fuel, system, and distribution types are confirmed [but] Act 129 does not provide information to customers relating to PECO's Residential Heating ("RH") rate options. Act 129 auditors do direct customers to contact the PECO Call Center for any questions related to billing.¹⁵⁵

One of PECO's stated objectives for the Residential Low-Income Subprogram is "to reduce household energy costs for residential customers with a household income less than or equal to 150% of federal poverty level."¹⁵⁶ For many customers, switching from Rate R to Rate RH could provide relief from unnecessarily high household energy costs, but this simple step of informing customers about this option has not been incorporated into the program process.

Q. Can PECO improve the benefits provided during building energy audits?

A. Yes. I recommend that PECO require Act 129 auditors who identify permanently installed electric heating systems during Energy Checkups provide information to the customer about the availability of Rate RH. This should also be required for checkups performed for the general residential program. In addition, because Act 129 auditors determine and record the heating system type during assessments,¹⁵⁷ an eligible customer who has received an Energy Checkup or other Act 129 audit and wants to start being billed at Rate RH should be able to contact PECO and switch to billing at Rate RH without needing to supply any additional proof or documentation to PECO of heating system type.

¹⁵⁵ PECO Response to TURN III-12.

¹⁵⁶ Plan, p. 68.

¹⁵⁷ PECO Response to TURN III-12.

D. Addressing Health and Safety Barriers

Q. Does the Company plan to address and remediate health and safety barriers for low-income customers?

A. Yes – in fact, PECO asserts that “[t]he objective of the Residential Low-Income subprogram is to increase energy efficiency and address health and safety barriers for low-income customers in single family homes.”¹⁵⁸ To advance this objective the Company “has allocated \$3,000,000 for health and safety measures for low-income customers” although it appears these funds may be targeted only to customers living in single-family homes.¹⁵⁹ PECO notes that low-income homes “may be more likely to need health and safety improvements prior to energy efficiency measure installation. When implementing components for low-income customers, the CSP will incorporate health and safety measures into the component offerings.”¹⁶⁰ PECO says the program “will take proactive steps during a customer’s in-home appointment. Energy advisors will identify any obstacles that could prevent the installation of energy efficiency measures such as electrical safety concerns, combustion issues, mold, or asbestos and may install safety devices, such as a smoke/carbon monoxide detector, when appropriate. By addressing these issues, the program ensures that homes are not deferred from participation due to such barriers.”¹⁶¹

Q. Is the Company providing funding for health and safety remediation in Phase IV?

A. The Company’s settlement in Phase IV required it to dedicate a budget of \$400,000-\$500,000 for a health and safety pilot in Phase IV. The Company reports it spent \$528,000 in total across PY14 and PY15, serving 106 households during Phase IV at an average health and safety

¹⁵⁸ Plan, p. 68.

¹⁵⁹ Id.

¹⁶⁰ Id. p. 69.

¹⁶¹ Id. p. 161.

cost of \$4,887 per job. The Company indicates that to be addressed, health and safety issues “must directly prevent installation of EE measures.”¹⁶²

Q. Does the Company indicate whether it will allocate additional funds if the \$3 million health and safety budget is fully committed?

A. The Company says that “[i]f remediation costs exceed the \$3 million allocation or are too high for a single participant, PECO and the CSP will not continue remediation beyond the allocated budget. Instead, within the available funds, they will prioritize measures that deliver the greatest energy savings impact for the lowest remediation cost.”¹⁶³ Additionally, PECO “anticipates offering remediations on a case-by-case basis” and does not propose a per-customer spending limit on health and safety assistance.¹⁶⁴

I agree with the latter approach, but while I appreciate the need for prudence, it is unduly stringent for PECO to say that it will not exceed the budget it has established. Instead, I recommend it retain some flexibility so that, if warranted, it can spend more than the budgeted amount of health and safety remediation. This seems to be implied in PECO’s subsequent statement that it “may consider increasing the funding available for health and safety, but such considerations would be made considering how the entire plan portfolio is performing and is projected to perform at the time.”¹⁶⁵ This statement seems to leave the door open for additional funds if warranted. – which is more consistent with PECO’s approach when it says:

The Health & Safety measure included in PECO’s Phase V Plan (Tables 20 and 21) is intentionally designed to be general and flexible, rather than prescriptive. This approach ensures that the program can address both anticipated and unforeseen barriers that may prevent the installation of energy efficiency

¹⁶² PECO Response to CAUSE-PA 1-17.

¹⁶³ PECO Response to CAUSE-PA 1-45.

¹⁶⁴ PECO Response to TURN III-5; PECO Response to TURN III-7.

¹⁶⁵ PECO Response to CAUSE-PA 1-45.

1 *measures in eligible homes. By not limiting the measure to a predefined list of*
 2 *treatments, PECO can respond to conditions that were not explicitly identified*
 3 *in the Plan, but are necessary to enable participation and achieve savings. . . .*
 4 *Importantly, PECO does not intend to impose a per-household/unit cap on*
 5 *Health & Safety treatments. The estimate [of a \$1,000 incremental cost for the*
 6 *“Health & Safety” measure] provides budgeting flexibility while allowing the*
 7 *CSP to address a wide range of issues without excluding customers due to*
 8 *unforeseen conditions.*¹⁶⁶

9 **Q. Does the Company provide any information about how common it is for customers to**
 10 **be deferred due to health and safety concerns?**

11 A. Unfortunately, the Company has limited information on deferrals due to health and safety
 12 barriers. PECO does not currently track the number of households deferred from Act 129 services
 13 due to health and safety issues.¹⁶⁷ In Phase IV “[t]he Act 129 Health and Safety pilot was
 14 implemented to inform PECO and stakeholders on the potential of implementing a remediation
 15 program. The tracking of health and safety barriers only occurred during the implementation
 16 period of the pilot.”¹⁶⁸ I urge the Commission to direct PECO to implement a detailed process for
 17 tracking homes that require health and safety remediation. This process should track:

- 18 • whether PECO’s Act 129 program treats those health and safety issues;
- 19 • whether PECO refers the household to external programs for health and safety remediation;
- 20 • whether the health and safety issues are ultimately resolved, either by PECO or external
- 21 programs;
- 22 • which, if any, energy efficiency measures are ultimately installed; and
- 23 • how much savings is generated from those measures.

¹⁶⁶ PECO Response to TURN III-5.

¹⁶⁷ PECO Response to TURN III-4.

¹⁶⁸ PECO Response to CAUSE-PA 1-23.

Q. Is your impression that the Company's approach to health and safety remediation is sufficient to ensure the ability of its programs to safely install deep savings energy efficiency measures?

A. I would say that in establishing a budget for health and safety remediation PECO has taken an important step in addressing health and safety barriers – but there is more the Company can and should do. While earmarking Act 129 funds for health and safety remediation is critical, it is equally important that the Company deliberately and determinedly not only refer customers to outside agencies, but also coordinate with those agencies to address health and safety barriers that are beyond the reasonable scope of Act 129. I address this need below.

E. Program Coordination

Q. In general terms, why would low-income households benefit from effective coordination among the different types of programs that target services to vulnerable communities?

A. Effective program coordination can greatly improve the process of participating in multiple programs by reducing the time and energy required for households to seek program information, submit applications and qualifications, schedule appointments that may require time of off work, and for renters coordinate with landlords to approve any work. Program coordination can also lead to better outcomes by providing more and complimentary benefits to households.

Q. Does PECO discuss its proposed approach for coordinating services to low-income customers across LIURP and Act 129?

A. PECO says that

[t]he current Act 129 Residential CSP also implements PECO's LIURP program...[therefore] assessment visits under both programs look for appropriate opportunities from each program. All work orders are distributed

1 *based on requirements and guidelines of the respective program. Each*
 2 *respective program manager reviews opportunities for cross-program*
 3 *participation regularly. Both Act 129 and LIURP energy advisors are cross*
 4 *trained on program requirements and measure offerings. These opportunities*
 5 *are identified during energy assessments to provide a “one-stop shop”*
 6 *experience for the customer.*¹⁶⁹

7 Importantly, the Company says that “eligible customers receive simultaneous services; no
 8 separate program application is required.”¹⁷⁰ PECO also reports that its Safe and Efficient Heating
 9 Program (SEHP) for qualifying low-income gas customers is outsourced to “the same contractor
 10 who manages PECO’s LIURP and Act 129’s Free Energy Assessment program. SEHP eligible
 11 customers receive measures as part of the audits under these programs which is coordinated by the
 12 common contractor.”¹⁷¹ Working towards seamless delivery of multiple programs with different
 13 funding streams will benefit the Company’s low-income customers by easing the “friction”
 14 associated with program participation and concurrently maximizing benefits.

15 **Q. Does the Company discuss its proposed approach to coordination with low-income**
 16 **programs implemented by other organizations?**

17 A. The Company says that it is “exploring collaborations with other initiatives in its service
 18 territory” such as PECO Gas’s efficiency offerings, Inflation Reduction Act-funded home energy
 19 rebate programs, and the City of Philadelphia’s housing programs, such as the Basic Systems
 20 Repair Program.¹⁷² PECO further states that its RLI “may coordinate” with PECO’s LIURP and
 21 the federal LIHEAP and WAP, “where appropriate.”¹⁷³ PECO’s plan, however, fails to detail any
 22 concrete structure for coordinating its RLI with other programs.

¹⁶⁹ PECO Response to CAUSE-PA 1-30.

¹⁷⁰ PECO Response to CAUSE-PA 1-33 (a).

¹⁷¹ PECO Response to CAUSE-PA 1-43 (c)(ii).

¹⁷² Plan, pp. 12-13.

¹⁷³ Id.

Q: Why is it important for PECO's Act 129 programs to be closely coordinated with other home repair, weatherization, and energy efficiency programs serving low-income households in PECO's service territory?

A: As with programs that are internal to PECO, effective coordination between energy efficiency, home repair, and weatherization programs is essential to achieve whole-home energy savings for low-income households in PECO's service territory. Many low-income homes face significant home repair needs, such as deteriorated building envelopes, moisture intrusion, or deferred maintenance, that limit the effectiveness of stand-alone energy efficiency measures.¹⁷⁴ Philadelphia is home to an unusually robust ecosystem of publicly funded home repair and weatherization programs.¹⁷⁵ Partnering with these programs provides a critical opportunity for

¹⁷⁴ See Federal Reserve Bank of Philadelphia, Measuring and Understanding Home Repair Costs: Spotlight on the Philadelphia Region (Nov. 2019) at 2-3, <https://www.philadelphiafed.org/-/media/frbp/assets/community-development/reports/measuring-and-understanding-home-repair-costs/111919-home-repair-spotlight.pdf> (estimating that 38% of units in Philadelphia faced critical repair and weatherization needs, more than half of which were owned or rented by families at or below the Federal Poverty Level); City of Philadelphia, Housing Opportunities Made Easy: A Proposed Plan to Provide Affordable, Safe, Healthy, Quality Housing (March 25, 2025) at 13, https://www.phila.gov/media/20250325171705/City-of-Philadelphia-2025.03.25-web_v2-2.pdf (noting that 40 percent of housing units in Philadelphia were built before 1940 and that older housing stock requires more upkeep).

¹⁷⁵ These programs include, but are not limited to:

- The Philadelphia Energy Authority's (PEA) Built to Last Program (BTL), a whole-home repair program that delivers critical home repairs, health and safety improvements, and energy efficiency and clean energy improvements. See Philadelphia Energy Authority, "Built to Last," <https://philaenergy.org/programs-initiatives/built-to-last/> (last visited 01/09/2026).
- The Philadelphia Housing Development Corporation's (PHDC) Basic Systems Repair Program (BSRP), which provides free repairs to correct electrical, plumbing, heating, limited structural and carpentry, and roofing emergencies in owner-occupied homes. Philadelphia Housing Development Corporation, "Basic Systems Repair Program," <https://phdcphila.org/residents-and-landlords/home-repair-and-improvements/basic-systems-repair-program/> (last visited 01/09/2026). PHDC, the City of Philadelphia's community development organization, repaired 3,259 homes through its BSRP program in 2024, and it provided additional repair assistance to hundreds more through other programs. Philadelphia Housing Development Corporation, "2024 PHDC Report," <https://phdcphila.org/wp-content/uploads/AnnualReports/PHDC-Annual-Report-CY-2024-for-web.pdf>, at 8 (last visited 01/09/2026).
- The federally funded Weatherization Assistance Program (WAP), which provides an array of weatherization services to reduce energy costs and increase comfort while safeguarding health and safety. See Pa. Dept. of Community & Economic Development, Weatherization Assistance Program (WAP), <https://dced.pa.gov/programs/weatherization-assistance-program-wap/> (last visited 01/09/2026). PHDC is

PECO to leverage non-Act 129 funding streams to enable deeper and more effective energy efficiency interventions under its Phase V Plan across its service territory. Coordination with non-Act 129 repair programs in PECO's service territory is therefore essential to achieving durable, cost-effective energy savings in housing stock with high levels of need.

Q: What has the Commission said regarding coordination and deeper savings in Act 129 Phase V?

A. In the Phase V Implementation Order, the Commission emphasized the importance of improved coordination between Act 129 programs and other energy efficiency, weatherization, and home repair initiatives, including the strategic use of stacked or braided funding, to overcome barriers that prevent delivery of effective energy efficiency interventions.¹⁷⁶

Q: You point out above that PECO is exploring collaborations with other programs in its service territory. Is this sufficient?

A. While I believe this is directionally correct, PECO must ensure that it makes solid, timely progress in bringing such collaboration to fruition. Exploration can occur over a multi-year period with no concrete results, and the Company's customers cannot wait for that to happen. PECO has not, but must identify concrete referral protocols, data-sharing mechanisms, scopes of work, and data tracking and reporting protocols to clarify how it will provide coordinated delivery of services in the Act 129 context for Phase V. Just as PECO is striving to provide a "one-stop shop" experience for the customer with internal coordination of Act 129, LIURP, and SEHP, it should broaden that one-stop shop experience for customers to include coordination with programs

the WAP provider in Philadelphia. See Pa. Dept. of Community and Economic Development, Weatherization Assistance Program: Helping Families Reduce Energy Costs (April 2025), <https://dced.pa.gov/download/weatherization-assistance-program-factsheet/> (last visited 01/09/2026).

¹⁷⁶ Phase V Implementation Order at 158.

external to PECO, including (but not limited to) Built to Last, Basic Systems Repair, Habitat for Humanity, Rebuilding Together, and Weatherization Assistance Programs. Frankly, good intentions are not enough – the Company must build clear, effective systems that ensure seamless coordination with the other services that are available to support its customers.

Q. Does PECO indicate when it will move beyond the exploration phase of hoped-for program coordination?

A. PECO has made clear that specific coordination strategies will not be identified until after approval of the Phase V Residential Conservation Service Provider (CSP) contract.¹⁷⁷ As a result, the Phase V Plan does not provide sufficient detail to assess how PECO’s professed commitments to coordination will be operationalized, measured, or enforced, or how they will differ in substance from the largely informal practices reflected in the Phase IV record. This lack of specificity is difficult to reconcile with the Commission’s requirement that the EDCs’ EE&C Plans provide details about planned coordination with other conservation programs.¹⁷⁸

Q. What does coordination between PECO’s Act 129 programs and Philadelphia area repair and weatherization programs look like in practice?

A. In discovery addressing coordination during Phase IV, PECO indicated that “The Phase IV Act 129 Residential CSP provides coordinated delivery of services for Act 129, PGW [Philadelphia Gas Works], and PWD [Philadelphia Water Department] programs when applicable.”¹⁷⁹ PECO explained that coordination with PGW and PWD programs exclusively occurred where the same CSP happened to be delivering services for multiple programs within the

¹⁷⁷ PECO Response to TURN II-5.

¹⁷⁸ Phase V Implementation Order at 167.

¹⁷⁹ PECO Response to TURN I-14; PECO Response to TURN II-4.

1 same household.¹⁸⁰ PECO also alluded to limited instances in which it or its CSP “received
 2 referrals” from Rebuilding Together and the Philadelphia Energy Authority’s Built to Last
 3 program.¹⁸¹ However, PECO did not provide the requested details about the scope of such
 4 coordination, nor does it maintain formal documentation of those partnerships.¹⁸²

5 **Q. Does PECO keep track of the various referrals provided to and received from other**
 6 **programs?**

7 A. No, which suggests that homes receiving major repairs through home repair programs are
 8 not systematically identified, prioritized, or sequenced for complementary energy efficiency
 9 upgrades under Act 129. Specifically, PECO acknowledged that during Phase IV, it did not
 10 coordinate Act 129 Services with the Philadelphia Housing Development Coordination (PHDC),
 11 administrator of the city of Philadelphia’s largest home repair and weatherization programs.¹⁸³
 12 Although PECO stated that it held limited discussions with PHDC regarding coordination and
 13 referrals with PHDC’s Rental Improvement Fund Program,¹⁸⁴ it has not identified any Act 129
 14 treatments that it coordinated with PHDC programs in practice. Additionally, PECO has not
 15 provided documentation illustrating procedures for such collaboration in Phase IV, and PECO
 16 further admits that it has not yet communicated with PHDC about coordinating in Phase V.¹⁸⁵ This
 17 lack of coordination is particularly concerning given the scale of PHDC-administered programs
 18 such as BSRP.¹⁸⁶ Without such coordination, PECO fails to effectively leverage external funding
 19 to maximize household-level benefits consistent with the Phase V Final Implementation Order.

¹⁸⁰ PECO Response to TURN V-2.

¹⁸¹ PECO Response to TURN I-14; PECO Response to TURN II-4.

¹⁸² See Id.; PECO Response to TURN V-1.

¹⁸³ PECO Response to TURN I-14; PECO Response to TURN II-4; PECO Response to TURN V-3.

¹⁸⁴ PECO Response to TURN V-3; PECO Response to TURN V-4.

¹⁸⁵ PECO Response to TURN III-2; TURN V-5.

¹⁸⁶ See supra note 175.

1 **Q. In your view what would effective coordination look like?**

2 A. In my view, effective coordination planning prioritizes the key objective of best serving
3 the customer front and center. Effective coordination tracks and reviews key performance metrics
4 to ensure that primary objective is met. I would suggest the following objectives would be critical
5 for coordination of Act 129 low-income programs with the low-income services programs offered
6 by others: Minimize participation challenges by taking a “general contractor” approach to
7 coordinating services, including by offering: 1) unified applications; 2) multi-partner audit data
8 collection through a shared audit done for all parties by a single CSP; 4) health and safety
9 remediation in the context of an overall job; and 5) jointly funded measure installations to
10 maximize savings and minimize scheduling conflicts, overhead expenses, and transaction costs.
11 PECO should collaborate with other partners in its service territory, including PGW and area water
12 utilities, the Weatherization Assistance Agencies, local and state home preservation programs,
13 DEP, and others to develop unified processes and shared objectives for delivering the best services
14 possible to customers, as measured by ease of participation and magnitude of benefits. PECO’s
15 stated intentions and its current practice of leveraging Act 129 funds to increase benefits for LIURP
16 participants are a good start, but as noted with respect to external programs, this is simply not
17 enough.

18 **Q. What steps should the Commission require PECO to take to improve coordination in**
19 **Phase V?**

20 A. Although PECO’s Phase V Plan adopts the language of whole-home delivery and braided
21 funding, its reliance on informal coordination and generalized referrals through shared contractors
22 does not constitute a comprehensive coordination strategy. Without formal referral pathways,

1 defined sequencing of work, data-sharing protocols, and accountability for follow-through,
2 coordination remains incidental rather than intentional.

3 To ensure meaningful collaboration with local programs, the Commission should require
4 PECO to work with potential partners to adopt concrete coordination mechanisms. At a minimum,
5 PECO should be directed to:

- 6 • **Establish formal referral protocols** with major home repair and weatherization program
7 administrators in PECO's service territory, including, but not limited to, weatherization
8 agencies, municipal programs, the Philadelphia Housing Development Corporation, and
9 the Philadelphia Energy Authority;
- 10 • **Develop data-sharing agreements** that allow for timely identification of eligible homes
11 and information regarding completed repairs and associated energy savings;
- 12 • **Define clear scopes of work and sequencing standards** identifying which types of
13 repairs PECO will refer to local repair and weatherization agencies as well as the order in
14 which such measures will be addressed;
- 15 • **Create a process flow chart** illustrating the customer journey from audit through health
16 and safety remediation through installation of energy efficiency measures;
- 17 • **Develop and implement data tracking tools and protocols** to allow the Company to
18 track deferred jobs, when repairs are made and by whom, and to follow up by installing
19 energy efficiency measures that were deferred including follow up procedures to keep
20 customers from falling through the cracks;
- 21 • **Dedicate staff capacity and administrative resources** responsible for managing
22 coordination efforts;

- **Establish a rhythm for project coordination check-ins** with parties that are managing coordinated programs, and come to agreement on future joint development of common applications, jointly funded measures installations, etc., and;
- **Report regularly on coordination outcomes**, including the number of referrals made, services delivered, and the role of coordination in enabling deeper energy efficiency savings.

Absent such requirements, PECO's coordination efforts are unlikely to advance beyond the limited and informal practices reflected in the Phase IV record, and the opportunity to leverage existing public investments to support deeper and more equitable energy efficiency outcomes for low-income households in PECO's service territory will remain unrealized.

V. RECOMMENDATIONS

Q. What are your recommendations to the Commission regarding approval of the Company's Act 129 Phase V Filing?

A. To improve the availability of meaningful energy efficiency opportunities for the Company's low-income customers, I recommend the Commission take the following steps prior to its approval of the Company's Plan:

1. Most fundamentally, PECO must increase its prioritization of deep savings measures that will meaningfully reduce energy burdens for participating households. I recommend the Commission order the Company to revise its Plan to rebalance its proposed measure mix in the RLI program such that a combination of building insulation and air sealing measures and efficient heat pumps and heat pump water heaters comprise 25% of the low-income portfolio savings for Phase V, roughly doubling what the Company has currently proposed.

2. Of the 25% of low income program savings that comes from heat pumps, heat pump water heaters, and building insulation and air sealing, I recommend that PECO set a goal in the Phase V Plan to annually target, at a minimum, 250 CAP customers with inefficient electric resistance heat for the installation of high efficiency heat pumps and/or other deep saving efficiency measures. PECO should specifically target CAP customers who would otherwise be at risk of exceeding maximum CAP credit limits. PECO should also track the types of low income measures installed by rate classification and CAP enrollment in order to improve reporting and inform its practices.
3. Disallow savings from the proposed LI-HER and LI Appliance recycling subcomponents from being counted towards achievement of PECO's low-income savings requirement. PECO has not demonstrated that either of these subcomponents would be "solely directed at low-income customers or low-income-verified participants in multifamily housing programs." However, I recommend that the Company continue with its proposed focused outreach to low-income customers as part of its general residential subprograms.
4. Direct PECO to implement protocols to undertake specific outreach to CAP customers who have exhausted, or are at risk of exhausting, their CAP credits to enroll them in RLI and/or LIURP.
5. Require Act 129 program auditors who identify permanently installed electric heating systems for residential customers during Energy Checkups to provide information to the customer about the availability of PECO's discounted electric heating rate, Rate RH, and require PECO to accept the audit information as sufficient basis to perform the rate switch.
6. To ensure meaningful collaboration with local programs, the Commission should require PECO to work with potential partners to adopt concrete coordination mechanisms. At a

1 minimum, as discussed in more detail in Section IV.E, PECO should be directed to
2 establish formal referral protocols with major home repair and weatherization program
3 administrators, develop data-sharing agreements that allow for timely identification of
4 eligible homes, define clear scopes of work and sequencing standards identifying which
5 types of repairs PECO will refer to others, create a process flow chart illustrating the
6 customer journey, develop and implement data tracking tools and protocols, establish
7 project coordination check-ins with partner programs, and report regularly on coordination
8 outcomes.

9 **Q. Does this conclude your testimony?**

10 A. Yes.

CAUSE-PA/TURN, Statement 1

Appendix A

Resume of Jim Grevatt

List of Proceedings in which Jim Grevatt has testified



Jim has 30 years of experience in energy efficiency, with a primary focus on residential and income-eligible program design and implementation. At Energy Futures Group Jim has advised regulators, program implementers, and advocates in two dozen states and provinces, and has provided expert witness testimony in fourteen of those jurisdictions, with a frequent emphasis on improving energy efficiency programs for customers in historically disadvantaged communities. Jim has hands-on experience with industry-leading approaches to designing and managing energy efficiency programs, including multi-family, low income, residential retrofit, new construction, HVAC, and efficient products programs. His in-depth knowledge of program operations and clear understanding of strategic thinking and planning ensure that programs achieve their desired market impacts. In past leadership roles at Efficiency Vermont, the DCSEU, and Vermont Gas, Jim had overall responsibility both for program design and operations.

✉ jgrevatt@energyfuturesgroup.com ☎ (802) 373-2488 📍 Hinesburg, VT

EXPERIENCE

Managing Consultant

Energy Futures Group, Hinesburg, VT
2013 - Present

Director, Targeted Implementation

Vermont Energy Investment Corp.,
Burlington, VT
2012 - 2013

Managing Consultant

Vermont Energy Investment Corp.,
Burlington, VT
2010 - 2012

Director, Residential Services

Vermont Energy Investment Corp.,
Burlington, VT
2005 - 2010

Manager, Energy Services

Vermont Gas Systems, S. Burlington, VT
2001 - 2005

Manager, Residential Energy Services

Vermont Gas Systems, S. Burlington, VT
1998 - 2001

Manager, HomeBase Retrofit Program

Vermont Gas Systems, S. Burlington, VT
1996 - 1998

Technical Specialist

Vermont Gas Systems, S. Burlington, VT
1994 - 1996

Associate Director and Technical Specialist

Champlain Valley Weatherization
Program, Burlington, VT
1991 - 1994

EDUCATION

University of Illinois
B.F.A., University Honors
1982

SELECT PROJECTS

Southern Environmental Law Center

2015 - Present

Provided technical support to environmental and social justice advocates in the Carolinas, and ongoing participation in the Duke Energy EE Collaborative and Dominion South Carolina EE Advisory Group, as well as technical support for SELC staff regarding pre-pay programs and other policy issues.

