
Duquesne Light Company |
Act 129 Phase V Energy |
Efficiency and |
Conservation Plan |

Docket No.: M-2025-3057325

Call-In Telephonic |
Hearing

Pages 25 - 53

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INDEX TO EXHIBITS

Docket No.: M-2025-3057325

Hearing Date: February 4, 2026

<u>NUMBER</u>	<u>FOR IDENTIFICATION</u>	<u>IN EVIDENCE</u>

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for	:	
Approval of its Energy Efficiency and	:	Docket No. M-2025-3057325
Conservation Phase V Plan	:	

DLC Exhibit 1: The Phase V Energy Efficiency & Conservation Plan, submitted
with the Pennsylvania Public Utility Commission on December 1, 2025

Duquesne Light Company – Phase V Energy Efficiency and Conservation Plan

Docket No. M-2025-3057325

December 1, 2025

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Table of Acronyms

Acronym/Term	Definition
AMI	Advanced Metering Infrastructure
BRA	Base Residual Auction
CEEP	Large Commercial Energy Efficiency Program
CHP	Combined Heat and Power
CPM	Contract Program Manager
CSP	Conservation Service Provider
DOE	United States Department of Energy
EDC	Electric Distribution Company
EE&C	Energy Efficiency and Conservation
EM&V	Evaluation, Measurement, and Verification
FPG	Federal Poverty Guidelines
HVAC	Heating, Ventilation, and Air Conditioning
IEAG	Income Eligible Advisory Group
IEEP	Large Industrial Energy Efficiency Program
LI-BEEP	Low-Income Behavioral Energy Efficiency Program
LIHEAP	Low-Income Home Energy Assistance Program
LIURP	Low-Income Usage Reduction Program
LI-WHRP	Low-Income Whole House Retrofit Program
Low-to-Moderate Income Customer	Customers at 151% to 225% of the Federal Poverty Guidelines
NAICS	North American Industry Classification System

Acronym/Term	Definition
NGDC	Natural Gas Distribution Company
OMP	Residential Online Marketplace Program
On-Peak Demand (kW)	Demand reductions during Non-Holiday Weekdays; 2-6 PM during June, July, and August; 7-9 AM and 6-8 PM during January and February
PCPP	Project Commitment Progress Payment
PDE	Pennsylvania Department of Education
Phase V EE&C Plan	Duquesne Light's Energy Efficiency and Conservation Plan for Act 129 Phase V submitted on November 30, 2025
PMP	Program Management Plan
PJM	Pennsylvania-Jersey-Maryland Interconnection LLC
PMRS	Program Management and Reporting System
POS	Point of Sale
PPUC	Pennsylvania Public Utility Commission
Program Year	June 1 st through May 31 st
RARP	Residential Appliance Recycling Program
R-BEEP	Residential Behavioral Energy Efficiency Program
REEP	Residential Energy Efficiency Programs
RFP	Request for Proposal
RMIP	Residential Midstream Incentives Program
SNEEP	Small-Medium Nonresidential Energy Efficiency Program
SOW	Statement of Work
SWE	Statewide Evaluator
TRM	Technical Reference Manual

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Note: If any of your answers require you to disclose what you believe to be privileged or confidential information, not otherwise available to the public, you should designate at each point in the EE&C Plan that the answer requires you to disclose privileged and confidential information. Explain briefly why the information should be treated as confidential. You should then submit the information on documents stamped “CONFIDENTIAL” at the top in clear and conspicuous letters and submit one copy of the information under seal to the Secretary’s Office along with the EE&C Plan. In addition, an expunged copy of the filing should also be included with the EE&C Plan. If someone

requests to examine the information, or if Commission staff believes that the proprietary claim is frivolous or otherwise not justified, the Secretary's Bureau will issue a Secretarial Letter directing that the EDC file a petition for protective order pursuant to 52 Pa. Code § 5.423.

Energy Efficiency and Conservation Plan

A. Transmittal Letter - with reference to statutory and regulatory requirements and Electric Distribution Company (EDC) contact that PA PUC should contact for more information.