Coalition of Maryland Energy Efficiency Advocates

2014 - Present

Prepared written comments and multiple appearances before the Commission to present evidence regarding Maryland utilities' 2015-2017, 2018-2020, 2021-2023, and 2024-2026 EmPOWER Maryland energy efficiency plans, and in additional proceedings related to utility goal setting, cost-effectiveness testing, best-practices in low-income programs, and energy efficiency financing.

Alliance for Affordable Energy

2025

Provided expert review and draft responsive comments regarding Entergy New Orleans' Implementation Plan for Program Years 16 Through 18 of the Energy Smart Program.

Pennsylvania Utility Law Project

2025

Provided expert review and technical support for responsive comments regarding Act 129 Phase V Implementation Order and Plan Template.

Appalachian Voices, New Virginia Majority, and Virginia Organizing, Inc.

2025

Provided expert witness testimony in Virginia Natural Gas' application for a general rate increase and for authority to revise the terms and conditions applicable to natural gas service.

(continued on next page)

SELECT PROJECTS (continued)

South Carolina Coastal Conservation League and Southern Alliance for Clean Energy 2025

Provided expert witness testimony in Dominion Energy South Carolina's Request for Approval of Pilot Demand Side Management Program for Income-Qualified, High-Use Residential Customers.

Appalachian Voices 2025

Provided expert witness testimony in Virginia Electric and Power Co.'s application for approval of its 2024 DSM Update.

Appalachian Voices 2025

Provided expert witness testimony in Appalachian Power Co.'s petition in the matter of establishing energy efficiency savings targets.

South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Vote Solar, and Upstate Forever 2025

Supported comment drafting regarding Duke Energy's request for approval of modifications to its DSM portfolio.

South Carolina Coastal Conservation League and Southern Alliance for Clean Energy 2025

Provided expert witness testimony on Dominion Energy South Carolina's 2025-2029 DSM Plan.

Appalachian Voices 2024

Provided expert witness testimony in Virginia Electric and Power Co.'s application in the matter of establishing energy efficiency savings targets.

West Virginia Citizen Action Group, Solar United Neighbors, and Energy Efficient West Virginia 2024

Provided expert witness testimony in Appalachian Power Company and Wheeling Power Company Petition for Review of EE/DR Programs, Approval of the Continuation of Certain Programs, the Approval of New Programs, and Authorization of an Increase in EE/DR Rider Rates.

South Carolina Coastal Conservation League and Southern Alliance for Clean Energy 2024

Provided expert witness testimony on the value of energy efficiency to mitigate rate impacts on vulnerable customers in Dominion Energy South Carolina's 2024 rate case.

Appalachian Voices 2024

Provided expert witness testimony in Virginia Electric and Power Co.'s application for approval of its 2023 DSM Update.

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania 2023

Provided expert witness testimony in Philadelphia Gas Works' Petition for Approval of Revised Demand Side Management Implementation Plan Fiscal Years 2025-2029.

Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association 2023

Provided expert witness testimony in Kentucky Utilities Company and Louisville Gas and Electric Company's Application for Approval of a Demand Side Management Plan.

South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Sierra Club 2023

Provided expert witness testimony on energy efficiency levels incorporated in Dominion Energy South Carolina's 2023 Integrated Resource Plan.

SELECT PROJECTS (continued)

Sierra Club and Earth Justice 2023

Provided expert witness testimony on electrification programs in Baltimore Gas and Electric Company's Application for an Electric and Gas Multi-Year Plan.

Sierra Club and Earth Justice 2023

Provided technical support for comments on Washington Gas Light Company's Application for Approval of Energy Efficiency Programs.

Appalachian Voices 2023

Provided expert witness testimony in Virginia Electric and Power Co.'s application for approval of its 2022 DSM Update.

Natural Resources Defense Council and Sierra Club 2022 - 2023

Provided expert witness testimony in Public Service Company of Colorado's Demand-Side Management and Beneficial Electrification Strategic Issues proceeding.

British Columbia Sustainable Energy Association 2022

Provided expert review, discovery, and evidence regarding Fortis BC's proposed RNG Gas Connections service.

The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar 2022

Provided expert witness testimony describing the need for energy efficiency programming as a result of Duke Energy Progress' proposed rate increase.

The South Carolina Coastal Conservation League and Southern Alliance for Clean Energy 2022

Provided expert witness testimony critiquing Dominion Energy South Carolina's petition for new natural gas efficiency programs.

Appalachian Voices 2022

Provided expert witness testimony in Virginia Electric and Power Co.'s application for approval of its 2021 DSM Update.

Natural Resources Defense Council and Sierra Club 2021

Provided expert witness testimony in Tri-State Generation and Transmission Association's 2020 Electric Resource Plan Proceeding.

West Virginia Citizen Action Group, Solar United Neighbors, and Energy Efficient West Virginia 2021

Provided expert witness testimony in Monongahela Power Company and the Potomac Edison Company Petition and General Investigation to Determine Reasonable Rates and Charges.

Natural Resources Defense Council and Sierra Club 2021

Provided expert witness testimony in Public Service Company of Colorado's 2021 Electric Resource Plan and Clean Energy Plan proceeding.

The Institute for Sustainable Communities 2022

Partnered with Common Spark Consulting to develop an energy efficiency action plan to support increased energy efficiency programs for disadvantaged communities of the Southeast Florida Regional Climate Change Compact.

Natural Resources Defense Council, Sierra Club, and Southwest Energy Efficiency Project 2021

Provided expert witness testimony to the Public Utility Commission of Nevada regarding the Application of Southwest Gas Corporation for Approval of a Conservation and Energy Efficiency Plan for the Years 2022, 2023 and 2024.

Energy Efficient West Virginia and West Virginia Citizen Action Group 2021

Provided expert witness testimony in Appalachian Power Company and Wheeling Power Company's Petition regarding EE/DR program approvals.

SELECT PROJECTS (continued)

Appalachian Voices 2021

Provided expert witness testimony in Virginia Electric and Power Co.'s EM&V proceeding and its application for approval of its 2020 DSM Update.

The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Sierra Club, and Natural Resources Defense Council 2021

Provided expert witness testimony critiquing the market potential study used in Duke Energy Carolinas and Duke Energy Progress 2020 Integrated Resource Plans.

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA") 2020 - 2021

Provided expert witness testimony in support of robust low-income efficiency programs in Philadelphia Gas Works Petition for Approval of Demand-Side Management Plan and PECO, Duquesne, and First Energy Act 129 Phase IV Plan proceedings.

Appalachian Voices and Natural Resources Defense Council 2020

Provided expert witness testimony in Virginia Electric and Power Co. Phase VIII DSM Program Application.

Citizens Action Coalition of Indiana 2020

Provided expert witness testimony in Duke Energy Indiana 2020-2023 DSM Plan.

The Consumers' Association of Canada (Manitoba) and Winnipeg Harvest 2019 - 2020

Provided expert witness testimony in the Efficiency Manitoba 2020/23 Efficiency Plan proceeding.

British Columbia Sustainable Energy Association 2017 - 2020

Provided expert review, discovery, and evidence in DSM-related aspects of multiple proceedings with Fortis BC, BC Hydro, and FEI.

Southern Alliance for Clean Energy and Earthjustice 2019

Provided expert witness testimony in the Florida Energy Efficiency and Conservation Act goal setting proceeding.

Energy Efficient West Virginia and West Virginia Citizen Action Group 2019

Provided expert witness testimony in Appalachian Power Company and Wheeling Power Company's Petition regarding EE/DR program approvals.

Alliance for Affordable Energy and Natural Resources Defense Council 2019 - 2021

Provided expert technical support for Louisiana Public Service Commission EE Rulemaking and Entergy New Orleans DSM Plan.

New Jersey Clean Energy Program 2015 - 2020

Planning support for NJCEP implementation team. Facilitated focus groups, worked with Board of Public Utilities Staff, program administrators, utility companies, and other stakeholders to identify opportunities to improve NJCEP strategic direction and increase benefits for ratepayers. Lead author drafting strategic plan.

Natural Resources Defense Council and Sierra Club 2017 - 2020

Provided expert witness testimony in Public Service Company of Colorado's Strategic Issues, 2019-2020 DSM Plan, and 2021-2022 DSM Plan proceedings.

Natural Resources Defense Council and Sierra Club 2018 - 2021

Provided expert witness testimony in Nevada Energy Company's 2019-2038 Triennial Integrated Resource Plan and 2019-2021 Energy Supply Plan, and 2019 and 2020 DSM Update proceedings and participated in stakeholder collaboratives.

SELECT PROJECTS (continued)

Environmental Law & Policy Center and Iowa Environmental Council 2018

Provided expert witness testimony in DSM proceedings regarding MidAmerican Energy Company's and Interstate Power and Light's 2019-2023 Energy Efficiency Plans.

Pueblo County Colorado 2018

Provided expert witness testimony in DSM proceedings regarding Black Hills Energy Company's 2019-2021 DSM Plan.

Sierra Club 2017 - 2018

Provided expert witness testimony in proceedings regarding Kentucky Power Company's DSM programs and cost-effectiveness.

California Alternative Energy and Advance Transportation Financing Authority 2017 - 2019

Provide technical assistance on development of commercial energy efficiency financing pilot.

Energy Efficiency for All 2015 - 2020

Expert technical support for affordable multifamily energy efficiency advocacy in Pennsylvania and Virginia. Worked with a coalition of energy efficiency and affordable housing advocates to shape advocacy efforts with utilities and regulators.

Regulatory Assistance Project 2016

Researched and co-authored with Chris Neme: The Next Quantum Leap in Efficiency: 30 Percent Electric Savings in Ten Years, addressing program and policy questions related to doubling the best efficiency program results.

Natural Resources Defense Council 2013

Provided expert witness testimony in support of NRDC's intervention in Ameren Illinois' 2014-2016 energy efficiency plan. Testimony demonstrated that Ameren would be capable of capturing significantly greater efficiency savings than it had proposed.

Regulatory Assistance Project 2015

Expert technical support for DSM in China. Worked with various government agencies and grid companies, as well as advocacy organizations to provide technical support related to advancing DSM and energy efficiency in China.

Vermont Public Service Department 2014 - 2015

Evaluation of Clean Energy Development Fund. Conducted interviews of staff and key stakeholders under contract to NMR and prepared memo outlining process findings and recommendations.

Evaluation of Efficiency Maine Low-Income Multi-Family Weatherization Program 2014 - 2015

Responsible for program staff and building owner interviews and process evaluation under contract to NMR and Efficiency Maine.

Northeast Energy Efficiency Partnerships 2014

Researched and co-authored meta-study of the use of energy efficiency to defer T&D investments.

Northeast Energy Efficiency Partnerships 2014

Researched and co-authored meta-study of ductless heat pump performance and market acceptance.

New Hampshire Electric Co-op 2014

Conducted assessment of the co-op's environmental and social responsibility programs' promotion of whole building efficiency retrofits, cold climate heat pumps and renewable energy systems. Presented recommendations to the co-op Board.

SELECT PROJECTS (continued)

High Meadows Fund 2014

Co-authored a study assessing the market viability of "High Performance Homes" in Vermont.

Energy Savings Potential Study, Delaware Department of Natural Resources 2013 - 2014

Led narrative development for the residential programs for a study of the energy efficiency savings potential in Delaware.

Regulatory Assistance Project 2013 - 2017

Provided technical support to energy efficiency advocates in proceedings in Maryland, Mississippi, and Missouri.

Better Buildings Solutions Center, U.S. Department of Energy 2013 - 2014

Energy Futures Group's lead author in drafting and reviewing web content for ten how-to "handbooks" detailing proven approaches to designing and implementing residential retrofit efficiency programs.

Utility Program Benchmarking 2013

Led research on behalf of a large IOU to compare the cost of saved energy across ~10 leading utility portfolios. The research sought to determine if there are discernible differences in the cost of saved energy related to utility spending in specific non-incentive categories, including administration, marketing, and EM&V.

Research on Trends in Multi-Family, HVAC, and New Construction Programs 2013 - 2014

Developed an analysis of emerging program trends on behalf of a leading energy efficiency industry firm.

Efficiency Power Plant, Regulatory Assistance Project 2013

Partnered with RAP to develop a demonstration tool to show how energy efficiency measures can be used to mitigate air quality impacts related to power production.

Natural Gas Energy Efficiency Analysis, the Green Energy Coalition 2013

Provided analytical support to demonstrate in testimony that Enbridge Gas could reduce the scale of its proposed pipeline expansion by implementing aggressive energy efficiency programs.

Targeted Implementation, VEIC 2012 - 2013

Responsible for market analysis and strategic planning for a new division expanding VEIC's energy efficiency program implementation projects.

DC Sustainable Energy Utility 2011 - 2012

Led the planning and startup implementation of Residential programs for the DC SEU, including single and multi-family and retail market programs. Led the development of the initial portfolio-level Annual Plan. Led client and partner interactions around planning and policy development. Member of DC SEU Senior Management Team.

EmPOWER Maryland Critical Program Review 2010 - 2012

Expert consultant to the Maryland Office of Peoples' Counsel in EmPOWER Maryland hearings regarding utility energy efficiency planning and reporting. Represented the OPC in stakeholder meetings that informed the current 2012-2014 EmPOWER plans. Multiple appearances before the Maryland Public Service Commission.

Efficiency Vermont 20-Year Forecast of Efficiency Potential 2010 - 2011

Senior Advisor in developing the forecast scenarios that led to significantly increased efficiency investment in Vermont.

Efficiency Vermont Residential Programs 2005 - 2010

Directed 100% growth in program budgets to nearly \$10M annually. Responsible for strategic direction, leadership, and results for Efficiency Vermont's award-winning residential retrofit, new construction, retail, and low-income programs. Supported excellence in a staff of 30.

SELECT PROJECTS (continued)

Vermont Gas Systems Efficiency Program Leader 2001 - 2005

Directed strategic planning and program operations that led to six programs and portfolio as a whole being recognized as exemplary in Responding to the Natural Gas Crisis: America's Best Natural Gas Energy Efficiency Programs (ACEEE, 2003). Built contractor infrastructure and internal support to consistently meet program objectives. Led development of Annual Reports, planning and budgeting. Collaborated with Efficiency Vermont staff to develop a fuel-blind, state-wide, jointly offered residential new construction program.

Residential Retrofit Program Development 1994 - 2005

Enhanced design and performance of VGS' residential retrofit offerings by streamlining delivery and building strong relationships with contractors, homeowners, and property managers.

Demonstrated Technical Excellence in Approaches to Residential Retrofits 1991 - 1998

Conducted hundreds of residential energy audits and quality assurance inspections for natural gas and alternative-fueled homes. Trained and coached installers to obtain desired quality. Worked to satisfy homeowners through explanation, education, sound listening to concerns, and ultimately assuring that concerns were addressed. Trained new staff in auditing techniques.

SELECT PRESENTATIONS

Small Steps in Coordination Equal Leaps and Bounds for Pennsylvania's Underserved Families: Driving Policy Improvements through Collaborative Advocacy. ACEEE 2018 Summer Study on Energy Efficiency in Buildings, August 2018.

Keys to the House: Unlocking Residential Savings with Program Models for Home Energy Upgrades. ACEEE 2016 Summer Study on Energy Efficiency in Buildings, August 2016.

Home Upgrade Program Design & Implementation Models for Acquiring Savings in Multiple Climate Zones. 2016 National Home Performance Conference, April 2016.

EERS Advancements in Maryland: EmPOWER After 2015. Presentation at ACEEE Energy Efficiency as a Resource Conference, September 2015.

Leveling the Playing Field for Distributed Energy Resources. Panelist discussing the use of energy efficiency to defer T&D investments, Acadia Center forum on Envisioning Our Energy Future, February 2015.

Residential Retrofit Programs: What's Working? Perspectives from National Program Leaders. Panelist at AESP National Conference 2012.

Elements of Retrofit Program Incentive Design. DOE Technical Assistance Program Publication, April 2011.

Designing Effective Incentives to Drive Residential Retrofit Participation. DOE Technical Assistance Program Webinar, October 2010.

Quality Assurance for Residential Retrofit Programs. DOE Technical Assistance Program Webinar, October 2010.

Home Performance with ENERGY STAR, Quality Assurance in Vermont. Panelist at the ACI Home Energy Retrofit Summit, April 2010.

Delivering on the Promise-Engaging Communities and the Public. Panelist at 2010 NEEP Summit, March 2010.

Home Performance with Energy Star in Vermont. Presentation at CEE Member meeting, June 2009.

Leading by Example: Exemplary Low Income Energy Efficiency Programs. Presented on Efficiency Vermont's Residential low income services at California's Low Income Energy Efficiency Symposium, June 2006.

Natural Gas Efficiency Policies, Responding to the Natural Gas Crisis One Therm at a Time. Co-presented with Dan York and Anna Monis Shipley of American Council for an Energy-Efficient Economy (ACEEE) -ACEEE/CEE Market Transformation Symposium, 2004.

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
List of Proceedings in which Jim Grevatt has testified

Jurisdiction	Date Filed	Docket	Client	Case
Illinois	11/5/2010	Docket No. 10-0568	Natural Resources Defense Council	Approval of Ameren Illinois Energy Efficiency and Demand-Response Plan
Illinois	10/18/2013	Docket No. 13-0498	Natural Resources Defense Council	Approval of Ameren Illinois Energy Efficiency and Demand-Response Plan
British Columbia, CN	2/9/2017	BCUC Project No. 3698869	B.C. Sustainable Energy Association and Sierra Club B.C.	British Columbia Hydro and Power Authority F2017-F2019 Revenue Requirements Application and F2017-F2019 Demand-Side Measures Expenditure Schedule
British Columbia, CN	5/25/2017	BCUC Project No. 3698896	B.C. Sustainable Energy Association and Sierra Club B.C.	Fortis B.C. Inc. 2016 Long Term Electric Resource Plan and Long Term Demand Side Management Plan
North Carolina	9/5/2017	Docket No. E-2, Sub 1145	North Carolina Justice Center and Southern Alliance for Clean Energy	Application of Duke Energy Progress, LLC for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider
Kentucky	11/22/2017	Case No. 2017-00097	Beverly May, Jim Webb, and Sierra Club	Investigation of the Reasonableness of the Demand Side Management Programs and Rates of Kentucky Power Company
Colorado	12/5/2017	Proceeding NO. 17A-0462EG	Natural Resources Defense Council and Sierra Club	Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its Electric and Gas Demand Side Management Plan
Colorado	3/5/2018	Proceeding NO. 17A-0462EG	Natural Resources Defense Council and Sierra Club	Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its Electric and Gas Demand Side Management Plan
British Columbia, CN	8/9/2018	BCUC Project No. 1598946	B.C. Sustainable Energy Association and Sierra Club B.C.	FortisBC Energy Inc. 2017 Long Term Gas Resource Plan
Colorado	8/24/2018	Proceeding No. 18A-0279E	Pueblo County, Colorado	Application of Black Hills/Colorado Electric Utility Company, LP for approval of its electric demand side management (DSM) plan for program years 2019-2021 and for approval of changes to its electric DSM cost adjustment tariff
Iowa	9/13/2018	Docket No. EEP-2018-0002	Environmental Law & Policy Center and Iowa Environmental Council	MidAmerican Energy Company Energy Efficiency Five-Year Plan

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
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Nevada	9/20/2018	Docket No. 18-06003	Sierra Club and Natural Resources Defense Council	Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for Approval of their 2019-2038 Triennial Integrated Resource Plan and 2019-2021 Energy Supply Plan
Iowa	10/2/2018	Docket NO. EEP-2018-0004	Environmental Law & Policy Center and Iowa Environmental Council	MidAmerican Energy Company Energy Efficiency Five-Year Plan
Iowa	10/22/2018	Docket No. EEP-2018-0003	Environmental Law & Policy Center and Iowa Environmental Council	IPL Energy Efficiency Five-Year Plan
Iowa	11/9/2018	Docket NO. EEP-2018-0003	Environmental Law & Policy Center and Iowa Environmental Council	IPL Energy Efficiency Five-Year Plan
Colorado	1/23/2019	PROCEEDING NO. 18A-0606EG	Natural Resources Defense Council and Sierra Club	Application of Public Service Company of Colorado for Approval of its Electric and Natural Gas Demand Side Management (DSM) Plan for Calendar Years 2019 and 2020
Virginia	2/6/2019	Case No. PUR-2018-00168	Appalachian Voices and Natural Resources Defense Council	Application of Virginia Electric and Power Company for approval to implement demand-side management programs and for approval of two updated rate adjustment clauses
Florida	6/10/2019	Docket Nos. 20190015-EG, 20190016-EG, 20190018-EG, 20190019-EG, 20190020-EG, 20190021-EG	Southern Alliance for Clean Energy	Commission Review of Numeric Conservation Goals
West Virginia	7/10/2019	Case No. 19-0396-E-P	EEWV/CAG	Appalachian Power Company and Wheeling Power Company, Petition for Review of EE/DR Programs, Approval of New EE/DR Programs, Termination of an Existing EE/DR Program, Modifications to EE/DR Cost Calculation Methodology and Cost and Recovery Allocations, and an Increase in EE/DR Rider Rates
Manitoba	12/9/2019		Consumers' Association of Canada (Manitoba) and Winnipeg Harvest	Efficiency Manitoba 2020-23 DSM Plan
Indiana	3/2/2020	IURC CAUSE NO. 43955 DSM 8	Citizens Action Coalition of Indiana	Duke Energy Indiana Plan for DSM and EE Programs 2020-2023
Virginia	3/20/2020	SCC Case No. PUR-2019-00201	Appalachian Voices and Natural Resources Defense Council ("Environmental Respondents")	Virginia Electric and Power Company - For approval of its 2019 demand side management update pursuant to § 56-585.1 A 5 of the Code of Virginia

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
List of Proceedings in which Jim Grevatt has testified

Colorado	11/2/2020	Proceeding No. 20A-0287EG	Natural Resources Defense Council and Sierra Club	Application of Public Service Company of Colorado for Approval of its Electric and Natural Gas Demand Side Management (DSM) Plan for Calendar Years 2021 and 2022
Pennsylvania	12/22/2020, and 2/5/2021	Docket No. P-2014-2459362	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA")	Petition of Philadelphia Gas Works for Approval of Demand-Side Management Plan for FY 2016-2020
Pennsylvania	1/13/2021	Docket Nos. M-2020-3020820, M-2020-3020821, M-2020-3020822, M-2020-3020823	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA")	Joint Petition for Consolidation of Proceedings and Approval of Phase IV Energy Efficiency and Conservation Plan of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company
Pennsylvania	1/14/2021	Docket No. M-2020-3020818	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA")	Petition of Duquesne Light Company for Approval of Demand-Side Management Plan for FY 2016-2020
Pennsylvania	1/14/2021, and 1/27/2021	Docket No. M-2020-3020830	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA")	Petition of PECO Energy Company for Approval of its Act 129 Phase IV Energy Efficiency and Conservation Plan
S Carolina	2/5/2021	Docket Nos. 2019-224-E and 2019-225-E	The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Sierra Club, and Natural Resources Defense Council	Duke Energy Carolinas and Duke Energy Progress 2020 Integrated Resource Plan
S Carolina	4/15/2021	Docket Nos. 2019-224-E and 2019-225-E	The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Sierra Club, and Natural Resources Defense Council	Duke Energy Carolinas and Duke Energy Progress 2020 Integrated Resource Plan
Virginia	3/23/2021	Case No. PUR-2020-00156	Appalachian Voices	In the matter of baseline determination, methodologies for evaluation, measurement, and verification of existing demand-side management programs, and the consideration of a standardized presentation of summary data for Virginia Electric and Power Company.
Virginia	4/16/2021	Case No. PUR-2020-00274	Appalachian Voices	In the matter of the application of Virginia Electric and Power Company for approval of its 2020 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
List of Proceedings in which Jim Grevatt has testified

W Virginia	7/23/2021	Case No. 21--0332-E-P	Energy Efficient West Virginia and West Virginia Citizen Action Group	Appalachian Power Company and Wheeling Power Company, Petition for Review of EE/DR Programs, Approval of Continuation of those Programs, and an Authorization of an Increase in EE/DR Rider Rates
Nevada	10/6/2021	Docket No. 21-06001 and Docket No. 21-06002 - Phase II	Sierra Club and Natural Resources Defense Council	Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for Approval of their 2019-2038 Triennial Integrated Resource Plan and 2019-2021 Energy Supply Plan and Application of Sierra Pacific Power Company d/b/a NV Energy for approval of its Natural Gas Conservation and Energy Efficiency Plan for the period 2022-2024.
Colorado	10/11/2021	Proceeding 21A-0141E	Sierra Club and Natural Resources Defense Council	Application of Public Service Company of Colorado for Approval of its 2021 Electric Resource Plan and Clean Energy Plan.
W Virginia	11/12/2021	Case No. 21-0658-E-ENEC	West Virginia Citizen Action Group, Solar United Neighbors, and Energy Efficient West Virginia	Monongahela Power Company and the Potomac Edison Company Petition and General Investigation to Determine Reasonable Rates and Charges for Monongahela Power Company and The Potomac Edison Company on and after January 1, 2022
Colorado	11/23/2021	Proceeding No, 20A-0528E	Natural Resources Defense Council, Sierra Club, and Western Colorado Alliance	Application of Tri-State Generation and Transmission Association, Inc. for Approval of its 2020 Electric Resource Plan
Virginia	3/22/2022	Case No. PUR-2021-00247	Appalachian Voices	Application of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 6 of the Code of Virginia
S Carolina	4/4/2022	Docket # 2021-361-G	The South Carolina Coastal Conservation League and Southern Alliance for Clean Energy	Dominion Energy South Carolina, Inc.'s Request for Approval of New Natural Gas Energy Efficiency Programs
S Carolina	4/18/2022	Docket # 2021-361-G	The South Carolina Coastal Conservation League and Southern Alliance for Clean Energy	Dominion Energy South Carolina, Inc.'s Request for Approval of New Natural Gas Energy Efficiency Programs
S Carolina	12/1/2022	Docket No. 2022-254-E	The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar	Application of Duke Energy Progress, LLC for Authority to Adjust and Increase its Electric Rate Schedules and Charges
British Columbia, CN	12/5/2022		B.C. Sustainable Energy Association	FortisBC Energy Inc. (gas), Stage 2 Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
List of Proceedings in which Jim Grevatt has testified

Colorado	12/8/2022	Proceeding 22A-0309EG	Sierra Club and Natural Resources Defense Council	Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its Electric and Gas Demand Side Management and Beneficial Electrification Plan
S Carolina	12/22/2022	Docket No. 2022-254-E	The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar	Application of Duke Energy Progress, LLC for Authority to Adjust and Increase its Electric Rate Schedules and Charges
Colorado	1/19/2023	Proceeding 22A-0309EG	Sierra Club and Natural Resources Defense Council	Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its Electric and Gas Demand Side Management and Beneficial Electrification Plan
S Carolina	1/12/2023	Docket No. 2022-254-E	The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar	Application of Duke Energy Progress, LLC for Authority to Adjust and Increase its Electric Rate Schedules and Charges
Virginia	3/29/2023	Case No. PUR-2022-00210	Appalachian Voices	Application of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 6 of the Code of Virginia
Maryland	6/20/2023	Case No. 9692	Sierra Club	Baltimore Gas and Electric Company's Application for an Electric and Gas Multi-Year Plan
S Carolina	6/27/2023	Docket No. 2023-9-E	South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Sierra Club	Dominion Energy South Carolina, Incorporated's 2023 Integrated Resource Plan (IRP)
Kentucky	7/14/2023	Case No. 2022-00402	Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association	Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Site Compatibility Certificates and Approval of a Demand Side Management Plan
Pennsylvania	11/13/2023	Docket No. P-2014-2459362	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA").	Petition of Philadelphia Gas Works for Approval of Demand-Side Management Plan for FY 2025-2029
Pennsylvania	1/11/2024	Docket No. P-2014-2459362	The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA").	Petition of Philadelphia Gas Works for Approval of Demand-Side Management Plan for FY 2025-2029
Virginia	3/26/2024	Case No. PUR-2023-00217	Appalachian Voices	Application of Virginia Electric and Power Company for approval of its 2023 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia

CAUSE-PA/TURN St. 1, Appendix A
Grevatt Resume and List of Proceedings
List of Proceedings in which Jim Grevatt has testified

S Carolina	6/5/2024	Docket No. 2024-34-E	South Carolina Coastal Conservation League and Southern Alliance for Clean Energy	Application of Dominion Energy South Carolina, Inc. for Authority to Adjust and Increase its Retail Electric Rate Schedules, Tariffs, and Terms and Conditions
W Virginia	7/10/2024	Case No. 24-0332-E-P	West Virginia Citizen Action Group, Solar United Neighbors, and Energy Efficient West Virginia	Appalachian Power Company and Wheeling Power Company Petition for Review of EE/DR Programs, Approval of the Continuation of Certain Programs, the Approval of New Programs, and Authorization of an Increase in EE/DR Rider Rates.
Virginia	9/16/2024	Case No. PUR-2023-00227	Appalachian Voices	In the matter of establishing energy efficiency savings targets for Virginia Electric and Power Company
S Carolina	9/19/2024	Docket No. 2024-192-E	South Carolina Coastal Conservation League and Southern Alliance for Clean Energy	Application of Dominion Energy South Carolina, Inc. for Approval to Continue Its Portfolio of Demand Side Management Programs to Include Approval of a New Residential Demand Response Program and Reaffirmation of Its Demand Side Management Rate Rider
Virginia	9/30/2024	Case No. PUR-2024-00134	Appalachian Voices	In the matter of establishing energy efficiency savings targets for Appalachian Power Company pursuant to VA Code § 56-596.2 B 3
Virginia	3/24/2025	Case No. PUR-2024-00222	Appalachian Voices	Virginia Electric and Power Company - For approval of its 2024 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia
Virginia	6/16/2025	Case No. PUR-2024-00048	Appalachian Voices, New Virginia Majority, and Virginia Organizing, Inc.	Application of Virginia Natural Gas, Inc. for a general rate increase and for authority to revise the terms and conditions applicable to natural gas service
S Carolina	11/4/2025	Docket No. 2025-173-E	South Carolina Coastal Conservation League and Southern Alliance for Clean Energy	Dominion Energy South Carolina's Request for Approval of Pilot Demand Side Management Program for Income-Qualified, High-Use Residential Customers

CAUSE-PA/TURN Statement 1, Grevatt Appendix B

Interrogatories of CAUSE-PA to PECO

PECO Response to CAUSE-PA 1-1

PECO Response to CAUSE-PA 1-2, Attachment

PECO Response to CAUSE-PA 1-3

PECO Response to CAUSE-PA 1-16

PECO Response to CAUSE-PA 1-17

PECO Response to CAUSE-PA 1-23

PECO Response to CAUSE-PA 1-30

PECO Response to CAUSE-PA 1-33

PECO Response to CAUSE-PA 1-39

PECO Response to CAUSE-PA 1-43

PECO Response to CAUSE-PA 1-45

PECO Response to CAUSE-PA 2-18

PECO Response to CAUSE-PA 3-8

PECO Response to CAUSE-PA 3-9

PECO Response to CAUSE-PA 4-2, Attachment

Interrogatories of TURN to PECO

PECO Response to TURN I-1

PECO Response to TURN I-3

PECO Response to TURN I-5

PECO Response to TURN I-6

PECO Response to TURN I-7

PECO Response to TURN I-8

PECO Response to TURN I-9

PECO Response to TURN I-10

PECO Response to TURN I-14

PECO Response to TURN II-4

PECO Response to TURN II-5

PECO Response to TURN II-9

PECO Response to TURN II-12

PECO Response to TURN III-2

PECO Response to TURN III-4

PECO Response to TURN III-5

PECO Response to TURN III-7

PECO Response to TURN III-12

PECO Response to TURN III-14

PECO Response to TURN V-1

PECO Response to TURN V-2

PECO Response to TURN V-3

PECO Response to TURN V-4

PECO Response to TURN V-5

Pennsylvania Public Utility Commission

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PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-1

For June 2021 to date, please identify, disaggregated by month, as of the last day of the month, the number of electric residential accounts served by the company, disaggregated by the following customer segments and by electric heating versus non-electric-heating accounts.

Please also indicate the source data relied upon for each response.

- a) All residential customers
- b) Estimated low income customers
- c) Confirmed low income customers
- d) CAP customers
- e) Confirmed low income customers, excluding CAP customers
- f) Residential customers, excluding confirmed low income customers and CAP customers

Please provide this data in a fully functional Excel spreadsheet.

RESPONSE:

PECO does not track residential customer accounts in the Subpart b category, “Estimated low-income customers.” For the answers to the remainder of this question, please refer to Attachment CAUSE-PA-1-1(a, c-f).

A customer is considered “confirmed low income” if the customer: (1) is enrolled in CAP, (2)

has received LIHEAP in the prior 2 years, or (3) has verified household income of 150% FPL or less within the last 2 years.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-2

For June 2021 to date, please identify, disaggregated by month, as of the last day of the month, the average monthly kWh electricity usage per electric heating residential account in the company's service territory, disaggregated by the following residential customer segments:

- a) All residential customers
- b) Confirmed low income customers
- c) CAP customers
- d) Confirmed low income customers, excluding CAP customers
- e) Residential customers, excluding confirmed low income customers and CAP customers

Please provide this data in a fully functional Excel spreadsheet and indicate the source data relief upon for each response.

RESPONSE:

Please see Attachment CAUSE-PA-2(a-e).

A customer is considered "confirmed low income" if the customer: (1) is enrolled in CAP, (2) has received LIHEAP in the prior 2 years, or (3) has verified household income of 150% FPL or less within the last 2 years.

Responsible Witness: Jacqueline F. Golden

Avg Monthly kWh Usage per Elec Heating Residential Account
June 2021 - October 2025

Attachment CAUSE-PA-1-2(a)

	kWh				
a) All Residential	2025	2024	2023	2022	2021
January	1,950	1,716	1,787	1,882	1,954
February	1,761	1,396	1,491	2,064	1,973
March	1,463	1,465	1,315	1,419	1,635
April	980	1,005	998	1,095	1,017
May	745	790	746	829	797
June	742	768	715	831	859
July	999	1,090	905	954	1,016
August	917	970	950	1,063	990
September	749	784	890	952	980
October	722	693	721	739	747
November		697	820	836	844
December		1,314	1,378	1,480	1,438

	kWh				
b) Confirmed Low Income	2025	2024	2023	2022	2021
January	2,182	1,851	1,810	1,872	1,882
February	2,230	1,999	1,565	2,021	1,918
March	1,713	1,656	1,398	1,443	1,623
April	1,113	1,134	1,031	1,112	985
May	746	777	707	764	704
June	720	739	592	653	687
July	926	931	725	744	780
August	862	864	792	831	774
September	710	728	748	757	772
October	710	604	620	647	592
November		845	820	794	774
December		1,481	1,452	1,479	1,458

	kWh				
c) CAP	2025	2024	2023	2022	2021
January	2,268	1,987	1,969	2,009	2,006
February	2,332	2,075	1,702	2,173	2,039
March	1,798	1,722	1,524	1,560	1,719
April	1,172	1,182	1,128	1,200	1,041
May	783	808	779	830	763
June	759	763	643	709	733
July	957	959	784	800	823
August	893	887	849	891	820
September	736	752	802	812	816
October	739	687	666	697	631
November		819	887	861	828
December		1,539	1,562	1,603	1,559

	kWh				
d) CLI Excl CAP	2025	2024	2023	2022	2021
January	1,858	1,321	1,426	1,519	1,576
February	1,848	1,659	1,208	1,614	1,610
March	1,408	1,384	1,040	1,109	1,367
April	901	947	803	906	848
May	617	659	520	603	551
June	579	651	442	508	557
July	810	830	555	610	659
August	730	777	614	677	636
September	594	639	563	606	630
October	575	569	468	520	483
November		945	596	608	617
December		1,252	1,055	1,116	1,145

	kWh				
e) Resi Excl CLI & CAP	2025	2024	2023	2022	2021
January	1,928	1,703	1,785	1,883	1,961
February	1,719	1,348	1,484	2,068	1,978
March	1,439	1,447	1,306	1,417	1,636
April	966	993	995	1,093	1,020
May	745	791	750	836	806
June	744	771	728	850	876
July	1,007	1,106	925	977	1,040
August	922	980	967	1,086	1,011
September	753	789	905	972	1,000
October	724	696	731	749	763
November		684	820	840	851
December		1,299	1,370	1,480	1,436

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Response of PECO Energy Company
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The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-3

For June 2021 to date, please identify, disaggregated by month, as of the last day of the month, the average monthly kWh electricity usage per non-electric-heating residential account in the company's service territory, disaggregated by the following residential customer segments:

- a) All residential customers
- b) Confirmed low-income customers
- c) CAP customers
- d) Confirmed low-income customers not enrolled in CAP
- e) Residential customers, excluding confirmed low income customers and CAP customers

Please provide this data in a fully functional Excel spreadsheet and indicate the source data relief upon for each response.

RESPONSE:

Please see Attachment CAUSE-PA-1-3(a-e).

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-16

Please define “comprehensive program” as the company uses the term in its proposed Phase V Plan and describe the criteria the company uses to determine whether a program is comprehensive.

RESPONSE:

The Company defines a comprehensive program as a program that includes measures that meet the Commission’s definition of comprehensive.

Comprehensive program components of PECO’s Residential and Non-Residential Programs and additional details about each program’s comprehensive approach to implementation are outlined in Section 3.1.7 of PECO’s Phase V EE&C Plan.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-17

Please indicate whether the company provides for remediation of health and safety issues that impair the delivery of comprehensive measures to low-income residential customers through its EE&C program in Phase IV. If yes, please provide:

- a) The criteria the company uses to determine whether to remediate health and safety issues present at a customer's home;
- b) The forecast dollar amount of the Phase IV EE&C Plan budget dedicated to the remediation of health and safety issues;
- c) The dollar amount of actual Phase IV EE&C expenditures for remediation of health and safety issues, disaggregated by program year;
- d) The dollar amount of any maximum individual allowance or per-job spending limit for remediating health and safety issues present at a customer's home.

RESPONSE:

Yes.

- a. Criteria for remediation. PECO applied the following criteria to determine whether to remediate health & safety ("H&S") issues:
 - Customer Eligibility:
 - Household income at or below 150% of Federal Poverty Level
 - Residence in a single-family home (two or fewer units)
 - Homeowner or tenant with landlord consent

- Issue Eligibility:
 - The H&S condition must directly prevent installation of EE measuresExamples include:
 - Electrical hazards (e.g., knob-and-tube wiring removal, panel upgrades);
 - Moisture-related issues (e.g., roof repair/replacement, sump pump installation);
 - Infestation removal, stair repair, asbestos removal; and/or
 - Indoor air quality improvements (e.g., ventilation upgrades).
- Prioritization:
 - Treatments enabling high-impact energy efficiency (“EE”) measures such as ductless mini-split heat pumps, heat pump water heaters, insulation, and air sealing were prioritized.
- b. Forecast budget.
 - The Phase IV settlement required a dedicated budget of at least \$400,000 and not to exceed \$500,000 for H&S remediation under the pilot.
- c. Actual expenditure by program year.
 - Total Actual Spend (PY 14 and PY 15): \$528,000
 - \$518,000 for H&S treatments
 - \$10,000 for administration
 - While PECO does not have an exact breakdown of spending between program years, the focus of the pilot each program year was as follows: PY14 (June 2022–May 2023): Initial treatments and EE linkage work
 - PY15 (June 2023–Nov 2023): Remaining treatments and follow-on EE installations
- d. Maximum Individual Allowance or Per-Job Limit. No formal per-job spending cap was enforced. Actual spending varied significantly:
 - Average per-home spend: \$4,887
 - Lowest spend: \$80
 - Highest spend: \$52,087

High-cost cases were associated with major roof replacements and electrical upgrades.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-23

Of the customers identified in CAUSE-PA 1-18 and 1-19, please identify the number of customers in each segmentation who were unable to receive comprehensive measures or who received only partial services following an energy audit in Phase IV due to health and safety issues with the property, disaggregated by the specific type of health and safety issue present and by program year.

Please provide this data in a fully functional Excel spreadsheet.

RESPONSE:

The Act 129 Health and Safety pilot was implemented to inform PECO and stakeholders on the potential of implementing a remediation program. The tracking of health and safety barriers only occurred during the implementation period of the pilot. During the course of the pilot, 106 customers received remediation for health and safety issues following an energy audit. For additional information, please see Attachment CAUSE-PA-1-23(a).

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 1

Response Date: December 15, 2025

REVISED CAUSE-PA-1-30

For Phase IV, please provide, disaggregated by program year:

- a) The number of customers who were referred from the company's EE&C programs to the company's LIURP;
- b) The number of those customers identified in response to subsection (a) who subsequently received LIURP services.

RESPONSE:

The current Act 129 Residential CSP also implements PECO's LIURP program, so traditional referrals do not apply as assessment visits under both programs look for appropriate opportunities from each program. All work orders are distributed based on requirements and guidelines of the respective program. Each respective program manager reviews opportunities for cross-program participation regularly. Both Act 129 and LIURP energy advisors are cross trained on program requirements and measure offerings. These opportunities are identified during energy assessments to provide a "one-stop shop" experience for the customer. In light of these existing processes, PECO does not track customer "referrals" from EE&C programs to LIURP, and vice versa, and therefore does not have information responsive to subparts a and b., However, the Residential CSP tracks the number of LIURP customers that also receive Act 129 measures, which is included in Attachment CAUSE-PA-1-30.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company

to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-33

Please indicate whether a customer can receive coordinated services funded through both the company's LIURP and the company's low income EE&C programs. If the answer to this question is yes, please describe:

- a) How the company determines which measures will be funded by each program;
- b) How the company deems electric savings from coordinated or co-funded LIURP/EE&C jobs to each program;
- c) The steps a customer must take to receive services from both programs, including whether a separate application for each program is required;
- d) Whether the same contractor is used to provide services to the consumer;
- e) If separate contractors are used to provide services, whether those contractors are coordinated to provide services at the same time.

RESPONSE:

- a) Customers may receive coordinated services funded through the company's LIURP and the company's low-income EE&C program. PECO determines the funding allocation by applying each program's measure eligibility criteria to the project scope.
- b) Deemed electric savings are calculated through the PA TRM algorithms. Measures installed for Act 129 programs during LIURP audits follow Act 129 savings calculation protocols.
- c) Eligible customers receive simultaneous services; no separate program application

- is required.
- d) Yes, the same contractor is used to provide services to the customer.
 - e) N/A.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-39

Please refer to the Direct Testimony of Marina Geneles: “The low-income subprogram of the Residential HER Program has similar offerings to the overall Residential HER Program but is targeted only to customers in the low income sector.” [Geneles 9:16-18].

- a) Are there any differences between the Residential HER program and the Residential HER LI subprogram other than the fact that the LI subprogram is “targeted only to customers in the low income sector”? Please describe, in detail, any differences.

RESPONSE:

There are no major differences in the core offerings between the Residential Home Energy Reports (HER) program and the Residential HER Low-Income (LI) subprogram. Both programs provide:

- Regular delivery of Home Energy Reports (digital or mail) with personalized energy usage information, neighborhood comparisons, and energy-saving recommendations.
- Access to online tools for customers to monitor their energy use and receive alerts.
- Education on energy-saving behaviors and opportunities.

The key difference is that the behavioral data and program content for the HER LI subprogram are tailored specifically to low-income customers, reflecting the unique program offerings and

opportunities available to this segment. This tailoring ensures that the LI subprogram:

- Provides the same benefits as the traditional residential HER program.
- Provides content that is focused on no-cost proposed solutions to reduce barriers for low-income households.
- Provides content regarding braiding opportunities with other low-income programs and services to maximize impact and accessibility.

In essence, the HER LI subprogram is designed to deliver the same effective behavioral energy savings as the market-rate HER program but with enhanced customization and support aligned with the needs and resources of low-income customers.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-43

Please refer to the Direct Testimony of Urmila Dighe: “I am also responsible for implementation of the separate gas energy efficiency program offered by PECO to its residential and commercial and industrial (“C&I”) customers.” [Dighe 1:15-17]. Please also refer to the statement “PECO will mitigate federal funding risks by leveraging partnerships between Phase V programs and other PECO programs such as gas energy efficiency and the Low-Income Usage Reduction Program.” [Dighe 11:4-6].

- a) Please describe the “separate gas energy efficiency program” referenced in the statement.
- b) Are PECO’s dual-fuel customers able to apply for and participate in both the gas and electric energy efficiency programs through a single application? Please explain.
- c) Does PECO’s gas energy efficiency program include a low-income component?
 - i) If yes, please describe the low-income component, including eligibility criteria and measures offered.
 - ii) If yes, please explain whether, and how the low-income gas program is coordinated with PECO’s Act 129 low-income programs.

RESPONSE:

- a) The Company has a total Pennsylvania Public Utility Commission (“Commission”) approved residential natural gas EE&C budget of \$3.077 million.

PECO currently offers its residential gas customers a mix of rebates to encourage them to upgrade to high-efficiency furnaces, boilers and water heaters, direct install measures, as well as discounts on smart thermostats purchased through PECO's online marketplace. In addition, the Safe and Efficient Heating Program ("SEHP") provides qualifying low-income gas customers no-cost direct installation measures through the Low-Income Usage Reduction Program ("LIURP") and as part of free home energy assessments to improve the efficiency and safety of natural gas heating and water heating in their homes. PECO also offers two natural gas heating equipment energy efficiency rebates available to commercial rate natural gas customers.

- b) PECO's Natural Gas Energy Efficiency program offerings are accessible to the company's residential and commercial natural gas customers. All the offerings are available online at PECO.com through the same channels as the electric program components. There is no single application to participate in every available measure or program; however, the company has streamlined processes to minimize redundancies. For ENERGY STAR qualified equipment rebates, customers submit eligible equipment separately between programs through the singular online portal or using the printable PDF applications. PECO natural gas customers participating in PECO's home energy assessments or free energy checkups are determined eligible for natural gas direct install components or SEHP measures during the audit, with no action needed by the customer. PECO's online marketplace automatically determines natural gas and/or electric program eligibility for smart thermostat instant discounts during the checkout process without customers needing to apply separately.
- c) Yes, SEHP is funded through the residential natural gas energy efficiency program offering no-cost direct install measures through LIURP and Act 129's Free Home Energy Assessments.
 - i. SEHP serves PECO residential natural gas heating customers who meet the following criteria: (1) the customer has household income that is at or below 150% of the Federal Poverty Level; (2) the customer has an average monthly wintertime usage of no more than 149 cubic feet of natural gas; (3) the customer has not received a LIURP heating audit in the past two years; however, this requirement is waived for measures only offered under SEHP. The measures offered under SEHP include:
 - i. Inspection of the natural gas furnace and/or boiler, including tune-ups and repairs;

- ii. Heating system replacement for furnaces based on age, end-of-life, safety, ability to repair and system efficiency;
 - iii. Inspection of the natural gas water heaters including repairs;
 - iv. Replacement of natural gas water heaters in poor condition or nearing end-of-life;
 - v. Installation of smart water heater controls;
 - vi. Installation of a carbon monoxide detector with a 10-year lithium-ion battery;
 - vii. Installation of energy savings products such as low flow faucet aerators, low flow showerheads, pipe wrap, thermostatic showerhead combos (for customers who heat water using natural gas), weatherization measures, smart thermostats and more; and
 - viii. A 12-month supply of filter replacements in addition to education and regular reminders on the frequency of filter replacement (for customers with natural gas supplied furnaces).
- ii. SEHP serves as a supplemental program which funds energy saving and safety measures to eligible PECO residential natural gas customers. The program accomplishes this by outsourcing the implementation of SEHP to the same contractor who manages PECO's LIURP and Act 129's Free Energy Assessment program. SEHP eligible customers receive measures as part of the audits under these programs which is coordinated by the common contractor.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 1

Response Date: December 12, 2025

CAUSE-PA-1-45

Please refer to the Direct Testimony of Urmila Dighe: “PECO has designed the Residential Program to accommodate spending up to \$3 million to address health and safety barriers that prevent low-income customers from installing energy efficiency measures.” [Digh 9:18-20]

- a) What process will be used to determine whether any specific health and safety remediation measures would appropriately be funded through the referenced \$3 million fund? Please explain.
- b) Does PECO envision a per-participant average or maximum health and safety investment? Please explain.
- c) If health and safety requirements exceed the available funds what steps will the Company or CSP take to address the issues?
- d) The Company states that it is “exploring collaboration with the City of Philadelphia’s housing programs, such as the Basic Systems Repair Program.... Additionally, PECO is exploring opportunities to collaborate with the City of Philadelphia’s HOME Plan, which includes multiple programs focused on improving home condition and implementing health and safety upgrades” [Plan at 13].
 - i) Please describe the steps taken by the Company to explore the referenced collaboration.
 - ii) Has the Company identified any barriers to successfully developing the referenced collaborations? Please explain.
 - iii) Please describe the next steps and timeline for developing the referenced collaborations.

RESPONSE:

- a) During the initial home energy audit or inspection, the CSP will identify health and safety barriers that prevent installation of energy efficiency measures (e.g., electrical hazards, structural issues, asbestos). The CSP will determine if the remediation is essential for enabling the installation of approved energy efficiency measures. Only measures directly related to facilitating program participation will be considered. The CSP will then submit the remediation request to PECO for review and approval under the \$3 million allocation. PECO will ensure that the remediation aligns with program guidelines and budget constraints.
- b) PECO does not specify a fixed per-participant cap in the Plan. Instead, PECO anticipates reasonable costs per home based on typical health and safety issues encountered in low-income housing. The \$3 million fund is intended to cover remediation across the entire program term, so PECO will monitor spending and may establish internal guidelines or thresholds to prevent disproportionate allocation to a single participant.
- c) If remediation costs exceed the \$3 million allocation or are too high for a single participant, PECO and the CSP will not continue remediation beyond the allocated budget. Instead, within the available funds, they will prioritize measures that deliver the greatest energy savings impact for the lowest remediation cost.

Projects requiring excessive remediation may be deferred, and customers may be referred to other assistance programs (e.g., LIHEAP, local weatherization agencies). PECO may consider increasing the funding available for health and safety, but such considerations would be made considering how the entire plan portfolio is performing and is projected to perform at the time.

- d) Please see as follows:
 - i. PECO is reviewing what programs are currently offered by the City of Philadelphia that align with Act 129 offerings, and PECO is meeting with stakeholders at the City of Philadelphia to identify opportunities for collaboration.
 - ii. PECO is in the preliminary stages of this collaboration and has no identified barriers at this time.

- iii. PECO plans to meet with stakeholders familiar with the relevant non-Act 129 programs in the coming months to discuss a potential path forward for Phase V collaboration.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 2

Response Date: December 19, 2025

CAUSE-PA-2-18

Please refer to Table 21. Residential Low-Income Subprogram Estimated Savings and Participation.

- a) On p. 80 the Table shows the measure “Residential LED Lighting: ENERGY STAR Screw-in LED Bulb (Standard)” with a forecast of 506,428 units for savings of 21,038 MWh. How will these bulbs be distributed?
- b) Please provide all criteria that must be followed for these bulbs. For example, can they be used to replace an existing LED bulb?
- c) On p. 83 the Table shows the measure “Residential Air Sealing” with 5,990 participants for 3.313 MWh savings. Please provide more details on how this measure will be installed. For example, is this blower door directed air sealing that will be installed by a certified contractor, or is it kits that contain, for example, spray foam and caulk?
- d) On p. 84 the Table shows the measure “ENERGY STAR Air Purifiers - Direct Install LI & MF” with a forecast of 35, 714 measures for 10,367 MWh savings. Are these air purifiers going to be installed only to replace existing inefficient air purifiers or will they be installed where no air purifier currently exists? Please explain.

RESPONSE:

- a) These measures will be directly installed by the Residential CSP’s energy advisors.