B. Table of Contents - including lists of tables and figures.

C. Table of Acronyms – include definitions of any acronyms used in the plan.

D. Mapping of Program Years to Dates – show table identifying the start and end dates of all program years.

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

This EE&C plan template reflects Commission guidance issued in previous Act 129 Orders. Specifically:

- Phase V Implementation Order. Docket No. M-2025-3052826. Entered June 18, 2025. Weblink (henceforth referred to as “2025 IO”)
- Phase 1 Implementation Order. Entered January 16, 2009. Docket No. M-2008-2069887. Weblink (henceforth referred to as “2009 IO”)
- 2026 TRC Test Final Order. Docket No. M-2024-3048998. Entered November 7, 2024. Weblink (henceforth referred to as “TRC Test Order”)
- 2026 Technical Reference Manual Final Order. Docket No. M-2023-3044491. Entered September 12, 2024. Weblink (henceforth referred to as “TRM Order”)

1. Overview of Plan

(The objective of this section is to provide an overview of the entire plan)

1.1. Summary description of plan, plan objectives, and overall strategy to achieve energy efficiency and conservation goals.

Pursuant to Act 129 of 2008 (“Act 129”), the Pennsylvania General Assembly charged the Pennsylvania Public Utility Commission (“PUC” or “Commission”) with establishing an energy efficiency and conservation program. The energy efficiency and conservation program requires each electric distribution company (“EDC”) with at least 100,000 customers to adopt a plan to reduce energy demand and consumption within its service territory. In response to Act 129, on January 16, 2009, the Commission entered an Implementation Order at Docket No. M-2008-2069887 which was utilized in Phase I program planning. On August 3, 2012, the Commission entered an Implementation Order at Docket Nos. M-2012-2289411 and M-2008-2069887 for Phase II program planning. On June 11, 2015, the Commission entered an Implementation Order at Docket No. M-2014-2424864 for Phase III program planning along with a Clarification Order issued on August 20, 2015. On June 18, 2020, the Commission entered an Implementation Order at Docket No. M-2020-3015228 for Phase IV program planning. On June 18, 2025, the Commission entered an Implementation Order at Docket No. M-2025-3052826 for Phase V program planning. The Act requires that by November 30, 2013, and at least every five years thereafter, the Commission shall evaluate the costs and benefits of the program. Based upon findings of the Statewide Evaluator (SWE) contained in its Market Potential Study¹, the Commission determines that the benefits of a Phase V Act 129 program will exceed the costs and therefore proposes to adopt additional required incremental reductions in consumption for another Energy Efficiency and Conservation Plan (“EE&C” or “Plan”) program term.

In the June 18, 2025, Implementation Order, the Commission adopted the percentage reduction targets recommended by the SWE. Duquesne Light Company’s (“Duquesne Light” or “Duquesne” “DLC” or the “Company”), energy consumption reduction target for the Phase V five-year energy efficiency consumption is 261,583 MWh and demand reduction target is 46.5 MW. In compliance with the requirements of Act 129 and PUC Orders, Duquesne has used the energy consumption and demand reductions established by the Commission to develop its energy efficiency and conservation plan, which is submitted herewith.

EE&C Plan savings projections for each sector are proportionally aligned with Pennsylvania Act 129 - Phase V Energy Efficiency and Peak Demand Reduction Market Potential Study Report (“Phase V Potential Study” or “Potential Study”) Tables 48, 50 and 52 (as well as briefing slides 38 and 49). The forecast values themselves were changed to match the amount in the Commission’s Phase V Implementation Order. The Potential Study identifies Duquesne Lights’s Act 129 Potential at page 52 setting the target 287,700 MWh that includes traditional EE and adds Solar and CHP. The Implementation Order² set the portfolio target 261,583 MWh and

¹ Energy Efficiency Potential Study for Pennsylvania, NV5, February 7, 2024.

² Energy Efficiency and Conservation Program Implementation Order, Docket M-2025-3052826, Table 2: Final Phase V Targets, by EDC, page 12.

46.5 MW. The EE&C Plan is designed to achieve 5% over the Implementation Order requirements.

- 1.2. Summary description of process used to develop the EE&C plan and key assumptions used in preparing the plan. Provide the basis for key assumptions and discuss sources of uncertainty that may affect the plan. This summary should include a description of the EDC's process for stakeholder engagement during both the development and implementation of the EE&C plan.

In developing this plan, Duquesne Light prioritized affordability for customers and committed to continuous evaluation to ensure the cost-effective delivery of energy efficiency goals. Additionally, the Phase V Plan emphasizes consolidation of program offerings where feasible, reducing redundancies and aligning resources to maximize impact and streamline administration. Duquesne Light's Phase V EE&C Plan development process is summarized below.