- b) Please refer to the 2026 Pennsylvania Technical Reference Manual (PA TRM) Volume 2, 2.1.1 Residential LED Lighting for all eligibility criteria for this measure. By way of further response, no, this measure cannot replace an existing LED bulb.
- c) The Residential Air Sealing measures will be installed by certified contractors in alignment with the protocols established in the 2026 PA TRM. Please refer to the PA 2026 TRM Volume 2, 2.6.1 Residential Air Sealing for all measure eligibility criteria.
- d) Air purifiers can be installed to replace existing inefficient air purifiers or where no air purifier currently exists. Please refer to the PA TRM, Volume 2, 2.4.14 ENERGY STAR Air Purifiers for all measure eligibility criteria.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission
v.
PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 3

Response Date: December 29, 2025

CAUSE-PA-3-8

Using the most recent data available, please indicate the average income of the company's confirmed low-income customers.

RESPONSE:

Average income for confirmed low-income customers is \$1,169.92 per month.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission
v.
PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 3

Response Date: December 29, 2025

CAUSE-PA-3-9

Please explain the difference between the appliance recycling component of the residential program and the appliance recycling component of the low-income residential program.

RESPONSE:

There is no difference between the appliance recycling component of the residential program and that of the low-income residential sub-program from the customer's perspective. During appliance recycling drop-off events, PECO collects account information from all participating customers. If a customer is verified as low-income, that customer is then placed in the low-income sub-program for tracking and incentive funding purposes, and the associated energy savings are allocated to the Low-Income carve-out.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set 4

Response Date: January 16, 2026

CAUSE-PA-4-2

From June 1, 2021, to date, disaggregated by month and year, as of the last day of the month/year, please indicate for customers who exceeded their maximum CAP credit limits:

- a) The number of CAP participants who had their rates increased as a result of exceeding their maximum CAP credit limits;
- b) The average monthly bill that these customers received after exceeding their maximum CAP credit limits;
- c) The average difference between the monthly bills before and after exceeding their maximum CAP credit limits;
- d) The number of customers who were terminated for nonpayment after exceeding their maximum CAP credit limits, within the following intervals of exceeding their maximum CAP credit limits (1) 0-30 days; (2) 31-60 days; (3) 61-90 days; (4) 91-120 days; and (5) 121 days or later.
- e) The number of customers who received a termination notice after exceeding their maximum CAP credit limits, within the following intervals of exceeding their maximum CAP credit limits (1) 0-30 days; (2) 31-60 days; (3) 61-90 days; (4) 91-120 days; and (5) 121 days or later.
- f) For the customers identified in response to subpart (d), please indicate the total amount(s) of uncollectible expenses related to these accounts and/or account balances.

Please provide this data in a live Excel spreadsheet.

RESPONSE:

Please refer to the responses to TURN-I-6 and CAUSE-PA-4-1 for the number of customers who exceeded their maximum CAP credit limits for the requested timeframe.

- a) The rate billed to a CAP customer does not change when the customer exceeds their maximum CAP credit limit. These customers resume receiving CAP credit discounts when their next annual maximum CAP credit period starts.
- b-c) PECO tracks and reports on the number of customers who exceed their maximum CAP credit limits on an annual calendar basis. As such, this information is not available.
- d-f) PECO tracks the number of customers who exceed their maximum CAP credit limit on an annual basis and not by the intervals requested. As such, terminations and termination notices were counted if they occurred during the current or subsequent calendar year that the individual customer exceeded their maximum CAP Credit limit. In addition, please see Attachment CAUSE-PA-4-2(d-f) for the annual data for 2023-2025. Data is not available for 2021 and 2022.

Responsible Witness: Megan A. McDevitt

Attachment CAUSE-PA-4-2(d-f)
Page 1 of 1

	d	e	f
	# Terminated for Non-Payment during current & subsequent calendar year	# Issued Termination Notice during current & subsequent calendar year	Arrears Related to Terminations
Max Credit Exceeded in 2023	659	3,856	\$1,349,135
Max Credit Exceeded in 2024	1,243	3,671	\$2,910,941
Max Credit Exceeded in 2025	1,162	3,860	\$2,354,310

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 22, 2025

TURN-I-1

For each of the listed residential low-income subprogram eligible measures listed in Table 20 (pages 73-77 of PECO's Plan), please indicate whether the measure is available to:

- a. Rate R Customers
- b. Rate RH Customers
- c. Any other residential customers

RESPONSE:

All measures listed in Table 20. Residential Low-Income Subprogram Eligible Measures, p. 74 are only available to low-income customers, both Rate R and RH.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-3

For PECO customers on Rate R enrolled in CAP, please provide the following information on an annual basis for each Program Year (PY) 15, 16, and 17:

- a. The average number of CAP customers on Rate R.
- b. The number of CAP customers on Rate R who were referred for LIURP or Act 129 Services during Phase IV.
- c. The number of CAP Customers on Rate R who received Act 129 services only during Phase IV.
- d. The number of CAP Customers on Rate R who received Act 129 services and LIURP services during Phase IV.
- e. For how many CAP Customers on Rate R did PECO request landlord consent to provide recommended EE&C measures?
- f. For how many CAP Customers on Rate R for whom landlord consent was requested did PECO not receive landlord consent?

RESPONSE:

- a. Please see Attachment TURN-I-3(a) for subpart a.
- b. CAP customers who are deemed high users and meet the monthly average usage eligibility criteria, have at least 12 months of usage history at the premises, and have not been treated by LIURP within the past 24 months, are referred for consideration of services for LIURP. Actual

number of CAP customers referred for LIURP services is not tracked. There is no traditional referral process for Act 129 services.

c.-f. Information is not available specific to Rate R. Please see Attachment TURN-I-3(c-f) for information for residential customers in total.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-5

Please explain the steps PECO takes to make a referral for Act 129 services. If those steps are different for any of the following customer groups, please so indicate:

- a. Rate R customers
- b. Rate RH customers
- c. CAP customers
- d. Non-CAP Confirmed Low Income Customers
- e. CAP customers who are approaching or have met their maximum CAP credit

RESPONSE:

There is no traditional referral process for Act 129 services.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 22, 2025

TURN-I-6

Please identify the number of CAP customers on Rate R who exceeded their maximum CAP credits in each of the last three program years (PY 15, 16 and 17).

RESPONSE:

PECO tracks and reports on the number of CAP electric customers who exceed their maximum CAP credit limit on an annual calendar basis.

- For 2023 information, please refer to Attachment TURN-I-6(a).
- For 2024 information, please refer to Attachment TURN-I-6(b).
- For 2025 YTD November information, please refer to the following:

FPL_RANGE	ELECTRIC_R	ELECTRIC_RH	TOTAL
0-50%	2,746	461	3,207
51-100%	3,709	568	4,277
101-150%	2,135	264	2,399
Total	8,590	1,293	9,883

Responsible Witness: Megan A. McDevitt



Richard G. Webster, Jr.
Vice President
Regulatory Policy & Strategy
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PECO
2301 Market Street S15
Philadelphia, PA 19103

May 22, 2024

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Re: REVISED PECO Default Service Program and Mitigation Plan Docket No. P-2008-2062739; PECO List of Customers Exceeding the Applicable Maximum CAP Benefit Amount

Dear Secretary Chiavetta:

The Company requests that this Revised report replace the existing report that was filed on March 27, 2024 and requests that the Secretary's Bureau remove the existing report from the record at Docket No. P-2008-2062739 and replace it with this revised version.

In Paragraph 74 of the Commission-approved settlement in the above-referenced proceeding (the "DSP Settlement"), PECO agreed to provide the following information:

PECO will generate a list by March 31 of each year identifying those Customer Assistance Program customers that individually received benefits in the prior calendar year greater than the then-applicable maximum CAP benefit amount, as set forth for both electric and gas at 52 Pa. Code § 69.265(3)(v), as that amount may be revised by the Commission from time-to-time. The list will include the customer's usage, discount level, and CAP tier.

Docket No. P-2008-2062739, Settlement, filed March 10, 2009.

The reporting obligation stemming from the DSP Settlement related to PECO's CAP tiered rate structure. In October 2016, PECO adopted a new CAP structure – a Fixed Credit Option ("CAP-FCO"). The CAP-FCO structure remained in place until December 2022, at which time PECO implemented its CAP Percentage of Income Payment Plan ("CAP-PIPP").

Rosemary Chiavetta, Secretary
May 22, 2024
Page 2

The numbers below are the actual CAP maximums for 2023 under the CAP-PIPP. PECO notes that per the terms of its Commission-approved USECP, there are no CAP maximums for gas customers.

2023	Max Credit	
FPL Range	Electric R	Electric RH
0-50%	\$ 2,693	\$ 3,835
51-100%	\$ 1,897	\$ 2,547
101-150%	\$ 1,719	\$ 2,275

Using these actual 2023 CAP-PIPP maximum values, the chart below reflects the number of CAP customers – by Federal Poverty Level (“FPL”) grouping – that exceeded their annual CAP maximums in 2023.

FPL Range	Electric R	Electric RH
0-50%	1,777	107
51-100%	3,044	184
101-150%	1,547	98

This information is being provided to the Commission and to the DSP Settlement signatories, as set forth in the attached Certificate of Service.

If you or any of the other recipients of this letter have any questions, please contact me at 215-841-5777.

Sincerely,



Richard G. Webster, Jr.
Vice President
Regulatory Policy and Strategy

cc: Certificate of Service

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PECO ENERGY COMPANY'S DEFAULT : DOCKET NO. P-2008-2062739
SERVICE PROGRAM AND MITIGATION PLAN:

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a true copy of the enclosed **PECO List of Customers Exceeding the Applicable Maximum CAP Benefit Amount** upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA EMAIL

Allison Kaster
Director and Chief Prosecutor
Bureau of Investigation & Enforcement
Pennsylvania Public Utility Commission
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Dated: May 22, 2024



Richard G. Webster, Jr. Telephone 215.841.5777
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Regulatory Policy & Strategy www.peco.com dick.webster@peco-energy.com

PECO
2301 Market Street S15
Philadelphia, PA 19103

March 25, 2025

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

**Re: PECO Default Service Program and Mitigation Plan Docket No. P-2008-2062739;
PECO List of Customers Exceeding the Applicable Maximum CAP Benefit Amount**

Dear Secretary Chiavetta:

In Paragraph 74 of the Commission-approved settlement in the above-referenced proceeding (the “DSP Settlement”), PECO agreed to provide the following information:

PECO will generate a list by March 31 of each year identifying those Customer Assistance Program customers that individually received benefits in the prior calendar year greater than the then-applicable maximum CAP benefit amount, as set forth for both electric and gas at 52 Pa. Code § 69.265(3)(v), as that amount may be revised by the Commission from time-to-time. The list will include the customer's usage, discount level, and CAP tier.

Docket No. P-2008-2062739, Settlement, filed March 10, 2009.

The reporting obligation stemming from the DSP Settlement related to PECO's CAP tiered rate structure. In October 2016, PECO adopted a new CAP structure – a Fixed Credit Option (“CAP-FCO”). The CAP-FCO structure remained in place until December 2022, at which time PECO implemented its CAP Percentage of Income Payment Plan (“CAP-PIPP”).

Rosemary Chiavetta, Secretary
March 25, 2025
Page 2

The numbers below are the actual CAP maximums for 2024 under the CAP-PIPP. PECO notes that per the terms of its Commission-approved USECP, there are no CAP maximums for gas customers.

2024	Max Credit	
FPL Range	Electric R	Electric RH
0-50%	\$ 2,693	\$ 3,835
51-100%	\$ 1,897	\$ 2,547
101-150%	\$ 1,719	\$ 2,275

Using these actual 2024 CAP-PIPP maximum values, the chart below reflects the number of CAP customers – by Federal Poverty Level (“FPL”) grouping – that exceeded their annual CAP maximums in 2024.

FPL Range	Electric R	Electric RH
0-50%	2,319	13
51-100%	3,547	7
101-150%	1,806	6

This information is being provided to the Commission and to the DSP Settlement signatories, as set forth in the attached Certificate of Service.

If you or any of the other recipients of this letter have any questions, please contact me at 215-841-5777.

Sincerely,



Richard G. Webster, Jr.
Vice President
Regulatory Policy and Strategy

cc: Certificate of Service

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PECO ENERGY COMPANY'S DEFAULT : DOCKET NO. P-2008-2062739
SERVICE PROGRAM AND MITIGATION PLAN:

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a true copy of the enclosed **PECO List of Customers Exceeding the Applicable Maximum CAP Benefit Amount** upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA EMAIL

Allison Kaster
Director and Chief Prosecutor
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Dated: March 25, 2025

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-7

For the Rate R customers referenced in TURN-I-6, please indicate, for each of the last three program years (PY 15, 16 and 17):

- a. The number of these customers who were referred for LIURP or Act 129 Services during Phase IV.
- b. The number of these customers who received Act 129 services only during Phase IV.
- c. The number of these customers who received Act 129 services and LIURP services during Phase IV.
- d. For how many of those customers referred did PECO request landlord consent to provide recommended EE&C measures?
- e. For how many of these customers for whom landlord consent was requested did PECO not receive landlord consent?

RESPONSE:

- a. PECO does not track the actual number of R customers on CAP who exceed their maximum CAP credit limit referred for LIURP services. There is no traditional referral process for Act 129 services.

b-e. Information is not available specific to R customers on CAP who exceed their maximum CAP credit. Please see Attachment TURN-I-3(c-f) for information for residential customers in total.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-8

Please identify the number of CAP customers on Rate RH who exceeded their maximum CAP credits in each of the last three program years (PY 15, 16, and 17).

RESPONSE:

Please refer to the response to TURN-I-6

Responsible Witness: Megan A. McDevitt

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-9

For the Rate RH customers referenced in TURN-I-8, please indicate, for each of the last three program years (PY 15, 16 and 17):

- a. The number of these customers who were referred for LIURP or Act 129 Services during Phase IV.
- b. The number of these customers who received Act 129 services only during Phase IV.
- c. The number of these customers who received Act 129 services and LIURP services during Phase IV.
- d. For how many of those customers referred did PECO request landlord consent to provide recommended EE&C measures?
- e. For how many of these customers for whom landlord consent was requested did PECO not receive landlord consent?

RESPONSE:

- a. PECO does not track the actual number of R-H customers who exceed their maximum CAP credit limit referred for LIURP services. There is no traditional referral process for Act 129 services.
- b-e. Information is not available specific to Rate R H. Please refer to Attachment TURN-I-3(c-f) for residential customers in total.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-10

Reference PECO Plan at p. 70. Will all low-income customers be eligible for both the free energy checkups and the free energy check-up plus assessments? If the answer is no, please identify the eligibility criteria for each, and indicate which of those offerings (free energy checkups and/or free energy check-up plus assessments) the following sets of customers will be eligible for:

- a. CAP Customers
- b. Rate R CAP Customers
- c. Rate RH CAP Customers
- d. Non-CAP Low Income Customers
- e. Rate R Non-CAP Low income Customers
- f. Rate RH Non-CAP Low income Customers

RESPONSE:

To clarify, customer rate class does not determine eligibility for assessment appointments. Only low-income customers who have permanently installed electric systems are eligible for the Free Energy Check Up Plus appointment; all other low-income customers are eligible for the Free Energy Check Up appointment. Non-CAP customers must meet the required $\leq 150\%$ FPL guidelines to participate in the Act 129 Low-Income program.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set I

Response Date: December 19, 2025

TURN-I-14

With respect to each of the following agencies, please summarize any discussions PECO has had regarding coordination of PECO's Act 129 and/or LIURP programs with weatherization or home repair programs run by:

- a. Energy Coordinating Agency;
- b. Philadelphia Housing Development Corporation;
- c. PGW;
- d. Philadelphia Energy Authority;
- e. Habitat for Humanity;
- f. Philadelphia Corporation for Aging;
- g. Rebuilding Together; and/or
- h. Other (please specify).

RESPONSE:

PECO participates in ongoing collaborations and discussions with PGW and the Philadelphia Water Department (PWD) regarding coordination of its Act 129 program with their respective programs.

The PECO Act 129 Residential CSP receives referrals from the Philadelphia Energy Authority to support its Built-to-Last Program and participates in regularly scheduled check-in calls to discuss referral processes and program updates.

PECO has also received referrals from Rebuilding Together Philadelphia, which are directed to the Act 129 Residential CSP for weatherization and HVAC services.

PECO has not held discussions regarding coordination of Act 129 and LIURP with the organizations listed in subparts a, e, and f. PECO looks forward to expanding its collaboration with these entities in Phase V.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set II

Response Date: January 06, 2026

TURN-II-4

Reference Phase V Plan at 12-13 and 22 regarding coordination with non-Act 129 programs, including repair and weatherization agencies, local municipality initiatives, and other utility programs. Please provide concrete descriptions of all coordination efforts that have taken place to date in Phase IV, including:

- a. partner agencies or organizations;
- b. referral pathways;
- c. data-sharing protocols;
- d. financing structures;
- e. services performed;
- f. respective scopes of work in an individual home; and
- g. attributable savings achieved.

RESPONSE:

The coordination efforts that have taken place to date in Phase IV include:

- a. Partner agencies or organizations: PECO coordinates Act 129 programs with non-Act 129 initiatives through partnerships with:
 - Philadelphia Gas Works (PGW);
 - Philadelphia Water Department (PWD);
 - Philadelphia Energy Authority (PEA) for its Built-to-Last Program; and

- Rebuilding Together Philadelphia.

Please refer to the response to TURN-1-14 for additional information regarding coordination of Act 129 programs with external programs.

b. Referral pathways:

- The Phase IV Act 129 Residential CSP provides coordinated delivery of services for Act 129, PGW, and PWD programs.
- PECO does not have a formal referral process for Act 129; however, coordination occurs when customers are jointly eligible for multiple programs.
-
- PECO does not routinely receive referrals from PEA or Rebuilding Together Philadelphia for Act 129 services. Any coordination with these organizations has been limited to specific initiatives such as Built-to-Last and LIURP-related efforts.

c. Data Sharing Protocols: The Residential CSP is provided with external referral data from partner organizations to enable program coordination and service delivery

d. Financing Structures: PECO does not currently offer financing options for any Act 129 Phase IV component.

e. Services Performed: The Phase IV Act 129 Residential CSP provides coordinated delivery of services for Act 129, PGW, and PWD programs when applicable. Services performed include energy efficiency upgrades eligible under Act 129, tailored to the existing condition of the home.

f. Respective Scope of Work in an Individual Home: Work scopes are determined by existing home conditions and program eligibility.

g. PECO does not track savings attributed to external programs.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set II

Response Date: January 06, 2026

TURN-II-5

Reference Phase V Plan at 12-13 and 22 regarding coordination with other repair and weatherization agencies, local municipality initiatives, and utility programs. Please provide concrete descriptions of all coordination efforts that PECO anticipates in Phase V, including:

- a. partner agencies or organizations;
- b. referral pathways;
- c. data-sharing protocols;
- d. financing structures;
- e. services to be performed;
- f. respective scopes of work in an individual home; and
- g. attributable savings achieved.

RESPONSE:

PECO expects to continue the coordination and collaboration with external programs as described in the responses to TURN I-14 and TURN II-4 in Phase V. PECO also is exploring collaboration with the Weatherization Assistance Program (WAP) and the City of Philadelphia's Home Plan. Specific coordination strategies and the efforts referenced in Subparts a-f will be identified upon approval of the Phase V Residential CSP contract. PECO cannot provide estimated savings from coordination efforts at this time.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission
v.
PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set II

Response Date: December 23, 2025

TURN-II-9

Reference Phase V Plan at 70: “Low-Income Single Family: The CSP will offer two appointment types for customers: Free Energy Checkups . . . [and] Free Energy Check Up Plus Assessments.” Please clarify:

- a. whether customers have a choice between appointment types.
- b. how PECO and/or the CSP will determine which appointment type to offer a household.
- c. whether LIURP referrals affect appointment type; and
- d. the Company’s expected ratio of each appointment type.

RESPONSE:

- a. Customers do not have the option of choosing an appointment type in the Low-Income Single Family sub-component. Customers that have primary and/or permanently installed electric heating systems are eligible for Free Energy Check Up Plus appointments.
- b. The Residential CSP determines the customer’s heating type during the intake process to validate the appointment type is appropriate for the customer. By way of further response, please refer to Subpart a.
- c. There are no traditional referrals between Act 129 and LIURP; please see PECO’s response to CAUSE-PA-1-30. Coordinated efforts between LIURP and Act 129 do not affect appointment type; eligibility for Act 129 and appointment type is determined independently based on heating system.
- d. The Residential CSP does not provide an appointment participation forecast; rather, forecasts are modeled on a technology unit (e.g., HVAC, water heating, etc.) basis.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission
v.
PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set II

Response Date: December 23, 2025

TURN-II-12

Reference Phase V Plan at 70 regarding drop-off locations for appliances to be recycled. Please explain whether PECO plans to offer any appliance recycling pickups for customers lacking vehicle access, disabled customers, or seniors? If not, please explain the measures PECO will take to ensure that those customers are also able to participate in the appliance recycling component.

RESPONSE:

PECO's Phase V Plan does not include appliance recycling pickups. There are resources within the PECO territory, such as Earth 911, that can offer this service for customers lacking vehicle access, disabled customers, and seniors. PECO will offer referrals to agencies that assist with in-home appliance pick-ups.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 06, 2026

TURN-III-2

Please describe how PECO coordinated its Act 129 programs with Weatherization Assistance Program (“WAP”) providers in Philadelphia and surrounding counties during Phase IV, including referral pathways, funding coordination, and respective scopes of work. Please provide any supporting documentation, including memoranda of understanding, guidance documents, and other relevant documents.

RESPONSE:

PECO Act 129 did not formally collaborate with any WAP agencies in Phase IV. However, PECO held discussions with the Philadelphia Housing Development Corporation on coordination with Act 129 and referral opportunities. PECO will seek to engage and explore opportunities for collaboration with WAP agencies in the PECO service territory in Phase V.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 06, 2026

TURN-III-4

Regarding PECO's Act 129 health and safety pilot in Phase IV, please provide, disaggregated by year:

- a. the number of households deferred from Act 129 services due to health and safety issues;
- b. the number of households who received health and safety remediation;
- c. the types of health and safety remediations performed; and
- d. the average cost of health and safety remediations in participating households.

Please provide this data in a live Excel spreadsheet.

RESPONSE:

PECO Act 129 currently does not track Health and Safety deferrals.

For Subparts b-d, please see Attachment TURN-III-4(b-d).

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 06, 2026

TURN-III-5

Reference Phase V Plan at Tables 20 and 21. Please provide a detailed description of the measures included within the “Health & Safety” measure. Please also explain PECO’s basis for estimating an incremental cost of \$1,000 per unit.

RESPONSE:

The Health & Safety measure included in PECO’s Phase V Plan (Tables 20 and 21) is intentionally designed to be general and flexible, rather than prescriptive. This approach ensures that the program can address both anticipated and unforeseen barriers that may prevent the installation of energy efficiency measures in eligible homes. By not limiting the measure to a predefined list of treatments, PECO can respond to conditions that were not explicitly identified in the Plan, but are necessary to enable participation and achieve savings. PECO anticipates health and safety interventions to include measures implemented in the Phase IV Health and Safety pilot. In addition, please reference PECO’s response to TURN-III-4(c) for a list of those measures. These, along with any newly identified issues in Phase V, may be incorporated into the Phase V Health and Safety program.

The \$1,000 per unit incremental cost shown in the Phase V Plan is an estimate, derived from the cost structure submitted by the Residential CSP during the bidding process. Importantly, PECO does not intend to impose a per-household/unit cap on Health & Safety treatments. The estimate

provides budgeting flexibility while allowing the CSP to address a wide range of issues without excluding customers due to unforeseen conditions.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 06, 2026

TURN-III-7

Does PECO plan to impose a per-customer (or per-household) limit on the amount PECO will spend on health and safety remediation in connection with Act 129 services. If so, what is that limit, and what was the basis for setting it at that amount?

RESPONSE:

Currently, PECO has not considered a per-customer (or per household) limit on the amount of health and safety remediation costs.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 06, 2026

TURN-III-12

Please explain whether and how auditors identify electric heating during Act 129 audits. What actions are taken when electric heating is identified during Act 129 audits, and how are customers informed of or assisted with Residential Heating (“RH”) rate options?

RESPONSE:

Act 129 auditors are BPI (Building Performance Institute) certified and conduct visual inspections of all HVAC equipment during the Energy Checkup. During the checkup, the fuel, system, and distribution types are confirmed. Any opportunities for efficiency upgrades identified by the auditor are recorded then submitted for review and approval.

Act 129 does not provide information to customers relating to PECO’s Residential Heating (“RH”) rate options. Act 129 auditors do direct customers to contact the PECO Call Center for any questions related to billing.

Information regarding rate RH and how to apply can be found on PECO’s website or by calling the PECO Call Center.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set III

Response Date: January 08, 2026

TURN-III-14

PECO projects that 35,714 air purifiers will be directly installed through its “ENERGY STAR Air Purifiers - Direct Install LI & MF” measure (see Phase V Plan at Table 21). At an incremental cost of \$300 per unit (see Phase V Plan at 75), these measures will cost approximately \$10,714,200 total in Phase V. The estimated expenditures for the low-income residential subprogram in Phase V are \$55.20 million (see Van Eeghen Testimony at Table 3). Please explain:

- a. the basis for allocating approximately 19.4% of the total Phase V low-income residential subprogram budget to this measure;
- b. whether PECO evaluated the net electric load impacts of these measures;
- c. how any increased electric consumption is accounted for in savings calculations; and
- d. whether alternative measures were evaluated and rejected.

Please produce any documentation supporting answers to the above.

RESPONSE:

- a. PECO allocated this portion of the Phase V low-income residential subprogram budget based on the Residential CSP’s proposal, which incorporated historical participation trends from Phase IV, the Market Potential Studies, the Residential baseline study, market intelligence, and projected demand for the ENERGY STAR® air purifiers measure. In recent years, in Phase IV, the measure demonstrated strong uptake among income-eligible participants and was popular among participants who

desired improved indoor air quality but could not afford such devices. PECO's Phase IV Evaluation reporting supports the reasonableness of the Phase V budget allocation; in addition, please reference Table E-12 of PECO's PY16 Final Annual Report to the PA PUC, which shows that ENERGY STAR Air Purifiers represented approximately 18% of Income-Eligible energy savings:

<https://www.puc.pa.gov/pcdocs/1896291.pdf>.

- b. PECO did not evaluate the net electric load impacts of this measure.
- c. Increased consumption is not included in the savings calculations under Act 129. Savings calculations follow the protocols outlined in the PA TRM Section 2.4.14 (<https://www.puc.pa.gov/pcdocs/1848563.pdf>), and PECO does not deviate from these prescribed calculations.
- d. All measures eligible in the PA TRM were considered for inclusion in PECO's Phase V Plan; please reference Table 8 of PECO's Phase V Plan for the list of Residential Eligible Measures.

Responsible Witness: Marina Geneles

Pennsylvania Public Utility Commission

v.

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Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set V

Response Date: January 15, 2026

TURN-V-1

Reference PECO Responses to TURN-I-14 and TURN-II-4(a). Please provide documentation illustrating the “partnerships” through which PECO coordinates its Act 129 programs with each of the following entities:

- a. Philadelphia Gas Works (PGW);
- b. Philadelphia Water Department (PWD);
- c. Philadelphia Energy Authority (PEA) for its Built-to-Last Program; and
- d. Rebuilding Together Philadelphia.

Please provide representative memoranda of understanding, contracts, meeting notes, technical documents, or any other documentation outlining the scope of these partnerships within the last three years.

RESPONSE:

- a. PECO does not have formal documentation illustrating partnerships through which PECO coordinates its Act 129 program with Philadelphia Gas Works (PGW). PECO does not maintain a direct contractual agreement with PGW for the purpose of coordination with the Act 129 program. Coordination with PGW occurs through Act 129 Residential Conservation Service Provider (CSP), which holds a separate contract with PGW specific to the scope of work for its program. During the intake process, the Residential CSP determines program eligibility services where applicable to help ensure that customers receive all qualifying treatments.

- b. PECO does not have formal documentation illustrating partnerships through which PECO coordinates its Act 129 program with Philadelphia Water Department (PWD). PECO does not maintain a direct contractual agreement with PWD for the purpose of coordination with the Act 129 program. Coordination with PWD occurs through the Act 129 Residential CSP, which holds a separate contract with PWD specific to the scope of work for that program. During the intake process, the Residential CSP determines program eligibility services where applicable to help ensure that customers receive all qualifying treatments.
- c. PECO does not have formal documentation illustrating partnerships through which PECO coordinates its Act 129 program with the Philadelphia Energy Authority (PEA). PECO does not maintain a direct contractual agreement with PEA for the purpose of coordination with the Act 129 program. Coordination with PEA occurs through the Act 129 Residential CSP, which has a Memorandum of Understanding with PEA related to PEA's "Built-to-Last Program." In addition, the Residential CSP participates in bi-weekly meetings organized by PEA to discuss referral opportunities; however, formal meeting notes are not distributed by PEA. Referrals from PEA are provided to the Residential CSP, which then conducts intake and determines eligibility for Act 129 services.
- d. PECO does not have a formal partnership agreement or contract with Rebuilding Together Philadelphia (RTP) for the purpose of coordinating Act 129 services. PECO has received referrals from RTP, which are directed at the Act 129 Residential CSP for weatherization and HVAC services.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set V

Response Date: January 15, 2026

TURN-V-2

Reference PECO Response to TURN II-4: “The Phase IV Act 129 Residential CSP provides coordinated delivery of services for Act 129, PGW, and PWD programs. PECO does not have a formal referral process for Act 129; however, coordination occurs when customers are jointly eligible for multiple programs.” Confirm or deny: In Phase IV, PECO only coordinated delivery of Act 129 services with PGW and PWD programs when the household in question was served by the same CSP across all programs involved.

- a. If confirmed, please explain why PECO limited coordination with PGW and PWD to instances where the household was being served by the same CSP.
- b. If denied, please explain how PECO coordinated Act 129 jobs with non-Act 129 programs when those programs used a different CSP.

RESPONSE:

PECO confirms that during Phase IV, coordination of Act 129 services with PGW and PWD occurred only when the household was served by the same CSP. These services were combined during visits performed by the Act 129 Residential CSP when it also delivered PGW or PWD services. Other PGW/PWD contractors completed work specific to their own contracts, and PECO did not receive customer information from PGW or PWD programs delivered by providers other than the Residential CSP. Consequently, when a customer participated in a PGW

or PWD program through a different contractor, the Residential CSP could not directly coordinate services.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

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Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set V

Response Date: January 15, 2026

TURN-V-3

Compare PECO Responses to TURN-I-14 (representing that PECO did not coordinate its Phase IV Act 129 programs with the Philadelphia Housing Development Corporation [“PHDC”] during Phase IV), TURN-II-4 (same), and TURN-III-2 (“PECO held discussions with the Philadelphia Housing Development Corporation on coordination with Act 129 and referral opportunities.”). Please clarify: did PECO coordinate any Act 129 jobs with PHDC during Phase IV? If so, please describe how PECO coordinated its services with PHDC. If not, please explain why PECO did not.

RESPONSE:

During Phase IV, PECO engaged with the Philadelphia Housing Development Corporation (PHDC) to explore coordination opportunities under Act 129 and received referrals through PHDC’s Renter Improvement Fund program. After reviewing these referrals, PECO determined that the projects primarily sought electrification or fuel-switching measures, which are not eligible under Act 129. As a result, PECO was unable to implement Act 129 treatments for these projects.

Responsible Witness: Urmila Dighe

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set V

Response Date: January 15, 2026

TURN-V-4

Reference PECO Responses to TURN-III-2. Please provide dates of, participants in, and notes from all discussions held with the Philadelphia Housing Development Corporation on coordination with Act 129 and referral opportunities within the last three years.

RESPONSE:

PECO attended a discussion hosted by Philadelphia Housing Development Corporation (PHDC) on July 15, 2024, regarding coordination with Act 129 and its Renter Improvement Fund and potential referrals for Act 129 services. PECO did not prepare meeting notes and formal meeting notes were not shared by PHDC after the meeting. Meeting attendees included:

- Tom Hill (PECO);
- Karen Wheatley (PECO);
- Rachel Mulbry (PHDC);
- Nancy Wei (PHDC);
- Pat Coleman (New Ecology);
- Grace Hancock (PEA);
- Alon Abramson (PEA);
- Anna Shugoll (City of Phila);
- Nidhi Krishen (City of Phila).

PECO scheduled a follow-up meeting with members of PHDC on July 23, 2024, to discuss the potential collaboration of Act 129 energy efficiency and PHDC's Renter Improvement Fund. PHDC provided notes summarizing the discussion points, attached hereto as Attachment TURN-V-4(a). Meeting attendees included:

- Tom Hill (PECO);
- Karen Wheatley (PECO);
- Rachel Mulbry (PHDC); and
- Nancy Wei (PHDC).

PECO hosted another follow-up meeting on September 26, 2024, to discuss additional details of potential collaboration. PECO did not prepare meeting notes regarding the follow-up meeting, and formal meeting notes were not shared by PHDC after the meeting. Meeting attendees included:

- Kathy MacWilliams (PECO);
- Tom Hill (PECO);
- Nancy Wei (PHDC); and
- Rachel Mulbry (PHDC).

Responsible Witness: Urmila Dighe



RE: PECO/PHDC Program Discussion

From Rachel Mulbry <[REDACTED]>

Date Wed 7/24/2024 4:11 PM

To Hill, Thomas M:(PECO) <[REDACTED]>; Wheatley, Karen M:(PECO)
<[REDACTED]>

Cc MacWilliams, Kathleen:(PECO) <[REDACTED]>; Nancy Wei
<[REDACTED]>

 1 attachment (211 KB)

NEW-PHDC-Rental-Improvement-Fund-flyer-4-24.pdf;

Hi Tom and Karen,

Thanks again for taking the time to meet yesterday. I've attached the Rental Improvement Fund flyer and I'm hoping you can pass it along to CMC and others who might be able to distribute it during audits or other communication with rental property owners. If there's a LUIRP/Act 129 flyer that we can also distribute, please feel free to share it. As promised, here is the list of follow-up items I captured in my notes:

1. PHDC/PECO data sharing

- a. Tom/Karen: Would you be able to share a copy of data sharing language that you've used with other agencies in the past?
- b. Tom/Karen: Would PHDC need a separate data sharing agreement with CMC to get access to audit and upgrade information, or would the agreement between PHDC & PECO suffice?

2. Program consent forms

- a. Tom: Landlord consent – please share a copy of the LUIRP/Act 129 landlord consent form so that our legal team can take a look and propose the easiest way to incorporate that into our current application materials

3. Tenant income verification

- a. Tom: Can you share a copy of the LUIRP income protocol, so that we can draft an income self-attestation template that would meet PECO's requirements?

4. Rebates

- a. Karen: can you look further into the possibility of processing (batch) rebates to PHDC if we were to front the capital through the Rental Improvement Fund and document the installation?

5. LUIRP/Act 129 energy upgrades

- a. Tom: can you help us get a meeting with the Universal Services team on the calendar?
- b. Tom: is there a list of eligible energy upgrades that we could review? We talked broadly about HVAC and weatherization, but I imagine there's a more detailed list.

I'm looking forward to continuing this collaboration!

Warmly,
Rachel

Rachel Mulbry
Director of Policy & Strategic Initiatives
Philadelphia Housing Development Corporation



1234 Market Street, 16th Floor | Philadelphia, PA 19107

(215) 448-3067

she/her

-----Original Appointment-----

From: Hill, Thomas M:(PECO) <[REDACTED]>

Sent: Wednesday, July 17, 2024 9:11 AM

To: Hill, Thomas M:(PECO); Rachel Mulbry; Nancy Wei; Wheatley, Karen M:(PECO)

Cc: MacWilliams, Kathleen:(PECO)

Subject: PECO/PHDC Program Discussion

When: Tuesday, July 23, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: CR Marketing

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Pennsylvania Public Utility Commission

v.

PECO Energy Company

Docket No. M-2025-3057328

Response of PECO Energy Company
to Interrogatories of
Tenant Union Representative Network
TURN Set V

Response Date: January 15, 2026

TURN-V-5

Reference PECO Response to TURN-III-5: “PECO also is exploring collaboration with the Weatherization Assistance Program (WAP).” Confirm or deny: PECO has communicated with the Philadelphia Housing Development Corporation, the Philadelphia County WAP administrator, about collaboration opportunities.

- a. If confirmed, please describe how those communications have shaped plans for coordination of Act 129 programs with WAP in Phase V.

RESPONSE:

PECO has not yet directly communicated with the Philadelphia Housing Development Corporation (PHDC) or the Philadelphia County Weatherization Assistance Program (WAP) administrator regarding collaboration opportunities for Phase V. PECO has, however, initiated preliminary exploratory efforts and conducted discussions with the City of Philadelphia and affiliated partner agencies concerning the Philadelphia HOMES plan (which encompasses initiatives administered by PHDC) and potential coordination with Act 129 programs (see PECO’s response to CAUSE-PA-2-5). PECO anticipates formally engaging with PHDC following approval of the Phase V Residential CSP contract to identify and evaluate opportunities for integration between WAP and Act 129 programs. The scope, structure, and implementation framework for such coordination will be determined after those discussions.

Responsible Witness: Marina Geneles

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company :
For Approval of its Act 129 Phase V : Docket No. M-2025-3057328
Energy Efficiency and Conservation Plan :

**PREPARED HEARING EXHIBIT LIST OF THE COALITION FOR AFFORDABLE
UTILITY SERVICES AND ENERGY EFFICIENCY IN PENNSYLVANIA AND THE
TENANT UNION REPRESENTATIVE NETWORK**

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) and the Tenant Union Representative Network (TURN) intend to move for admission of the following evidence at the February 2, 2026, evidentiary hearing in the above-captioned matter:

- Direct Testimony of Jim Grevatt on Behalf of the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania and the Tenant Union Representative Network (CAUSE-PA/TURN Statement 1)
 - 62 pages of written testimony
 - Appendix A: Resume of Jim Grevatt & List of Proceedings in which Jim Grevatt has testified
 - Appendix B: Cited Discovery Responses
- Verification of Jim Grevatt

CAUSE-PA and TURN are in the process of reviewing rebuttal testimony filed by PECO Energy Company and developing cross examination of PECO witnesses. As such, CAUSE-PA and TURN may have additional exhibits to introduce as evidence at the evidentiary hearing.



Respectfully Submitted,
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Dated: January 30, 2026

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PECO Energy Company for :
Approval of Its Act 129 Phase V Energy : Docket No. M-2025-3057328
Efficiency and Conservation Plan :
:
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**TESTIMONY
OF
JEANEEN A. ZAPPA**

**On Behalf of
Keystone Energy Efficiency Alliance**

Topics Addressed:
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January 20, 2025

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1 **I. IDENTIFICATION**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS?**

3 A. My name is Jeaneen Ann Zappa, and I am the Executive Director at the Keystone Energy
4 Efficiency Alliance (“KEEA”), a 501(c)(6) trade association of 81 energy efficiency
5 organizations who do business in the Commonwealth of Pennsylvania. Our mailing
6 address is 614 S. 4th Street, Unite #307, Philadelphia, PA 19147. I also serve as the
7 Executive Director of the affiliated 501(c)(3) nonprofit organization, the Energy
8 Efficiency Alliance (“EEA”), which is dedicated to advancing energy efficiency in the
9 Mid-Atlantic through education and awareness.

10 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

11 A. My testimony today is submitted on behalf of KEEA.

Q. PLEASE BRIEFLY DESCRIBE YOUR QUALIFICATIONS?

A. My career experience spans roles in the for-profit, public, and not-for-profit sectors. Since July of 2021, I have served as the Executive Director for KEEA, after joining the organization one year prior. For the past five years, I have worked with our trade association energy efficiency business members in Pennsylvania and New Jersey to understand and represent their viewpoints and concerns. These energy efficiency member businesses focus on areas spanning from legal counsel, equipment manufacturing, contractors, and program implementers in the residential, commercial, and industrial sectors. Our work focuses on critical industry shaping trends and their impacts on businesses and individuals.

Prior to joining KEEA, I served as the Executive Director of Conservation Consultants Inc. ("CCI") for seven years. CCI implemented utility programs with a focus on residential energy efficiency and healthy home performance programs. CCI worked with multiple utility companies in the Commonwealth, including Columbia Gas of Pennsylvania, Peoples Gas Company, and Duquesne Light Company on both Act 129 and LIURP programming. CCI also implemented other programs that included those focused on home repairs and energy retrofits, energy efficiency marketing, and comprehensive home energy audits. Prior to joining CCI my roles include serving as the first Sustainability Manager for Allegheny County, where I was part of a large ESCO project team for County facilities. My early career involved work in marketing for the health care and technology sectors.

I hold a dual degree in Magazine Journalism and Marketing from Syracuse University and an MBA from the University of Pittsburgh. My complete resume is attached to my testimony as Exhibit KEEA-1.

Q. HAVE YOU PRESENTED TESTIMONY IN PROCEEDINGS BEFORE THIS OR OTHER REGULATORY BOARDS?

A. Yes. I presented verbal testimony before the Pennsylvania PUC as part of a hearing on Resource Capacity (Docket No. M-2024-3051988) held on November 25, 2024 with subsequent written testimony submitted in January 2025.

II. INTRODUCTION AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony will be focused on addressing certain aspects of PECO Energy Company's ("PECO" or the "Company") Act 129 Phase V Energy Efficiency and Conservation Plan Filing ("Phase V Plan"). Those aspects are the importance of maximizing ratepayer-funded energy efficiency, health and safety barrier mitigation, coordination of marketing activities, coordination of electrification programs, and workforce development and training.

Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?

A. Yes. I am sponsoring the following exhibits:

- Exhibit KEEA-1 – Resume of Jeanene Zappa

- Exhibit KEEA-2 - H&S Budgets Workpaper

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. First I discuss the importance of ratepayer-funded energy efficiency and the myriad benefits it provides the Commonwealth. I then discuss the importance of health and safety barrier mitigation and recommend that PECO allocate funding, as their peers did, specifically for the mitigation of health and safety barriers that are preventing the

households with the greatest need for energy savings from participating in their programs. Next, I discuss how PECO can coordinate marketing activities with other EDCs to better leverage program outcomes and utilize funding to spread energy efficiency messaging to as many residents of the Commonwealth as possible. I then explore how PECO should coordinate efforts with other state electrification programs to more robustly serve their customers by ensuring that all incentives available are applied toward their energy saving projects. I finish up with recommendations on how PECO should address workforce development and more specifically provide training to the workforce on the most impactful areas of need to better serve their customers and lead to deeper energy savings. In summary, I recommend that, as part of its Phase V Plan, PECO should:

1. Include an assessment in its low income program that aligns with the Healthy Home Evaluator evaluations from the Building Performance Institute and adopt the Healthy Home Evaluator certification as a requirement for contractors;
2. Align with the other Act 129 EDCs around developing and supporting a single point of entry for their Act 129 programs under a single umbrella label;
3. Include in their annual report the to the PUC a summary of their outreach activities to each sector (small business, commercial and industrial, residential, and low income);
4. Conduct a survey to track awareness of Act 129 programs and to publicly share the findings and use this information as a basis for further considering marketing coordination;
5. Coordinate with the Pennsylvania Department of Environmental Protection (“PA DEP”) on exactly how incentive “braiding” will occur, including ways to streamline application processes and reduce duplicative data collection;
6. Make efficient heat pump and heat pump water heater (“HPWH”) incentives available to customers regardless of the fuel used for space and water heating prior to the purchase of the new high efficiency equipment;
7. Cover any costs for ASHRAE Level 2 audits not covered by the HER program for participants in both programs;

8. Enter into a formal data sharing partnership between the PA DEP, Resource Innovations, EDCs and others to streamline data flow and expedite braided incentive processing, and provide the formal partnership plan to interveners in this docket;
9. Report on the results of this formal coordination plan in the semi-annual and annual reports to the PUC to include metrics on the number of coordinated projects by measure and additional funds leveraged due to coordination;
10. Include a more robust workforce development training plan with specified budgets and participation projections in their Phase V Plan, focused on high efficiency cold climate heat pump technology, heat pump water heater technology, and a whole home comprehensive project approach and report on results in its semi-annual and annual reports.
11. Coordinate with the other Act 129 EDCs and state programs, such as the PA DEP's HEAR and TREC, to combine resources to deliver workforce development training on the focus areas referenced above

III. IMPORTANCE OF MAXIMIZING RATEPAYER FUNDED ENERGY EFFICIENCY

Q. WHAT IS THE IMPORTANCE OF ENERGY EFFICIENCY TO THE ECONOMY OF PENNSYLVANIA?

A. Energy efficiency has a significant economic impact on the Commonwealth of Pennsylvania, and continued investment through Act 129 will deliver both direct and indirect benefits to its businesses and residents. The energy efficiency industry employs 76,289 people in the Commonwealth, making it the largest component of Pennsylvania's clean energy sector jobs.¹ But it's not just the clean energy sector. Energy efficiency is the largest employer in all energy sectors in the Commonwealth – including energy transmission & distribution, nuclear, and traditional fossil fuels.² Additionally, the energy efficiency sector is a strong driver for small business growth and success, with nearly

¹ E2, *Clean Jobs Pennsylvania 2025* (Nov. 24, 2025) <https://e2.org/reports/clean-jobs-pennsylvania-2025/>.

² Building Performance Association, *Energy Efficiency Jobs in America – Pennsylvania* (Dec. 2025) <https://building-performance.org/education/resources/pennsylvania-energy-efficiency-jobs-in-america-report/>.

93% of energy efficiency businesses employing fewer than 100 people.³ Each job and each business sends a ripple of economic activity through Pennsylvania from wages, payroll taxes and direct expenditures on goods and services. Moreover, energy efficiency has been a growing jobs sector for the past several years.

Q. WHAT IS THE IMPORTANCE OF ENERGY EFFICIENCY TO THE PEOPLE OF PENNSYLVANIA?

A. Energy efficiency plays a critical role in delivering multiple benefits to the people of Pennsylvania. Energy savings and the associated cost savings are perhaps the biggest direct benefit of energy efficiency in the Commonwealth. In the most recent measured year of Act 129 ('23-'24), every dollar spent on energy efficiency resulted in a return of \$1.44 in benefits, including avoided energy costs and operation and maintenance savings.⁴ Across the current five-year phase, Act 129 programs are expected to achieve nearly a 3.1% cumulative reduction in annual electricity use statewide, which directly lowers participant bills.⁵ According to a recent RMI Strategic Insight, energy efficiency saves the average Pennsylvanian \$500 annually.⁶ Notably, Pennsylvania's energy cost savings is just under half of the national average savings of \$1,000 per person from energy efficiency, suggesting that Pennsylvania's energy efficiency programs have room to achieve higher savings still.⁷ Weatherization programming plays a unique role as an

³ *Id.*

⁴ Public Utility Commission, *SWE Final Annual Report: Act 129 Program Year 15*, 13 (Dec. 14, 2024) https://www.puc.pa.gov/media/3262/swe_py15_final_annual_report120424.pdf.

⁵ *Id.* at 15.

⁶ RMI, *How to Save Money for All Americans: Efficiency* (Apr. 14, 2025) <https://rmi.org/how-to-save-money-for-all-americans-efficiency/>.

⁷ *Id.*

economic revitalization tool for low-income communities. The return on investment for these programs is compelling, where every \$1.00 invested returns \$1.72 in energy benefits, contributing to an annual household energy cost savings of over \$372.⁸

Commercial properties can also make improvements through energy efficiency and reap significant savings. According to the US Environmental Protection Agency, commercial properties can reduce their energy consumption by up to 50% through energy efficiency alone.⁹ The Department of Energy reports that commercial buildings achieve an average energy savings of 30% when they implement comprehensive energy efficiency measures.¹⁰ As evidence of this, the 540 commercial property owners participating in the Pittsburgh area 2030 District saw a 26.5% energy reduction and a \$56M combined reduction in their energy bills in 2023.¹¹

Energy efficiency also reduces carbon emissions, which improves public health. The Pittsburgh 2030 District saw a 52.3% reduction in carbon across participating commercial properties, and the PA PUC's own report shows 2,115,577 short tons of avoided carbon dioxide emissions so far in Phase IV.¹² Public health research shows that carbon

⁸ U.S. Dept. of Energy, *Weatherization Assistance Program Fact Sheet*, 1 (June 2022) https://www.energy.gov/sites/default/files/2022-06/wap-fact-sheet_0622.pdf.

⁹ CIM, *Energy Efficiency in Commercial Buildings* (Apr. 7, 2025) <https://www.cim.io/blog/energy-efficiency-in-commercial-buildings#:~:text=The%20U.S.%20Department%20of%20Energy%20reports%20that%20commercial,savings%20directly%20boost%20operational%20budgets%20and%20profit%20margins.>

¹⁰ *Id.*

¹¹ Green Building Alliance, *Pittsburgh 2030 District: 2024 Annual Progress Report* (May 2025) https://www.gba.org/wp-content/uploads/Pittsburgh-2030-District-2024-Progress-Report_Reduced-Size-002.pdf.

¹² Compiled from Act 129 Phase IV SWE Annual Reports, PY13-16. <https://www.puc.pa.gov/filing-resources/issues-laws-regulations/act-129/act-129-statewide-evaluator-swe/>.

emissions reduction strategies significantly enhance human health, improving air quality, and reducing mortality and morbidity.¹³ Energy consumption and energy production generate the highest amounts of Greenhouse Gas (GHG) emissions, including Carbon Dioxide in Pennsylvania. Electricity generation contributes 29% of the state’s GHG total, and the industrial sector’s energy consumption contributes 31% of the total.¹⁴

Q. WHAT ARE SOME OTHER WAYS THAT ENERGY EFFICIENCY BENEFITS THE COMMONWEALTH?

A. Energy efficiency reduces the strain on our energy grid. In a time of rising electricity rates with increased demand on the grid, reducing energy usage provides a twofold benefit – both as a cost savings to the rate payer and as a way to reduce load on the already strained power grid. First, costs to ratepayers are indeed higher: Pennsylvania ranked 14th on a list of the most expensive for energy in the nation.¹⁵ The problem is projected to escalate with rising forecasts for electrical demand. PJM estimates an increased load of 32 GW from 2024 to 2030.¹⁶ Pennsylvanians face higher electricity bills, with the average charge hitting 20.49 cents/kWh in October of 2025 for the residential sector.¹⁷ This follows a long upward climb in rates, particularly during periods

¹³ Abdala SA, Khomsi K, Houdou A, *et al.* Emission Reduction strategies and health: a systematic review on the tools and methods to assess co-benefits. *BMJ Open* (Dec. 9, 2024) <https://pmc.ncbi.nlm.nih.gov/articles/PMC11628954/>.

¹⁴ *Pennsylvania Greenhouse Gas (GHG) Inventory*, <https://www.pa.gov/agencies/dep/residents/climate-change/ghg-inventory>.

¹⁵ Nicole Spector, “Energy Bill Breakdowns in All 50 States” *GoBankingRates* (Apr. 8, 2025) https://www.gobankingrates.com/money/economy/energy-bill-breakdowns-in-all-50-states/?hyperlink_type=manual&utm_term=incontent_link_4&utm_campaign=1319350&utm_source=yahoo.com&utm_content=6&utm_medium=rss.

¹⁶ *2025 Long-Term Load Forecast Report Predicts Significant Increase in Electricity Demand*, PJM Inside Lines (Jan. 30, 2025) <https://insidelines.pjm.com/2025-long-term-load-forecast-report-predicts-significant-increase-in-electricity-demand/>.

¹⁷ *Electric Power Monthly*, U.S. Energy Information Administration https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_5_06_a.

of summer peak demand. August bills in all states increased from 2015 to 2023 by an average of nearly 27%. That roughly equals an increase of \$40 for just the month of August. Utility rates over the same period rose on average by 23.2%. The average August residential kWh consumption fell during the same period by 2.83%, so while energy usage decreased, both what people were charged per unit of energy and how much they paid increased.¹⁸ Energy efficiency – particularly energy efficiency measures that also shave peak demand – helps both ratepayers’ corporate coffers and personal financial outlook, but it also helps the entire regional transmission grid by reducing the load necessary to flow through the grid.