Duquesne Light developed the Phase V Plan in partnership with implementation providers to leverage industry expertise and streamline the transition from Phase IV. Following the release of the Phase V Implementation Order, Duquesne Light issued six (6) competitive solicitations to affect implementation of five program types: (1) Residential market rate and Low-Income programs, (2) Behavioral Programs, (3) Midstream Programs (e.g., Medium-Small Nonresidential Midstream and Residential Midstream Programs), (4) Small-Medium Nonresidential and Large Commercial sectors and (5) Large Industrial sector efficiency program. Solicitation (6) was for Evaluation, Measurement and Verification ("EM&V"). Duquesne Light's Phase V EE&C Plan development process is summarized below.

Duquesne Light will evaluate existing programs for potential integration where they align with our objectives and regulatory requirements. In addition, DLC will explore resource adequacy initiatives that enhance grid resiliency and support our long-term vision of delivering clean, reliable energy for all customers. These efforts will include assessing emerging technologies, leveraging data-driven insights to optimize performance, and identifying opportunities for collaboration with key stakeholders. By prioritizing innovation and sustainability, DLC aims to strengthen system reliability, reduce environmental impact, and ensure equitable access to energy solutions across our service territory.

- 1) Measure content and projected mix

The EE&C Plan forecast measure detail is directly linked to Conservation Service Provider (CSP) responses to competitive solicitations issued by Duquesne Light for the design and implementation of the programs presented in this Plan. Accordingly, the measure mix was taken from proposals selected based on CSP expertise and innovation. Phase V Plan measures (See Section 11, Table 8) were reconciled with content of the 2026 Technical Reference Manual (TRM) and information provided in the SWE saturation studies and potential forecast.³ Measure savings impact, cost and benefit.

³ Ibid.

Measure deemed savings were updated consistent with the 2026 TRM. Measure costs were documented using the SWE incremental costs database⁴, contractor values, EDC research and specific measure cost web research. Incentive amounts were established starting with baseline assumptions applied in the Phase V Potential Study. These were adjusted based upon historic incentives provided by Duquesne Light, the other six Pennsylvania EDCs, escalated for the Phase V performance period and adjusted as required to achieve budgetary requirements. Avoided cost assumptions were updated consistent with the Total Resource Cost Test (TRC) Order⁵ utilizing output from the Avoided Cost Calculator consistent the 2026 TRC Test Final Order⁶ these values are applied to render measure, program, portfolio and Plan level cost-effectiveness as expressed by the TRC ratio.

2) Program definition

Programs were defined based upon delivery channels within each customer sector. Duquesne Light worked with CSPs to establish program definitions.

Residential sector programs will employ proven successful appliance recycling, online marketplace and midstream engagement channels. Under-served, income qualifying customers receive on-site and or virtual energy assessments, customer education, direct-install and comprehensive energy saving measures.

Nonresidential Sector Programs: The Small-Medium Nonresidential Customer Energy Efficiency Program (C&I customers with a monthly max billing demand of less than 300 kW over the prior 12 months) provides direct-install, downstream and midstream incentive engagement channels were successful in Phase IV and are continued in Phase V. Large Commercial and Industrial customer programs (for C&I customers with a monthly max billing demand $\geq$ 300 kW over the prior 12 months) provide proven down-stream audit services and measure incentives both prescriptive and custom tailored to site-specific needs.

The Public Agency Partnership (PAPP) was implemented directly by Duquesne Light in Act 129 Phases I, II and III, is brought back for Phase V. No longer a regulatory “carve-out” the program provides successful strategies to overcome GNI sector⁷ barriers to program participation. The programs are discussed in more detail below.

3) Portfolio/Program Goals and Funding

Program goal allocation and associated program budgets were designed based upon the SWE Energy Efficiency Potential Study and adjusted to accommodate the Commission’s Implementation Order, which required segment carve-outs for the low-income segment and specified program comprehensiveness requirements.⁸ Goal allocation for the remaining customer

⁴ Ibid.

⁵ PA PUC 2026 Total Resource Cost Test Order, November 7, 2024, at Docket No. M-2024-3048998.

⁶ TRC Test Order