For Pennsylvanians who are low-income, this is even more critical. National research shows that energy insecure households were billed more than other households for energy, making energy savings critically important to these families.¹⁹ According to the American Council for an Energy Efficiency Economy’s 2020 report, “How High Are Household Energy Burdens?,” the mid-Atlantic region on average experiences an energy burden of 3.4%, while low-income households experience a much higher median of 9.4% energy burden. The ACEEE updated fact sheet from 2024 shows that low income renters and homeowners in the Pennsylvania cities of Pittsburgh and Philadelphia have a much higher average energy burden still (approximately 16%). These households need and deserve a robust investment in energy efficiency in the Commonwealth. As explained further throughout this testimony, ensuring that households which are systematically

¹⁸ “Study: Despite Gains in Energy Efficiency and Green Energy Generation – Electricity Bills have Increased 27% Since 2015”, *Texas Electricity Ratings* (Aug. 2024) <https://www.texaselectricityratings.com/resources/study-despite-gains-in-energy-efficiency-electricity-bills-are-higher>.

¹⁹ “U.S. energy insecure households were billed more for energy than other households,” U.S. Energy Information Administration (May 30, 2023) <https://www.eia.gov/todayinenergy/detail.php?id=56640>.

deferred from existing energy efficiency programs can access these resources saves money for all ratepayers in the long term. When the most egregiously poor performing dwellings are repaired and are improved to be higher performing homes, the ratepayer costs for other services are lessened, along with reduced demand on the grid.

IV. HEALTH AND SAFETY BARRIER MITIGATION

Q. WHY IS IT IMPORTANT TO PROVIDE SPECIFIC FUNDING FOR HEALTH AND SAFETY BARRIER MITIGATION?

A. Today, all too often, health and safety-related issues prevent participation in residential, low-income energy efficiency programs. Anecdotal evidence suggests up to 30% of prospective program participants are deferred from services due to health and safety issues which prevent the performance of blower door tests, the installation of insulation, and air sealing to make a home less drafty. These barriers include items such as knob and tube wiring, significant roof damage, various moisture issues, the presence of mold, and the presence of asbestos. Common HVAC issues like cracked heat exchangers or even a fossil fuel heating system that has not received a clean and tune for several years can lead to high carbon monoxide levels, which also prevents a customer from participating in much needed energy efficiency programming. While these HVAC situations are problematic, they can be addressed through dedicated pools of funding for emergency repairs to heating equipment or to remediate other health and safety issues, while other reasons for deferrals cannot. Choosing to invest in these much-needed improvements will help routinely deferred households, taking the worst-performing homes and transforming them into safer, more comfortable homes that have lower energy bills.

Moving customers from deferral lists into programs also helps to increase program participation rates and misconceptions that energy efficiency programs are saturated. There are many homes that have not yet received but desperately need services; energy efficiency programs just have not offered the breadth of health and safety repairs required to allow for the necessary improvements to a large percentage of households in need. Making these robust health and safety improvements is making a commitment to longer-term improvements for customers that are systematically overlooked.

Q. DID THE COMMISSION ADDRESS THE ISSUE OF HEALTH AND SAFETY BARRIER MITIGATION IN ITS IMPLEMENTATION ORDER?

A. Yes. Page 167 of the Implementation Order stated that the EE&C Plan Template will include a section to discuss the health and safety issues that arise in the delivery of the Act 129 services. In addition, the Commission states that the “remediation of health and safety issues is an ideal area for coordination” (Order, p. 167).

Q. WHAT DOES PECO PROPOSE REGARDING HEALTH AND SAFETY BARRIER MITIGATION IN THEIR PHASE V PLAN?

A. PECO has allocated \$3,000,000 or 6.4% of the total low-income budget specifically for the mitigation of Health and Safety (“H&S”) barriers. This is the highest percentage allocated among all EDCs in their Phase V Plans. On page 161 of their Phase V plan PECO details their H&S program as follows, “PECO recognizes the importance of addressing health and safety barriers to ensure equitable access to energy efficiency programs for residential customers. As part of the broader Phase V Residential Energy Efficiency portfolio, the program will allocate up to \$3,000,000 to fund health and safety measures for low-income households. The program will take proactive steps during a customer's in-home appointment. Energy advisors will identify any obstacles that could

prevent the installation of energy efficiency measures such as electrical safety concerns, combustion issues, mold, or asbestos and may install safety devices, such as a smoke/carbon monoxide detector, when appropriate. By addressing these issues, the program ensures that homes are not deferred from participation due to such barriers.”

Q. DOES PECO ADEQUATELY ADDRESS HEALTH AND SAFETY BARRIER MITIGATION IN THEIR PHASE V PLAN?

A. Yes. I applaud PECO’s demonstrated leadership in carving out a substantive budget allocation for the mitigation of H&S barriers. This action sets the stage for a larger impact in the number of customers that will be able to receive energy efficiency services as part of PECO’s Act 129 programming.

Q. WHAT HEALTH AND SAFETY MEASURES SHOULD BE COVERED BY THE HEALTH AND SAFETY FUNDS?

A. In the direct testimony provided by Witness Urmila Dighe as part of PECO’s Phase V Plan filing it is stated that their H&S allocation can be used for the mitigation of issues “...such as mold, electrical and structural issues...” (PECO Statement No. 1, Direct Testimony of Urmila Dighe, PECO’s Senior Manager of Energy Efficiency Portfolio, at 9-10). I want to ensure that funding for health and safety barrier remediation should address the full range of problems served in the state’s former Whole House Preservation program. Specifically, issues tied to moisture – like mold and rot, and the consequently needed repairs to building envelope or interior – should be eligible as a health and safety measure. Knob and Tube wiring upgrades should be permitted repairs. Similarly, significant combustion hazards like excessive wood shavings or other debris or even hoarding situations present a health and safety obstacle. Additionally, health problems such as pest infestations, the remediation of asbestos, and mold treatment should be

covered. Additionally, lower-cost items such as heating system clean and tunes, repairs, and cooktop/oven repairs should be allowed if needed to reduce carbon monoxide levels.

Q. HOW SHOULD PECO IDENTIFY HEALTH AND SAFETY ISSUES THAT NEED TO BE REMEDIATED?

A. With standardized training and certification now well established, PECO should incorporate an assessment that aligns with the Healthy Home Evaluator evaluations from the Building Performance Institute. They should also adopt the Healthy Home Evaluator certification as a requirement for contractors. This credential is designed to augment standard Building Performance Institute credentials like the Building Analyst, Quality Control Inspector, Energy Auditor, or MultiFamily Building Analyst. Additionally, under Phase V, collecting and reporting the data to the PA PUC would lead to a bigger picture of the value of the overall health and safety program, much like today's carbon emissions reduction calculations and reporting in the Act 129 program. While not part of energy savings calculations, carbon tracking provides valuable information on Act 129's impact.

V. COORDINATION OF MARKETING ACTIVITY

Q. WHAT DID THE PHASE V IMPLEMENTATION ORDER SAY REGARDING THE COORDINATION OF MARKETING ACTIVITY?

A. While the Commission did not establish the requirement of a common statewide marketing platform, they reiterated their position that EDC's should coordinate marketing efforts when likely to leverage program outcomes (Phase V Order, p. 190)

Q. WHAT COORDINATION OF MARKETING DOES PECO DESCRIBE IN THEIR PHASE V PLAN?

A. PECO addresses program level marketing primarily by directing those efforts to their CSPs, "The CSP will be responsible for program marketing, coordinating with PECO's Marketing and Promotions team, E&O CSP, and the Exelon Energy Efficiency

Marketing Agency for messaging design and consistency. Marketing strategies will vary by component.” (PECO Plan at 29.) However, PECO does not address the coordination of marketing efforts with other EDC’s to leverage program outcomes in their Phase V Plan. They do, however, seek to engage multiple stakeholders as they state, “PECO’s Phase V Plan highlights the availability of multiple funding sources to help customers maximize participation and project impact. To facilitate awareness and accessibility, PECO will engage contractors through targeted outreach and provide education. These strategies are designed to reduce barriers, enhance affordability, and deliver greater value across PECO’s service territory.” (PECO Plan at 160)

Q. DOES PECO ADEQUATELY ADDRESS MARKETING COORDINATION IN THEIR PHASE V PLAN?

A. No. PECO needs to provide greater clarity and explicitly state how it will handle marketing coordination with other EDCs. In my role, I regularly hear from front-line community group representatives and business organizations that their members are not aware of existing Act 129 programs, nor how to access them. Each utility has elected to lean into creating their own branded web sites and marketing material about their Act 129 programs. They vary significantly in how information is presented to consumers and how to find the detailed information on rebates and eligibility. For a business owner or head of household seeking assistance, this framework can be confusing.

I recommend that PECO, along with the other participating EDCs should align around developing and supporting a single point of entry for their Act 129 programs under a single umbrella label. For a minimum of disruption to existing branding and structure, this web site could then re-direct the visitor to each utility’s existing web sites and services. However, the joint utilities should invest in marketing this single umbrella entry

point, using all available successful marketing tactics, in addition to leveraging key industry groups. Specifically - establishing or refreshing partnerships and outreach channels with the network of Chambers of Commerce, property owners and managers' associations and other likely access points to the state's business owners and commercial property owners can help to engage business owners – especially small business owners who typically do not have the benefit of professional Certified Energy Managers to guide them or property management services who may be more familiar with energy efficiency programs and opportunities. Given the absence of a statewide benchmarking requirement for commercial property owners relative to their energy efficiency performance, the need to build this common informational runway from the combined utilities is imperative. Many times, businesses may have multiple locations in multiple electric territories, so a single point of entry can help to reduce confusion. Further, the EDCs should be required to include in their annual report the PUC a summary of their outreach activities to each sector (small business, commercial and industrial, residential, and low income) to better gauge the success or shortcoming of those efforts in each sector. Lastly, I recommend that the EDCs conduct a survey to track awareness of Act 129 programs and to publicly share the findings and use this information as a basis for further consideration of marketing coordination.

VI. COORDINATION WITH ELECTRIFICATION PROGRAMS

Q. WHAT DID THE COMMISSION’S PHASE V IMPLEMENTATION ORDER SAY REGARDING AVAILABILITY OF HIGH EFFICIENCY HEAT PUMP AND HEAT PUMP WATER HEATER (“HPWH”) INCENTIVES?

A. The Commission ordered the EDCs to make these “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.” (Phase V Final Order, p.174).

Q. DID PECO INCLUDE THESE MEASURES IN THEIR PLANS?

A. Yes. PECO lists Heat Pumps and HPWHs as measures in their programs including in Table 8: Residential Eligible Measures which starts on p.32. PECO does not describe, “how program delivery will target these bundled, or interwoven, funding opportunities,” (Phase V Final Order, p.174) as the PUC directs.

I recommend that the EDCs, including PECO, formally coordinate with the PA DEP on exactly how this incentive “braiding” will occur and provide notice to all intervenors in this docket with the formal coordination plan, once finalized. Further, the results of this formal coordination plan should be tracked and reported in the semi-annual and annual reports to the PUC and should include metrics such as the number of coordinated projects by measure and additional funds leveraged due to coordination.

I want to ensure that PECO will make these incentives available to customers regardless of the fuel used for space and water heating prior to the purchase of the new high-efficiency equipment.

Q. WHAT OTHER WAYS DID THE COMMISSION REQUIRE THE EDCs TO COORDINATE WITH OTHER PROGRAMS?

A. On page 187 of the Phase V Final Implementation Order, the Commission required the EDCs to “co-fund ASHRAE Level 2 audits or similar technical scoping studies with other program administrators.”

Q. DOES PECO FOLLOW THIS DIRECTIVE?

A. Yes. PECO lists ASHRAE Level 2 audits in their plan in Table 20: Residential Low-Income Subprogram Eligible Measures on page 76, in Table 21: Residential Low-Income SubProgram Estimated Savings and Participation on page 89, and in Table 32: Non-Residential Eligible Measures on page 119. Further, in their Commercial and Industrial program PECO offers, “Engineering Support and Audits: Provides customers with direct access to expert engineering support to help identify, evaluate, and implement energy savings opportunities. Includes ASHRAE Level 2 audits and leverages braided funding opportunities to minimize upfront costs and support customer participation.” (PECO Plan at 108)

This is an important first step, and I recommend that PECO make sure that they cover any costs for the ASHRAE Level 2 audit that are not covered by the HER Program.

Q. WHY IS IT IMPORTANT TO COVER THE ENTIRE ASHRAE LEVEL 2 AUDIT COST?

The target market for this offering is multifamily buildings that often do not have the funding to perform a comprehensive audit, such as ASHRAE Level 2. These customers are traditionally underserved and eliminating the cost barrier for an audit should help overcome some of the historical underinvestment in the sector. This is the reason that PA DEP has decided to focus the HER program specifically on multifamily buildings in the Commonwealth. Additionally, low-income multifamily buildings need particular support right now, as rising prices hit these residences particularly hard. Less visibly, the rules governing subsidized housing mean that higher utility costs often reduce allowable rent, leaving landlords with fewer resources to invest in energy-saving upgrades.

VII. WORKFORCE DEVELOPMENT

Q. WHY IS WORKFORCE DEVELOPMENT IMPORTANT?

A. Workforce development is an important part of a successful utility energy efficiency program. Ensuring that the workforce is properly trained and educated on the latest technologies, implementation strategies, and customer-centric project approaches is critical to achieving positive outcomes in overall energy savings, occupant health and safety, and project cost-effectiveness, for the utility program administrator, the participating contractor, and the utility customer.

Q. DOES PECO INCLUDE WORKFORCE DEVELOPMENT IN THEIR PHASE V PLAN?

A. No. There are a few references to training and trade ally management throughout PECO's Phase V Plan but no specifics on training or workforce development are provided. First, PECO states that their CSP will "...actively recruit trade allies and provide scheduled training and ongoing support to ensure they have the skills and resources necessary to

promote the Non-Residential program effectively.” (PECO Plan pg. 110) In addition, PECO states in reference to trade ally coordination that “All trade allies will be offered training opportunities and provided appropriate materials and technical support. The intent is to facilitate program awareness and knowledge, provide strategies for selling energy efficiency and peak demand reduction to their customers, and educate the trade allies.” (PECO Plan pg. 155)

Q. DOES THIS ADEQUATELY ADDRESS WORKFORCE DEVELOPMENT IN THE PECO PHASE V PLAN?

A. No. The references made to training throughout PECO’s Phase V Plan are both non-specific and also have a primary focus on training trade allies on their programs to ensure that trade allies are in the best position to raise program awareness and knowledge as well as equipped to sell projects to customers. In addition, there are no references made to workforce development or any specific technical training programs.

Q. WHAT WORKFORCE DEVELOPMENT TRAINING NEEDS TO BE INCLUDED IN THE PLAN FOR IT TO BE CONSIDERED ADEQUATE?

A. I recommend that PECO include a more robust workforce development training plan with specified budgets and participation projections in their Phase V Plan. The training plan should be focused on high efficiency cold climate heat pump technology, heat pump water heater technology, and a whole home comprehensive project approach. The focus on high efficiency cold climate heat pumps and heat pump water heaters would address two technologies that are critical to the success of PECO’s Phase V Plan. When these two technologies are installed in the wrong application and/or not sized correctly for that application, less than desired energy savings will be realized, leading to program under performance and customer dissatisfaction. The focus on a whole home comprehensive approach training would lead to deeper project energy savings and occupant health and

safety being addressed at the same time. This approach, where a project is evaluated by the needs of the home and the customer with all programs available for that specific home being utilized, streamlines the approach for the customer and leads to overall positive outcomes for the utility program administrator, the participating contractor, and the utility customer.

Furthermore, I recommend that PECO coordinate with the other Act 129 EDCs and state programs, such as the PA DEP's HEAR, to combine resources to deliver workforce development training on the focus areas referenced above. The same focus areas are important to all Act 129 EDCs and other state programs. This coordination would "improve the leverage ratio of Phase V EE&C plans", similar to that of the coordinated marketing efforts that the Commission urged EDCs to explore on page 190 of the final Act 129 Implementation Order.

Q. WHAT METRICS AND REPORTING SHOULD BE INCLUDED IN THE RECOMMENDED WORKFORCE DEVELOPMENT TRAINING PLAN?

A. To measure the success of the Workforce Development Training Plan, the following metrics should be reported on in PECO's semi-annual and annual reports.

- Training Topic
- Number of Participants
- Number of Contractor/Company Participants
- Future Scheduled Training Events

VIII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

VERIFICATION

I, Justin L. Carpenter, Esquire, hereby state that the facts above set forth are true and correct (or are true and correct to the best of my knowledge, information and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein made are subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Respectfully submitted,

/s/ Justin L. Carpenter

Justin L. Carpenter, Esq.

Policy Counsel

jcarpenter@keealliance.org

January 20, 2026

Executive Leader/Government Affairs Advocate/Energy Efficiency Champion

*Track record of success in nonprofit executive leadership, setting strategic direction,
and advancing policy objectives & awareness.*

Dynamic, hands-on leader, experienced in handling fast-paced daily operations and building and leading small talented teams through coaching and mentorship. Effective collaborator with strong partnerships and industry network. Strategic thinker able to navigate complex policy issues, and deliver creative and strategic messaging to constituents. Solid executive, seasoned in working with boards of directors and closely managing the P&L/financial performance of the organization.

Career Experience

Keystone Energy Efficiency Alliance/Energy Efficiency Alliances of New Jersey & affiliated Energy Efficiency Alliance

EXECUTIVE DIRECTOR (July 2021 to present; started July 2020 as Director of Operations)

Lead 7-person nonprofit and trade associations focused on advancing energy efficiency and EE-adjacent industry in Pennsylvania and New Jersey. Establish and work through key partnerships, secure funding, manage business memberships and services, and with Board oversight, set strategic policy priorities and objectives.

- Provided “steady hand” management: Helmed the organization through an executive change and 90% staff turnover. Ramped up new team members. Identified and added needed back-office and operating systems (HR, CRM, committees).
- Boosted organization profile: Led efforts to conduct increasingly successful 2022, 2023 and 2024 Annual Policy Conferences, growing sponsorships from \$80 to \$100k and attendance from 160 to 270, featuring multiple speakers and sessions. Drove planning process and directed efforts to grow.
- Honed policy focus: Crafted inaugural process to winnow and prioritize policy goals, engaging staff, Committee and Board members. Sparked and coalesced board/committee/staff work to introduce first set of clear, documented ‘policy principles’ for the organization.
- Pushed policy actions: Engaged with coalition partners to pass expanded Commercial Property Assessed Clean Energy legislation in PA in support of energy efficiency, resilience, and indoor air quality measures plus multi-family buildings. Supported team’s work on Whole Home Repair in PA & NJ and PJM. Led efforts on several workforce development events and projects. Wrote & delivered testimony/comments.
- Served as Spokesperson: Speak at multiple public events and represent the organizations publicly and with media. Selected to serve on PA Governor Josh Shapiro’s Transition Team for Energy & Environment. Delivered various presentations on federal funding incentives, SWPA decarbonization, clean energy workforce, rising energy bills, etc. and represented the organization at press conferences and in media interviews.

Conservation Consultants Inc. – Pittsburgh, Pennsylvania**EXECUTIVE DIRECTOR** (October 2013 to June 2020)

Strategically led and transformed the operational performance of a 40-year-old non-profit business with the aid of a 25-member team. Implemented energy efficiency programs for low- and moderate-income households for utility clients, serving approximately 4500 households annually. Strengthened strategic alliances and participation in high profile public events.

- Negotiated and secured three major contracts that represented \$2.5M in new business within the first four months of tenure. Renewed each contract three years later before expiry.
- Constructed and strengthened a management team that enabled the team to become one of the first “Healthy Home Evaluator” certified teams in the entire country.
- Refreshed an 11-year-old strategic plan after evaluating current and forecasted business operations. Overhauled the company’s brand identity, mission statement, and customer commitment.
- Delivered on goal of 2850 annual home visits, despite challenges presented by client’s failed back-office system upgrade project, developing an in-house data-mining technique to generate leads.

Allegheny County Government – Pittsburgh, Pennsylvania**SUSTAINABILITY MANAGER** (2009 to 2013)

Constructed the first-ever sustainability program office for the Allegheny County government. Drafted and implemented environmentally appropriate best practices in all facilities, operations, and departments.

- Successfully submitted bids that secured \$40k in grants for the South Park Sustainable planning project, \$153k for a planned solar hot water project, and \$250k for a planned geothermal project.
- Spearheaded efforts that resulted in the county being awarded the “Top Performer” award in Sustainable Pittsburgh’s annual “Green Workplace Challenge.”
- Boosted staff engagement from 20 to 200 after implementing new tools that enabled transparent communication across a 6k member, multiple-site enterprise.

Green Building Alliance – Pittsburgh, Pennsylvania**DEPUTY DIRECTOR** (2006 to 2008); **BUSINESS DEVELOPMENT DIRECTOR** (2008 to 2009)

Directly oversaw efforts that guided daily operations, explored new business development relationships, and secured added revenue growth for the entire organization.

- Expanded the attendance of the annual conference from 150 to 400 and membership from 125 to 370 with \$54k in membership dues. Secured additional donations/sponsorships of \$150k+.
- Recruited and selected the team tasked with the build-out of a new green office space to LEED®-ND Platinum certification.
- Guided the daily operations of the company, hiring an additional five team members and directly supervising a team of eight. Strengthened skills through training and mentorship opportunities.
- Facilitated compelling presentations and publicly represented the company. Improved relationships and satisfaction throughout the customer base.

Additional Professional Experience

DIRECTOR OF MARKETING ▪ Summa Technologies – Pittsburgh, Pennsylvania

Established robust strategy for customer retention that captured customer involvement in five new case studies. Facilitated “thought leader” events that captivated customer audiences.

MANAGER OF STRATEGIC ASSETS ▪ Vocollect – Pittsburgh, Pennsylvania

Implemented a strategic marketing plan that protected intellectual property, strengthened product development, and supported a domestic sales force of 15 alongside a 20-member international distribution network.

DIRECTOR OF STRATEGIC MARKETING ▪ Descartes Systems Group – Pittsburgh, Pennsylvania

Guided a cross-functional team in the demo creation of a five-product portfolio. Executed new program initiatives in record time. Empowered the sales team with new literature, training, and other tools.

MANAGER OF MARKETING COMMUNICATIONS ▪ E-Transport – Pittsburgh, Pennsylvania

Drafted and published key messaging, marketing strategy, and support materials for sales teams. Flawlessly launched 10+ software products that captured and retained new/existing customers.

Education & Credentials

Master of Business Administration (MBA)

University of Pittsburgh, Joseph M. Katz Graduate School of Business – Pittsburgh, Pennsylvania

Bachelor of Science – Magazine Journalism and Bachelor of Science – Marketing

Syracuse University – Syracuse, New York

Professional Development

- Certificate – Principles of Building Performance Institute (BPI); Trained in Home Energy Score rating tool
- LEED® Accredited Professional – U.S. Green Building Council, Leadership in Energy & Environmental Design
- Graduate: Home Performance 101 – Dale Carnegie & Pragmatic Marketing Courses
- Graduate: CORO Center for Civic Leadership Women in Leadership Program
- Certificate: Society of Competitive Intelligence Professionals

Affiliations & Awards/Recognition

- Recognized by Cribs for Kids as the 2017 Women of Achievement Awardee (Environment Category)
- Member – Low-Income Advisory Council, PA Weatherization Assistance Program
- Member – (while at CCI) Keystone Energy Efficiency Alliance (KEEA) Annual Conference Planning Committee
- Past Member – Society of Competitive Intelligence Professionals, Supply Chain Management Professionals
- Past Board Member – PA Solar Center, NeighborWorks Western PA, Nine Mile Run Watershed Association, Allegheny Land Trust, Crafton Public Library, Hollow Oak Land Trust
- Current Board of Directors - Pittsburgh Gateways Inc.

Recent Presentations & Media Hits

Webinar Speaker: [SAM.gov](#) Registration and Training

November 20, 2025

<https://www.localgovernmentacademy.org/sam-gov-registration-training-and-live-webinar/>

ACEEE Energy Efficiency As a Resource Conference

October 8, 2025

Moderator of panel: Delivering Affordable Efficiency and Flexibility

Webinar Speaker: Act 129: Understanding the Basics

April 14, 2025

<https://energyefficiencyalliance.org/act-129-understanding-the-basics-april-14-2025/>

Webinar Speaker: Why is My Electricity Bill So High?

March 4, 2025

<https://www.youtube.com/watch?v=A0w-llk86f0>

Webinar Speaker: Understanding PRESS: The Proposed New Reliable Energy Standard for PA

April 29, 2024

<https://energyefficiencyalliance.org/understanding-press-the-proposed-new-reliable-energy-standard-for-pa/>

Workforce Development: The Clean Energy Jobs Challenge in Southwest PA

March 30, 2023 – Speaker and co-organizer in collaboration with Sustainable Pittsburgh and E2.

Saving Energy Together - CLEAResult - PA Energy Conference

March 8 – 9, 2023 – Speaker on New Federal Financial Incentives for Energy Efficiency and led session on Act 129.

Organized event:

March 15, 2023 - KEEA & EEA-NJ's webinar on "Diversify or Die" about supply chain diversification.

Southwest PA Decarbonization Forum - Pennsylvania Environmental Council

March 16, 2023 – Panelist on "Creating Jobs & Driving Economic Growth"

Media Notes:

Trib Live - June 12, 2025

<https://triblive.com/local/regional/republican-budget-bill-will-cost-thousands-of-clean-energy-jobs-millions-in-investment-advocates-say/>

Republican budget bill will cost thousands of clean energy jobs, millions in investment, advocates say

PA Environmental Digest Blogspot - July 22, 2025

<https://paenvironmentdaily.blogspot.com/2025/07/what-ai-data-center-energy-summit.html>

What The A.I. Data Center & Energy Summit Missed: Exploding Electricity Demand Already Raising Prices - Ratepayers Need Protection; No Longer An 'All Of The Above' Energy Strategy

Tribune Review - July 21, 2025

<https://community.triblive.com/news/3841186>

Gregory Bengnardi and Jeaneen A. Zappa: Local action can protect Allegheny County from rising energy costs

Washington Examiner - June 30, 2025

<https://www.washingtonexaminer.com/news/3458301/debated-energy-tax-credits-necessary-pennsylvania/> Debated energy tax credits still necessary in Pennsylvania, says industry

Evergreen Press Release - April 15, 2025

<https://www.evergreenaction.com/press/new-report-shapiro-administration-rep-steele-and-keystone-energy-efficiency-alliance-join-evergreen-to-highlight-that-fixing-pjm-can-lower-energy-costs-and-create-jobs-across-the-mid-atlantic>

NEW REPORT: Shapiro Administration, Rep. Steele, and Keystone Energy Efficiency Alliance Join Evergreen to Highlight that Fixing PJM Can Lower Energy Costs and Create Jobs Across the Mid-Atlantic

Pittsburgh Post-Gazette February 2, 2025

<https://www.post-gazette.com/business/powersource/2025/02/02/electricity-prices-grid-pennsylvania-shapiro-pjm-utilities/stories/202501310087>

Region's power grid presents a math problem for Pennsylvania

NJ Spotlight

<https://www.njspotlightnews.org/2023/05/op-ed-nj-businesses-heat-pump-benefits/>

Pittsburgh Magazine

<https://www.pittsburghmagazine.com/can-pittsburgh-save-the-planet/>

Post Gazette

<https://www.post-gazette.com/opinion/Op-Ed/2022/03/26/jeaneen-zappa-rggi-pennsylvania-climate-change-fossil-fuels/stories/202203260006>

Podcast Interviews:

PA Environmental Council

<https://pecpa.org/news/pennsylvania-legacies-181-homework/>

Whole House was successful in PA. Now it needs to be expanded and fully funded.

Penn Future

<https://www.buzzsprout.com/1944759/11524553>

Grant Street Experience

<https://open.spotify.com/episode/6C9AZWxkjLenZtGzygKUva>

Recommended

EDC	H&S Budget as a % of			
	H&S Budget	LI Budget	Res Budget	Total Budget
PECO	\$3,000	6.36%	2.20%	0.70%
PPL	\$2,500	5.07%	2.17%	0.81%
FE PA	\$2,600	4.99%	1.59%	0.67%
DLC	\$800	4.99%	2.33%	0.82%

Actual H&S Allocation

EDC	H&S Budget as a % of			
	H&S Budget	LI Budget	Res Budget	Total Budget
PECO	\$3,000	6.36%	2.20%	0.70%
PPL	\$1,500	3.04%	1.30%	0.49%
FE PA	0	0.00%	0.00%	0.00%
DLC	0	0.00%	0.00%	0.00%

PECO

Table 5: Summary of Portfolio Costs

Sector	PY18		PY19		PY
	\$0	%	\$0	%	\$0
Residential Market Rate	\$16,888	22%	\$18,461	22%	\$17,756
Residential Low-Income	\$9,358	12%	\$9,401	11%	\$9,712
Small C&I	\$18,521	24%	\$21,852	26%	\$23,545
Large C&I	\$17,537	23%	\$21,963	26%	\$25,626
Common Costs	\$13,455	18%	\$13,455	16%	\$13,455
Total Portfolio Budget ¹	\$75,759	100%	\$85,132	100%	\$90,094
SWE Cost	\$0		\$0		\$0

¹ Cells with total percentages in row 11 will be green when the totals are above 99.9% and below 100.1%. All of these

Source: Phase V Plan, pg. 11

Health and Safety Budget \$3,000,000 Source: Phase V Plan, pg. 68
Part of the Residential Low income Program

PPL

Table 8. PA PUC Table 5 - Summary of Portfolio Costs

Sector	PY18		PY19		PY
	\$0	%	\$0	%	\$0
Residential Market Rate	\$12,928	22%	\$13,290	21%	\$13,571
Residential Low-Income	\$10,952	18%	\$10,267	16%	\$10,235
Small C&I	\$17,718	30%	\$20,507	32%	\$20,176
Large C&I	\$9,796	16%	\$12,028	19%	\$13,423

Common Costs	\$8,420	14%	\$8,420	420	\$8,420
Total Portfolio Budget ²	\$59,547	100%	\$64,991	100%	\$66,511
SWE Cost	\$1,000		\$1,000		\$1,000

Source: PPL Phase V Plan, pg. 15

Health and Safety Budget \$1,500,000 Source: PPL Phase V Plan, pg. 198
Part of the Resource Constrained Residential Low income Program

FE PA

Table 5: Summary of Portfolio Costs

Sector	PY18		PY19		PY
	\$0	%	\$0	%	\$0
Residential Market Rate	\$23,305	29%	\$23,384	30%	\$23,038
Residential Low-Income	\$10,618	13%	\$10,408	13%	\$10,458
Small C&I	\$22,916	28%	\$22,306	28%	\$22,320
Large C&I	\$19,272	24%	\$18,843	24%	\$18,846
Common Costs	\$4,814	6%	\$4,047	5%	\$3,601
Total Portfolio Budget ¹	\$80,924	100%	\$78,988	100%	\$78,262
SWE Cost ²	\$800		\$800		\$800

¹ Cells with total percentages in row 11 will be green when the totals are above 99.9% and below 100.1%. All of these

Source: FE PA Phase V Plan, Appendix B, Table 5

Health and Safety Budget \$0 Source: FE PA Phase V Plan, pg. 135

DLC

Table 5: Summary of Portfolio Costs

Sector	PY18		PY19		PY
	\$0	%	\$0	%	\$0
Residential Portfolio Budget	3,393	20.90%	3,703	19.80%	3,811
Residential Low-Income Portfolio E	3,237	20.00%	3,149	16.80%	3,178
Commercial/Industrial Small Portfo	4,102	25.30%	4,594	24.60%	5,327
Commercial/Industrial Large Portfo	4,608	28.40%	6,378	34.10%	7,698
Common Costs	881	5.40%	881	4.70%	881
Total Portfolio Budget	16,222	100.00%	18,705	100.00%	20,896
SWE Cost	\$0		\$0		\$0

Source: DLC Phase V Plan, p.g 130

Health and Safety Budget \$0 Source: DLC Phase V Plan, pg. 68
Part of the Residential Low income Program

LI Budget

Total	% of Total	Res % of Total	Total Res (LI + RES) Res Budget	% of Total	Total Budget
\$47,147	34.50%	11.03%	\$136,660	31.98%	\$427,386
\$49,352	42.80%	16.05%	\$115,319	37.50%	\$307,507
\$52,154	31.91%	13.36%	\$163,459	41.88%	\$390,320
16,033	46.68%	16.41%	34,343	35.14%	97,729.76

LI Budget

Total	% of Total	Res % of Total	Total Res (LI + RES) Res Budget	% of Total	Total Budget
\$47,147	34.50%	11.03%	\$136,660	31.98%	\$427,386
\$49,352	42.80%	16.05%	\$115,319	37.50%	\$307,507
\$52,154	31.91%	13.36%	\$163,459	41.88%	\$390,320
16,033	46.68%	16.41%	34,343	35.14%	97,729.76

'20	PY21		PY22		Phase V	
%	\$0	%	\$0	%	\$0	%
20%	\$18,161	19%	\$18,247	22%	\$89,513	20.90%
11%	\$10,002	11%	\$8,675	11%	\$47,147	11.00%
26%	\$24,629	26%	\$18,775	23%	\$107,323	25.10%
28%	\$28,414	30%	\$22,588	28%	\$116,127	27.20%
15%	\$13,455	14%	\$13,455	16%	\$67,275	15.70%
100%	\$94,661	100%	\$81,740	100%	\$427,386	100%
	\$0		\$0		\$0	

cells should be green once filled out to ensure correct cell values.

'20	PY21		PY22		Phase V	
%	\$0	%	\$0	%	\$0	%
21%	\$12,963	21%	\$13,215	24%	\$65,967	21.50%
16%	\$9,580	15%	\$8,318	15%	\$49,352	16.00%
31%	\$18,092	29%	\$14,997	27%	\$91,489	29.80%
20%	\$12,856	21%	\$10,495	19%	\$58,598	19.10%

13\$	\$8,420	13%	\$8,420	14\$	\$8,420	13.70%
100%	\$61,975	100%	\$54,483	100%	\$307,507	100.00%
	\$1,000		\$1,000		\$5,000	

'20	PY21		PY22		Phase V	
%	\$0	%	\$0	%	\$0	%
29%	\$20,692	27%	\$20,885	27%	\$111,305	28.50%
13%	\$10,383	14%	\$10,287	13%	\$52,154	13.40%
29%	\$22,346	29%	\$22,366	29%	\$112,254	28.80%
24%	\$18,863	25%	\$18,871	25%	\$94,694	24.30%
5%	\$3,610	5%	\$3,843	5%	\$19,913	5.10%
100%	\$75,894	100%	\$76,251	100%	\$390,320	100%
	\$800		\$800		\$4,000	

cells should be green once filled out to ensure correct cell values. 2 Company Assumption Based on PH IV alloca

'20	PY21		PY22		Phase V	
%	\$0	%	\$0	%	\$0	%
18.20%	3,725	16.80%	3,678	18.60%	18,310	18.70%
15.20%	3,207	14.50%	3,261	16.50%	16,033	16.40%
25.50%	6,025	27.20%	4,899	24.80%	24,947	25.50%
36.80%	8,343	37.60%	7,006	35.50%	34,032	34.80%
4.20%	881	4.00%	881	4.50%	4,407	4.50%
100.00%	22,181	100.00%	19,726	100.00%	97,729.76	100.00%
	\$0		\$0		\$0	

Original

Table 1: Portfolio Summary of Lifetime Cost:

Sector	nted Lifetime	ed Lifetime B
Market Rate Residential (exclus	\$344,312	\$314,199
Residential Low-Income	\$62,503	\$78,938
Small Commercial & Industrial	\$316,367	\$449,338
Large Commercial & Industrial	\$375,196	\$534,973
Total Portfolio	\$1,098,378	\$1,377,448

Source: PECO Phase V Plan, pg. 6

Original

Table 1: Portfolio Summary of Lifetime Cost:

Sector	nted Lifetime	ed Lifetime B
Market Rate Residential (exclus	\$124,095	\$156,458
Residential Low-Income	\$51,075	\$107,547
Small Commercial & Industrial	\$431,459	\$711,778
Large Commercial & Industrial	\$239,514	\$441,497
Total Portfolio	\$846,143	\$1,417,280

Source: PPL Phase V Plan, pg. 5

Original

Table 1: Portfolio Summary of Lifetime Cost:

Sector	nted Lifetime	ed Lifetime B
Market Rate Residential (exclus	\$236,618	\$255,609
Residential Low-Income	\$69,638	\$80,373
Small Commercial & Industrial	\$366,833	\$427,391
Large Commercial & Industrial	\$381,610	\$401,116
Total Portfolio	\$1,054,699	\$1,164,489

1 "Net" refers to the arithmetic difference between the previous two column

Source: FE PA Phase V Plan, Appendix B, Table 1

Table 1: Portfolio Summary of Lifetime Cost:

Sector	nted Lifetime	ed Lifetime B
Residential	\$48,523	\$38,392
Residential Low-Income	\$9,590	\$19,288
Residential Behavioral	\$5,009	\$7,049
Low Income Behavioral	\$836	\$958
Large Commercial C	\$36,173	\$89,288
Large Industrail (I	\$11,168	\$49,146
Small C&I	\$39,951	\$105,021
Total Portfolio	\$151,251	\$309,141

Source: DLC Phase V Plan, pg. 126



\$0

Updated Analysis

\$0

Costs	Benefits	Net
\$344,312	\$314,199	-\$30,113
\$62,503	\$78,938	\$16,435
\$316,367	\$449,338	\$132,971
\$375,196	\$534,973	\$159,777
\$1,098,378	\$1,377,448	\$279,070

0

0



\$1,000

Updated Analysis

\$2,106

Costs	Benefits	Net
\$124,095	\$156,458	\$32,363
\$51,075	\$105,441	\$54,366
\$431,459	\$711,778	\$280,319
\$239,514	\$441,497	\$201,983
\$846,143	\$1,415,174	\$569,031

0

0

\$2,600

\$3,001

Updated Analysis

Costs	Benefits	Net
\$236,618	\$255,609	\$18,991
\$69,638	\$77,372	\$7,734
\$366,833	\$427,391	\$60,558
\$381,610	\$401,116	\$19,506
\$1,054,699	\$1,161,488	\$106,789

0

0

Costs	Benefits	Net
\$18,991	1.1	
\$10,735	1.2	
\$60,558	1.2	
\$19,507	1.1	
\$109,790	1.1	

1s. It does not refer to net verified savin

\$800

\$1,609

Updated Analysis

Costs	Benefits	Net
\$48,523	\$38,392	-\$10,131
\$9,590	\$17,679	\$8,089
\$5,009	\$7,049	\$2,040
\$836	\$958	\$122
\$36,173	\$89,288	\$53,115
\$11,168	\$49,146	\$37,978
\$39,951	\$105,021	\$65,070
\$151,251	\$309,141	\$157,890

0

0

Costs	Benefits	Net
-\$10,131	0.79	
\$9,698	2.01	
\$2,039	1.41	
\$122	1.15	
\$53,115	2.47	
\$37,977	4.4	
\$65,070	2.63	
\$157,890	2.04	



***Additional H&S Allocation
Reduction in Benefits***

BCR
0.913
1.263
1.420
1.426
1.254



***Additional H&S Allocation
Reduction in Benefits***

BCR
1.261
2.064
1.650
1.843
1.673

***Additional H&S Allocation
Reduction in Benefits***

BCR
1.080
1.111
1.165
1.051
1.101

***Additional H&S Allocation
Reduction in Benefits***

BCR
0.791
1.843
1.407
1.146
2.468
4.401
2.629
2.044

FE PA Testimony

EDC	Proposed H&S Budget		Proposed LI Budget
	\$000	% of LI	\$000
PECO	\$3,000	6.4%	\$47,147
PPL	\$1,500	3.0%	\$49,352
FE PA (Proposed)	\$2,600	5.0%	\$52,154

DLC Testimony

EDC	Proposed H&S Budget		Proposed LI Budget
	\$000	% of LI	\$000
PECO	0	#DIV/0!	0
PPL	0	#DIV/0!	0
FE PA (Proposed)	\$3,000	#DIV/0!	0

PPL Testimony

EDC	Proposed H&S Budget		Proposed LI Budget
	\$000	% of LI	\$000
PECO	\$18,521	#####	\$0
PPL	\$17,537	#####	\$0
FE PA (Proposed)	\$0	0.0%	\$0

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company :
For Approval of its Act 129 Phase V : Docket No. M-2025-3057328
Energy Efficiency and Conservation Plan :

**PREPARED HEARING EXHIBIT LIST OF THE KEYSTONE ENERGY
EFFICIENCY ALLIANCE**

The Keystone Energy Efficiency Alliance (“KEEA”) intends to move for admission of the following evidence at the February 2, 2026, evidentiary hearing in the above-captioned matter:

The Direct Testimony of Jeaneen Zappa on behalf of the Keystone Energy Efficiency Alliance (KEEA Statement 1) consisting of 22 pages of written testimony; Exhibit A, the Resume of Jeaneen Zappa; and Exhibit B, H&S Budgets.

KEEA may have additional exhibits to introduce as evidence at the evidentiary hearing.

Respectfully submitted,

KEYSTONE ENERGY EFFICIENCY ALLIANCE

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February 2, 2026



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company	:	
for Approval of Its Act 129 Phase V	:	Docket No. M-2025-3057328
Energy Efficiency and Conservation Plan	:	

THE DIRECT TESTIMONY
OF
ALON ABRAMSON
ON BEHALF OF
THE CITY OF PHILADELPHIA
AND
THE PHILADELPHIA ENERGY AUTHORITY

January 20, 2026

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EXHIBITS

1. RESUME OF ALON ABRAMSON

DIRECT TESTIMONY

OF

Alon Abramson

I. INTRODUCTION AND BACKGROUND

1. Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: My name is Alon Abramson. My business address is 30 S. 15th St., Suite 801, Philadelphia, PA 19102.

2. Q: WHERE ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A: I am employed by the Philadelphia Energy Authority as Vice President of Programs. In that capacity, I oversee the Philadelphia Energy Authority's consumer-facing programs serving residential, commercial, and workforce development sectors, as well as supporting new program design and policy.

3. Q: WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A: I hold a BS in Civil Engineering and an MS in Environmental Engineering from Lehigh University. I have nearly two decades of experience designing, managing, and scaling energy efficiency and clean energy programs, with a focus on affordable housing and urban climate solutions. My CV is attached to this direct testimony as Exhibit A.

4. Q: WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A: The contents of PECO's finalized Phase V Act 129 EE&C Plan are highly important to the success and efficiency of many of the City of Philadelphia (the "City") and the Philadelphia Energy Authority ("PEA") (together, the "City Parties") projects and

1 programs and ultimately the City's progress towards its climate goals. This is done in a few
 2 ways. First, PEA assists the City in the development of long-term energy related projects
 3 including energy efficiency projects for City facilities, which are eligible for rebates from
 4 PECO under Act 129. Second, PEA operates programs to install and/or finance the
 5 installation of energy efficiency improvements and renewable energy systems for
 6 residents, especially those of low to moderate incomes, and businesses in the City, which
 7 are PECO customers, and who are eligible for rebates and other incentives or programs
 8 from PECO under Act 129. Lastly, it has been in the City's and PEA's experience that
 9 many of these programs would be executed more effectively and efficiently with stronger,
 10 established coordination with PECO under the EE&C Plan.

11 II. ANALYSIS OF PECO'S PROPOSED ACT 129 EE&C PLAN

12 5. Q: HAVE YOU REVIEWED PECO'S PHASE V ENERGY EFFICIENCY AND
 13 CONSERVATION PLAN ("EE&C PLAN")?

14 A: Yes.

15 6. Q: PLEASE SUMMARIZE YOUR POSITION ON THE FEATURES OF THE EE&C
 16 PLAN.

17 A: My testimony addresses the following positions:

- 18 a. It is difficult to integrate Act 129 repairs and funding with other programs due to
 19 lack of transparency and communication. The City Parties are seeking more
 20 transparency, better planning, and more communication to integrate H.O.M.E. and
 21 Built to Last funding with Act 129.
- 22 b. The EE&C Plan's overall Health and Safety allowance is too low to have any
 23 meaningful impact.

WAP, LIURP, and the City's H.O.M.E. Initiative, with the stated goals of expanding program reach, integrating resources, and improving customer experience.¹ Similarly, Section 4.4.2 highlights the availability of multiple funding sources and PECO's intent to engage contractors through outreach and education to reduce barriers and enhance affordability.² Section 4.4.5 further commits PECO to improved data collection and reporting on dual participation in order to facilitate braided funding opportunities and calculate leverage ratios.³

9. Q: DO YOU HAVE ANY RECOMMENDED ADJUSTMENTS TO PECO'S APPROACH TO COORDINATION?

A: While PEA supports these stated objectives, PEA's experience indicates that the EE&C Plan's coordination framework lacks the specificity and accountability necessary to achieve desired outcomes. Persistent implementation challenges have significantly limited PEA's ability to functionally integrate Built to Last with PECO's Act 129 programs. These challenges include inconsistent communication between PEA, PECO, and PECO's conservation service providers; the absence of clear, project level commitments from PECO regarding which Act 129 measures will be installed; a lack of guidance from PECO to its service providers on engaging with Built to Last participants; and a lack of coordination around scheduling for home repair activities, energy assessments, and measure installation.

Despite the EE&C Plan's references to collaboration, PECO and its service providers have largely employed Built to Last as a referral pathway rather than an

¹ See PECO Phase V EE&C Plan, Section 1.7.

² Id. at Section 4.4.2.

³ Id. at Section 4.4.5.

1 integrated delivery partner. While referrals for fully stabilized homes with low deferral
2 risk can be effective in some cases, this approach constrains the ability to achieve deeper
3 and more cost-effective energy savings across the housing stock. Many homes served
4 through Built to Last require coordinated sequencing of repairs, weatherization, and
5 equipment replacement to maximize participation and savings. This level of coordination
6 cannot be achieved through referrals alone.

7 For example, some households qualify for major equipment replacements such as
8 heat pump HVAC systems or heat pump water heaters. In many cases, these are not
9 discretionary upgrades, but replacements for systems that are non-functional, or at or near
10 the end of their useful life. Early coordination with PECO during project development is
11 essential to determine which measures will be supported through Act 129 and which must
12 be addressed through Built to Last or other funding sources. PEA must ensure that essential
13 systems are operational, measures not supported through Act 129 must be installed using
14 PEA resources, which directly affects project scope, sequencing, and the availability of
15 funding for other repairs and energy measures. The lack of coordination also results in
16 missed opportunities to deliver complementary measures, particularly weatherization and
17 insulation, which are dependent on timing.

18 Similar challenges arise when PECO identifies a customer facing a deferral and
19 seeks assistance from Built to Last to address underlying housing conditions. Without clear
20 protocols, shared planning processes, and aligned schedules, deferrals can result in delayed
21 or missed energy savings and increased administrative burden for all parties.

22 The City Parties submit that the coordination provisions described in Sections 1.7,
23 4.4.2, and 4.4.5 of the Phase V Plan remain largely aspirational and do not have any

1 operational detail required to deliver meaningful impacts. The City Parties desire early
2 project-level coordination, defined roles and responsibilities between PECO, its service
3 providers, and partner programs, and enforceable requirements for collaboration beyond
4 referrals and data reporting.

5 ii. HEALTH AND SAFETY

6 10. Q: WHAT IS YOUR POSITION ON THE HEALTH AND SAFETY PROVISIONS OF
7 PECO'S PLAN?

8 A: The City Parties appreciate PECO's continued recognition that unresolved health and
9 safety conditions are a primary driver of deferrals within low-income energy efficiency
10 programs. The inclusion of a dedicated Health and Safety budget within the Residential
11 Low-Income Subprogram reflects an understanding that energy efficiency measures cannot
12 be safely or effectively installed in many homes without first addressing underlying
13 hazards. However, as proposed, the Health and Safety funding levels are unlikely to be
14 sufficient to be impactful to the housing stock served, and may limit participation or fall
15 short of the stated goals in the Phase V Low Income program.

16 11. Q: PLEASE DESCRIBE YOUR CONCERNS WITH THE PER HOME HEALTH AND
17 SAFETY ALLOWANCE.

18 A: PECO proposes to allocate up to \$1,000 per home for Health and Safety Audits,
19 inclusive of the audit itself and any associated remediation, with an additional \$50 per
20 home for basic safety devices.⁴ Over the five-year Phase V period, this funding is projected
21 to support Health and Safety Audits for approximately 2,000 homes.

⁴ PECO Phase V EE&C Plan, Table 20.

1 Based on experience with low-income whole home programs in older urban
2 housing, a \$1,000 per home cap won't cover the full scope of health and safety barriers
3 commonly encountered. Conditions such as electrical hazards, moisture intrusion and
4 mold, deteriorated building components, and structural deficiencies frequently require
5 remediation costs that exceed the cap. In many cases, the audit alone consumes a
6 meaningful portion of the allowable budget, leaving limited resources available for
7 corrective work.

8 Without adequate funding to resolve these issues, homes will continue to be
9 deferred from participation, contrary to the program's stated objective of enabling
10 comprehensive, no-cost energy efficiency upgrades for low-income customers

11 12. Q: WHAT IS YOUR RECOMMENDATION WITH REGARDS TO THE PER HOME
12 HEALTH AND SAFETY ALLOWANCE?

13 A: I would recommend a few things. First, the EE&C Plan should increase significantly
14 the \$1,000 per home Health and Safety cap based on observed remediation costs in the
15 low-income housing stock, particularly in older urban homes. Second, PECO should clarify
16 in the EE&C Plan how frequently Health and Safety needs are expected to exceed the
17 proposed cap and how those cases will be resolved without deferral. Lastly, PECO should
18 consider increasing the Health and Safety budget or adopting a tiered or flexible per home
19 allowance that better reflects the variability and severity of conditions encountered.
20 Strengthening the Health and Safety component of the Residential Low-Income
21 Subprogram would improve participation, reduce deferrals, and better align PECO's Phase
22 V plan with the Commission's goals of equitable, comprehensive energy efficiency service
23 delivery.

1 13. Q: PLEASE DESCRIBE YOUR CONCERNS WITH THE RELIANCE ON EXTERNAL
2 FUNDING IN PECO'S EE&C PLAN.

3 A: PECO's plan states that it will utilize coordination with external programs and
4 integrated funding to address needed health and safety repairs, including municipal housing
5 programs such as the City of Philadelphia's H.O.M.E. Plan. While coordination across
6 programs is valuable and should be encouraged, reliance on external funding sources
7 introduces uncertainty and risk.

8 External housing repair programs are frequently capacity constrained, geographically
9 limited, or subject to eligibility criteria and funding cycles that do not align with Act 129
10 program timelines. As a result, households identified through PECO's program may
11 experience delays or fail to secure supplemental funding altogether, leading to no
12 improvements to housing and lost energy savings opportunities. The plan does not clearly
13 quantify how many homes are expected to successfully access these external resources or
14 how gaps will be addressed when such funding is unavailable.

15 14. WHAT IS YOUR RECOMMENDATION ON EXTERNAL FUNDING?

16 A: The EE&C Plan should provide greater transparency regarding reliance on external
17 funding sources, including assumptions about availability, success rates, and timelines.

18 15. Q: DO YOU HAVE ANY FINAL OPINIONS ON THE HEALTH AND SAFETY
19 INVESTMENT COMPONENT OF THE EE&C PLAN?

20 A: Yes. The \$3 million Health and Safety allocation represents a small fraction of the
21 overall Residential Low Income Subprogram budget, particularly when compared to the
22 scale of projected whole home upgrades and savings.⁵ PECO will deliver thousands of air

⁵ See PECO Phase V EE&C Plan, Section 3.2.1.

1 sealing projects, insulation upgrades, and advanced HVAC and water heating systems,
 2 which depend on adequate health and safety conditions. Absent sufficient investment in
 3 health and safety remediation, the program risks prioritizing easier to serve homes while
 4 leaving the most burdened households behind. This outcome is inconsistent with the equity
 5 objectives of Act 129.

6 iii. DAILY LOAD SHIFTING

7 16. Q: WHAT IS YOUR POSITION ON THE DAILY LOAD SHIFTING PROGRAM
 8 INCLUDED IN PECO’S PROPOSED EE&C PLAN?

9 A: PECO’s Phase V Daily Load Shifting (DLS) program proposes three participation
 10 channels: Managed EV Charging, Thermostat Optimization, and Bring Your Own Battery
 11 (“BYOB”).⁶ While these channels have potential to reduce peak demand, the EE&C Plan
 12 provides insufficient detail to demonstrate how the program will operate as a coordinated,
 13 scalable demand management strategy. Each channel appears to require separate
 14 enrollment, with no clear explanation of how customers with multiple enrolled devices will
 15 be managed, how load reductions will be prioritized across channels, or how overlapping
 16 dispatch during peak periods will be handled. The EE&C Plan also does not describe how
 17 DLS events will be triggered, their expected frequency or duration, or how opt-out
 18 provisions will affect performance.

19 Additionally, the EE&C Plan lacks clarity on operational signals and compensation.
 20 It is not specified whether load shifting will be achieved through direct control, aggregator
 21 dispatch, or price signals. PEA is very concerned with direct control that does not allow
 22 customer-override for any household, but especially for households where a battery storage

⁶ Id. at Section 3.2.

1 system backs up medical necessary devices. It is not clear that meaningful economic
2 incentives will be provided to participating customers or device aggregators. Without
3 transparent compensation structures tied to measurable performance, there is a risk that
4 participants and device providers will have insufficient motivation to enroll in the program
5 or collaborate over time. The proposed ramp-up strategy focuses on enrolling existing
6 devices to capture early savings but does not demonstrate how the program will encourage
7 broader participation or adoption of new load flexible technologies over time.

8 Overall, PEA is concerned that the DLS Plan does not take effective steps toward
9 implementing whole-home demand flexibility. Directionally, this would involve moving
10 to integrated, coordinated, same-day, whole-home demand flexibility with customer
11 compensation that reflects the value of the customer's contribution to the grid. Such
12 programs have been successfully implemented at grid scale in England and other countries,
13 and tested in successful pilots in California and a number of other states. Ideally, they
14 operate on price signals sent to a customer's electronic "agent" that integrates the response
15 of all controllable loads (including e.g. hot water heaters and smart appliances) in the
16 household in accordance with customer's pre-programmed preferences (and can be
17 overridden if needed). Compensation from such programs can support the implementation
18 of deeper (and smarter) energy efficiency retrofits that better meet Act 129 objectives.

19 For these reasons, the City Parties recommend that PECO provide additional detail
20 on program operations, coordination across channels, dispatch protocols, and
21 compensation mechanisms to ensure that the DLS program delivers meaningful, cost-
22 effective, and scalable peak load and ramping load reductions during Phase V and beyond.

1 17. Q: DO YOU HAVE ANY COMMENTS ON LOW-INCOME PARTICIPATION IN
2 THE DAILY LOAD SHIFTING PROGRAM?

3 A: The City Parties are concerned that the Daily Load Shifting (DLS) Program provides
4 small and largely symbolic opportunities for Low-Income Residential participation. As
5 proposed, the Low-Income Residential subprogram excludes Bring Your Own Battery
6 participation entirely and limits incentives to enrollment payments for 100 participants in
7 the first program year, followed by participation incentives for only 100 customers in each
8 subsequent year.⁷ This scale is not commensurate with the stated objectives of the DLS
9 program or with the role low-income households could play in advancing grid flexibility.

10 The absence of a Bring Your Own Battery option in the low-income subprogram is
11 concerning because it may block households that possess or may acquire devices to
12 contribute to load shifting and peak reduction. The proposed structure does not articulate a
13 vision for how the DLS program could be integrated with or reinforce other high-efficiency
14 or electrification investments, such as heat pumps, smart water heaters, or other
15 controllable end uses, within the low-income sector.

16 The City Parties note that limiting participation to a small, static cohort suggests
17 that low-income participation is treated as an ancillary feature rather than a meaningful
18 component of the DLS portfolio. This approach risks reinforcing inequities between low-
19 income households and market rate customers.

20 The City Parties recommend that PECO's EE&C Plan more clearly articulate how the
21 DLS program will support scalable low-income participation, including consideration of

⁷ See PECO Phase V EE&C Plan, Section 3.2.1.

1 expanded enrollment targets, inclusion of additional eligible technologies, and
2 coordination with existing low-income efficiency and electrification programs.

3 iv. LOW-INCOME SUBPROGRAM

4 18. Q: PLEASE DESCRIBE YOUR POSITION ON THE EE&C PLAN'S RESIDENTIAL
5 LOW INCOME SUBPROGRAM.

6 A: PECO's Phase V Residential Low-Income Subprogram places a disproportionate
7 emphasis on low-cost, high-volume measures such as lighting, kits, plug-in devices, and
8 incremental or behavioral interventions, while allocating a comparatively small share of
9 savings and participation to comprehensive upgrades. Although the Plan exceeds the low-
10 income carveout target in aggregate MWh, the distribution of savings raises concerns about
11 whether the program meaningfully advances durable, household-level energy efficiency
12 outcomes for low-income participants, consistent with Act 129 and Commission guidance.

13 Based on PECO's projected five-year savings and participation data, nearly three-
14 quarters of total low-income MWh savings are attributable to lighting, kits, and plug-load
15 measures. Lighting alone accounts for approximately one quarter of projected low-income
16 savings, while kits and plug-load measures account for an additional half of all savings. By
17 contrast, shell measures, high-efficiency HVAC, and heat pump water heaters together
18 account for less than 8 percent of projected savings, despite being the measures most likely
19 to deliver sustained bill reductions, comfort improvements, and resilience benefits in low-
20 income housing.

21 This imbalance is further reflected in participation levels. PECO projects hundreds of
22 thousands of kit and plug-load distributions, compared to fewer than 6,000 homes receiving
23 air sealing or major shell work and fewer than 2,000 homes receiving high-efficiency

1 HVAC upgrades over the entire Phase. While lower-cost measures can play a supporting
2 role, reliance on them as the primary driver of savings prioritizes deemed savings volume
3 over meaningful household-level impact. This concern is particularly acute for low-income
4 households, which typically face higher energy burdens and poorer housing conditions that
5 require deeper interventions to achieve lasting benefits.

6 A comparison with the main Residential Program underscores these concerns. The
7 broader Residential Program derives a substantial share of its savings from high-efficiency
8 HVAC, water heating upgrades, and other capital-intensive measures with durable impacts.
9 In contrast, the Low-Income Subprogram relies far more heavily on incremental measures,
10 offering low-income households fewer opportunities to access the most effective and long-
11 lasting efficiency upgrades that anchor savings in the main program. This disparity raises
12 equity concerns and calls into question whether the Low-Income Subprogram is aligned
13 with the intent to prioritize deep and persistent savings for households most in need.

14 The City Parties do not think PECO's Residential Low-Income Subprogram is
15 "comprehensive" as defined by the Commission given the relatively small share of savings
16 and investment directed toward shell, HVAC, and water heating upgrades. A program
17 dominated by lighting, plug-loads, and behavioral measures cannot reasonably be
18 characterized as comprehensive in its outcomes. The City Parties recommend that the
19 Commission direct PECO to rebalance the Residential Low-Income Subprogram by
20 increasing the share of funding, participation, and savings attributable to shell, HVAC, and
21 water heating measures, supported by adequate health and safety remediation. This would
22 better align the program with Act 129 objectives and ensure that low-income households
23 receive meaningful and lasting reductions in energy use and energy burden.

v. HYBRID HEAT PILOT

19. Q: PLEASE PROVIDE YOUR POSITION ON THE HYBRID HEAT PROJECT IN SECTION 9.1.4 OF THE PROPOSED EE&C PLAN.

A: As proposed, the pilot is limited to customers with hybrid heat pump systems who have both electric and natural gas service from PECO.⁸ This fact significantly narrows the eligible customer pool thereby limiting the pilot's effectiveness. While PECO's dual-fuel status may allow for unique operational insights, a pilot that relies on shifting load from electricity to natural gas during peak hours is a narrow solution to peak demand challenges that cannot be scaled to all customers. It is recommended to explore how air source heat pumps can be leveraged as an electric demand-side resource across PECO's entire customer base.

The pilot's focus on switching from electric to gas heating during winter peak periods raises questions about meeting long-term energy efficiency and electrification goals. The proposed approach prioritizes fuel switching over improving the efficiency or controllability of electric end uses. This is very limiting on the role that can be played by air source heat pumps, which can be optimized to deliver both energy savings and peak demand reductions.

The City Parties recommend the Commission direct PECO to modify this pilot to better leverage air source heat pumps for energy efficiency and peak demand reduction. One clear opportunity would be a pilot that utilizes smart thermostat-enabled control strategies to adjust temperature set points during peak periods, paired with transparent and meaningful financial compensation for participating customers. Such an approach would

⁸ PECO Phase V EE&C Plan, Section 9.1.4.

1 be applicable to a much larger segment of PECO's service territory, generate actionable
 2 insights into scalable demand flexibility strategies, and better align with emerging best
 3 practices for managing electrified heating loads.

4 Finally, the City Parties request that PECO clarify how lessons learned from the
 5 proposed pilot will be translated into future program design and whether additional pilots
 6 will be pursued to test electric-only heat pump load management strategies. Expanding the
 7 scope of experimental efforts in this manner would increase the value of pilot spending and
 8 support the development of demand-side resources that are more broadly deployable and
 9 consistent with the Commonwealth's long-term energy objectives.

10 vi. HOME ENERGY REPORTS

11 20. Q: PLEASE DESCRIBE YOUR POSITION ON THE RELIANCE ON HOME

12 ENERGY REPORTS WITHIN THE PROPOSED EE&C PLAN?

13 A: The City Parties recognize that the Commission has historically approved Home Energy
 14 Reports (HERs) as an eligible energy efficiency measure and acknowledge the strong cost-
 15 effectiveness metrics reported for PECO's Residential and Low-Income HER
 16 subprograms. The City Parties also recognize that PECO appropriately distinguishes HERs
 17 from equipment-based measures and positions them as a complementary offering within
 18 the Phase V portfolio. The concern raised here is not the existence of HERs, but the scale
 19 at which they are relied upon to satisfy Phase V savings requirements.

20 As proposed, HERs account for a substantial share of PECO's projected residential
 21 savings. Across both the market-rate and low-income programs, HERs are projected to
 22 deliver approximately 147,923 MWh and 33.3 MW over the Phase, representing roughly
 23 44 percent of total projected residential MWh savings and more than half of projected

1 residential peak demand reductions.⁹ This reliance on behavioral savings that may not
2 materialize may jeopardize the entire portfolio by allowing a significant portion of required
3 savings to be met through non-physical, non-persistent interventions rather than deeper
4 efficiency investments.

5 As described in the Plan, HERs do not deliver savings through the installation of
6 physical measures. Instead, savings are achieved through behavioral influence, social norm
7 comparisons, and educational messaging intended to encourage voluntary changes in
8 customer behavior. HERs are inherently contingent on customer action and acting on
9 communications. They differ fundamentally from the durable, equipment-based savings
10 associated with shell improvements, HVAC upgrades, or water heating replacements.
11 When HERs comprise such a large share of the savings stack, the overall portfolio becomes
12 more dependent on behavioral assumptions and less anchored in permanent reductions in
13 energy use.

14 This concern is amplified in the Low-Income HER subprogram, where modeled
15 savings decline sharply after the initial program year due to behavioral persistence decay.
16 While PECO appropriately applies a consistent decay methodology across HER offerings,
17 the limited introduction of new low-income participant cohorts allows decay to dominate
18 the savings profile over time. As a result, a meaningful portion of projected low-income
19 savings is front-loaded, short-lived, and increasingly reliant on modeled assumptions rather
20 than sustained physical improvements in housing stock. The City Parties recommend more
21 funds be allocated to Health and Safety where it will be more impactful instead of Low-
22 Income HER that depends on customer behavior.

⁹ PECO Energy Company St. No. 3, the Direct Testimony of Mark Van Eegan, Tables 1 & 2.

1 The City Parties are concerned that this approach is lowering the effective bar for total
2 delivered savings under Act 129. While HERs may remain a cost-effective and appropriate
3 supporting tool, reliance on it to deliver a large share of Phase V savings is very risky. The
4 City Parties urge the Commission to carefully examine the balance between behavioral and
5 equipment-based savings in PECO's Phase V portfolio and consider whether the proposed
6 reliance on HERs is consistent with the intent of Act 129 to drive durable energy efficiency
7 outcomes for customers.

8 vii. IMC ASSUMPTION AND ASSIGNMENT

9 21. Q: PLEASE EXPLAIN WHY IT IS YOUR POSITION THAT THE IMC PECO
10 ASSIGNED TO THE ENERGY STAR MOST EFFICIENT DUCTLESS MINI-SPLIT
11 HEAT PUMP IS SET AT A LEVEL THAT IS TOO LOW TO MEANINGFULLY
12 INCENTIVIZE ADOPTION IN THE MARKET-RATE RESIDENTIAL SECTOR.

13 A: The City Parties appreciate PECO's use of Incremental Measure Cost ("IMC") as the
14 basis for setting incentives for residential energy efficiency measures, and recognize the
15 regulatory rationale for this approach. Basing incentives on the incremental cost relative to
16 a code-minimum or standard-efficiency baseline is a well-established method for managing
17 portfolio cost-effectiveness and ensuring compliance with Act 129 requirements.

18 However, the City Parties are concerned that the IMC assigned to the ENERGY
19 STAR Most Efficient Ductless Mini-Split Heat Pump is set at a level that is too low to
20 meaningfully incentivize adoption in the market-rate residential sector. While the
21 incentive aligns with the listed IMC of approximately \$379 per unit, this amount bears
22 little relationship to the actual decision facing customers, for whom total installed project
23 costs can reasonably exceed \$15,000. In practice, an incentive capped at the modeled

1 incremental cost does not materially influence customer behavior for a capital-intensive
2 measure of this scale.

3 The City Parties urge the Commission to carefully consider whether the current
4 IMC assumptions for market-rate ductless mini-split heat pumps accurately reflect real-
5 world baselines and customer decision-making, and whether modest adjustments to
6 incentive levels or program design could better align incentives with the Commission's
7 long-term efficiency and electrification objectives while remaining consistent with Act
8 129. Without such adjustments, the City Parties are concerned that participation will be
9 minimal.

10 viii. RESIDENTIAL HEAT PUMPS AND ELECTRIC RESISTANCE CUSTOMERS

11 22. Q: PLEASE DESCRIBE YOUR CONCERNS REGARDING PECO'S APPROACH TO
12 HEAT PUMPS AND ELECTRIC RESISTANCE CUSTOMERS IN THE RESIDENTIAL
13 PROGRAM.

14 A: The City Parties are concerned that PECO's proposed EE&C Plan does not fully align
15 its residential program design with the Statewide Evaluator's findings regarding the
16 highest-value remaining energy efficiency opportunities within PECO's service territory.
17 The Statewide Evaluator identifies residential space heating as the single largest end-use
18 savings opportunity in PECO's territory. The Statewide Evaluator further concludes that
19 these savings are driven primarily by conversions from baseline electric resistance space
20 heating to high-efficiency heat pump technologies, along with improvements to existing
21 air-source heat pumps and complementary air sealing measures.

22 While PECO's Phase V EE&C Plan reflects partial recognition of this opportunity
23 through the inclusion of measures intended to capture deep savings from inefficient

baseline electric equipment, these offerings are primarily structured as standalone incentives rather than as components of a clearly defined customer pathway designed to drive adoption at scale. As proposed, the EE&C Plan defines “comprehensive” residential programming largely by the breadth of eligible measures, rather than by a delivery framework that supports customers through the technical, financial, and logistical barriers associated with electric resistance to heat pump conversions. Absent clearer design elements such as targeted outreach to electric resistance customers, defined audit-to-installation workflows, dedicated budgets and participation targets, and reporting specific to electric resistance retrofits, there is a risk that PECO’s residential portfolio will continue to rely on mature, lower-impact measures while underperforming against the high-value savings opportunities identified by the Statewide Evaluator.

ix. MEANING OF THE TERM “COMPREHENSIVE”

23. Q: PLEASE EXPLAIN YOUR CONCERNS WITH PECO’S USE OF THE WORD “COMPREHENSIVE” THROUGHOUT THE PROPOSED EE&C PLAN.

A: The City Parties are concerned that PECO’s Phase V Plan applies the label “comprehensive” so broadly that it departs from the Commission’s intent as articulated in the Phase V Implementation Order.¹⁰ The Commission emphasized that comprehensive programs should reflect a deliberate mix of measures that address multiple end uses, leverage lessons from Phase IV, and meaningfully advance whole-building or system-level efficiency for both residential and non-residential customers. In contrast, PECO’s Residential and Residential Low-Income tables designate nearly all individual measures as “comprehensive,” including single end-use, low-cost, or standalone measures such as LED

¹⁰ Energy Efficiency and Conservation Program, Docket No. M-2025-3052826 (Order entered June 18, 2025).

1 bulbs, aerators, showerheads, appliance recycling, and plug-load devices. Treating these
2 discrete measures as comprehensive blurs an important distinction between individual
3 efficiency actions and truly comprehensive program designs that integrate shell, HVAC,
4 water heating, controls, and enabling services in a coordinated way.

5 This approach risks undermining the Commission’s policy objective by effectively
6 redefining “comprehensive” to mean “eligible,” rather than reserving the designation for
7 programs that deliver integrated, whole-home or whole-building outcomes. The
8 inconsistency is further highlighted by the Low-Income Subprogram, where Health and
9 Safety measures, which are often essential prerequisites to delivering comprehensive
10 energy upgrades, are explicitly excluded from the comprehensive designation, while minor
11 efficiency measures are included. The City Parties urge the Commission to require PECO
12 to clarify and narrow its use of the “comprehensive” label, align measure classifications
13 with the intent of the Implementation Order, and clearly identify which residential and non-
14 residential offerings truly function as comprehensive programs rather than collections of
15 individual prescriptive measures.

16 III. CONCLUSION

17 The City Parties’ testimony identifies a consistent theme across PECO’s proposed
18 Phase V EE&C Plan: while the Plan reflects awareness of many of the right objectives,
19 including equity, coordination, demand reduction, and comprehensive energy efficiency,
20 it too often stops short of translating those objectives into program designs that are
21 operationally robust, scalable, and aligned with the highest-value opportunities identified
22 for PECO’s service territory. Across residential, low-income, and demand-side offerings,
23 the Plan relies heavily on broad descriptions, aspirational coordination language, and high-

1 volume but lower-impact measures, while providing limited detail on how deeper, more
2 durable savings will be delivered, especially for households facing structural barriers,
3 health and safety challenges, or complex retrofit needs.

4 The City Parties are particularly concerned that this approach risks prioritizing
5 modeled savings volume and administrative simplicity over long-term customer outcomes,
6 equity, and system-level value. Insufficient health and safety investment, heavy reliance
7 on behavioral savings, limited pathways for electric resistance customers, narrowly scoped
8 pilots, and fragmented demand flexibility programs all point to a portfolio that may meet
9 aggregate targets while underdelivering on persistent savings, resilience, and meaningful
10 bill reductions for customers most in need. These concerns are compounded by PECO's
11 expansive use of the term "comprehensive," which blurs the distinction between standalone
12 measures and integrated, whole-home or whole-building program designs envisioned by
13 the Commission. The City Parties, therefore, urge the Commission to direct PECO to
14 strengthen the specificity, accountability, and internal coherence of its Phase V Plan, clarify
15 program classifications, and more deliberately align investments with the highest-impact
16 efficiency and demand reduction opportunities in its territory, consistent with the intent of
17 Act 129 and the Phase V Implementation Order.

VERIFICATION

I, Alon Abramson, hereby declare that that the facts set forth in the foregoing direct testimony are true to the best of my knowledge, information and belief, and that I make this verification subject to the penalties of 18 Pa. C.S. §4904 pertaining to false statements to authorities.


Alon Abramson

DATE: January 20, 2026

EXHIBIT 1

RESUME OF ALON ABRAMSON

Alon Abramson

Philadelphia, PA

267-324-9948

alon.abramson@gmail.com

Education

Lehigh University, Bethlehem, PA

MS in Environmental Engineering, May 2006

BS in Civil Engineering, May 2005

Professional Experience

Philadelphia Energy Authority, Philadelphia, PA

Vice President of Programs

July 2024 – Present

- Facilitating new consumer program design.
- Overseeing organization-wide research and program evaluation efforts.
- Providing strategic oversight of residential, commercial, and workforce programs.

Director, Residential Programs

June 2021 – June 2024

- Oversaw a team to manage the Built to Last, Solarize Philly, and Water and Sewer Line Protection Programs, as described below.
- Supported fundraising efforts to advance program growth.

Program Manager

April 2017 – May 2021

- Created the Built to Last program, a partnership of 15+ organizations including program development, fundraising, and implementation.
- Managed the Solarize Philly program, including overseeing contractor partners and developing marketing campaigns.
- Managed the City's Water and Sewer Line Protection Program, which has over 20% of all residential Philadelphia Water Department customers enrolled and a strong track record of customer satisfaction and M/W/DBE participation.
- Developed and managed energy conservation programs for Philadelphia small business owners and multi-family affordable housing property owners. Responsibilities included: managing partners; performing outreach; and tracking program outcomes.
- Managed special projects including providing energy project technical assistance to cultural institutions, managing the complex procurement for LED Streetlighting, and developing the Flat Rock Dam hydropower project with the Philadelphia Water Department.

Penn Institute for Urban Research, Philadelphia, PA

Project Manager

September 2011 –April 2017

- Created a multimedia web platform showcasing the Philadelphia-based Consortium for Building Energy Innovation.
- Orchestrated outreach effort for Department of Energy products aimed at increasing energy efficiency across the entire market of commercial buildings.
- Managed the design and build of a new Knowledge Sharing Platform website for the Asia-Pacific Economic Cooperation for their Energy Smart Communities Initiative.

Golder Associates, Inc., Conshohocken, PA

Engineering Associate

June 2008 - March 2010

- Engaged in compliance oversight as client's on-site agent during major power plant construction. Managed all necessary construction permits and ensured that client could meet all necessary requirements. Was appointed Erosion and Sediment site inspector by client. Held both client and regulator meetings.
- Involved in final design of site remediation for pharmaceutical clients.
- Assisted with hydraulic and mechanical designs of pump/pipe systems.
- Prepared contractor bid and specification packages and cost estimates.
- Performed groundwater sampling using both standard and low-flow methods.

F. X. Browne, Inc., Lansdale, PA

Staff Engineer

July 2006 - September 2007

- Produced basic stormwater engineering designs for various land development projects.
- Worked on a range of wastewater treatment projects with both surface water and land discharge.

Boards and Committees

Energy Efficiency Alliance

Board Member

August 2024 – Present

Pennsylvania Weatherization Policy Advisory Council

Board Member, Technical Advisory Committee

June 2021 – Present

Greater Philadelphia Chapter of the Association of Energy Engineers

Member, Scholarship and Education Committee

November 2020 – June 2024

Civic Engagement

West Philly Runners, Philadelphia, PA – www.westphillyrunners.com

Founder and Organizer

November 2011 – Present

- Formed a community running group that has grown to a membership of over 1000 runners with weekly runs and unique running events.
- Organized a number of highly successful events that leverage heavy social media and traditional media engagement.

Open Streets PHL, Philadelphia, PA – www.openstreetsphl.com

Founding Member and Board Co-Chair

August 2015 – April 2017

Publications and Press

Thomhaven K. Apr. 2024. "[A first-in-the-nation home repair program sees overwhelming demand](#)" *Smart Cities Dive*

Berkouwer S. & Jahic A. Apr. 2024. "[Building to Last: Impacts of a Philadelphia Energy-Efficiency Housing Rehabilitation Program for Low-Income Households](#)" *Kleinman Center for Energy Policy*

Sisson P. Jun. 2022 "[The future of urban housing is energy-efficient refrigerators](#)" *MIT Technology Review*

Udavant S. Feb. 2020. "[Sustainability Group Helps Low-Income Homeowners With House Repairs, Weatherization](#)" *Next City*

Clark A. Aug. 2021. "[This initiative from PEA is connecting programs and organizations to support homeowners in low-income housing](#)" *Grid Magazine*

Post K. April 2019. "[Startup Energy: The Philadelphia Energy Authority aims for a green-energy tomorrow](#)" *Grid Magazine*

Technical Skills

Building modeling (eQuest, Asset Score Tool, HEED); ENERGY STAR Portfolio Manager; LEED Accreditation System; Passive House Standard; Green Roofing Practices; PV System Design

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PECO Energy Company :
For Approval of its Act 129 Phase V : Docket No. M-2025-3057328
Energy Efficiency and Conservation Plan :

**PREPARED HEARING EXHIBIT LIST OF
THE CITY OF PHILADELPHIA AND THE PHILADELPHIA ENERGY AUTHORITY**

The City of Philadelphia (“City”) and Philadelphia Energy Authority (“PEA”) intend to move for admission of the following evidence at the February 2, 2026, evidentiary hearing in the above-captioned matter:

The Direct Testimony of Alon Abramson on behalf of the City of Philadelphia and Philadelphia Energy Authority (City/PEA Statement 1) consisting of 23 pages of written testimony; the Verification of Alon Abramson; and Exhibit A: the Resume of Alon Abramson.

The City and PEA may have additional exhibits to introduce as evidence at the evidentiary hearing.

Respectfully,

/s/Laura Antinucci

Laura Antinucci, Esq.
PA Attorney I.D. #327217
Counsel for the CITY
Philadelphia Law Department
1515 Arch Street, 16th Floor
Philadelphia, PA 19102

Dated: January 30, 2026

Baird Brown
PA Attorney I.D. #32749
Counsel for PEA
eco(n)law LLC
230 S. Broad Street
Philadelphia, PA 19102

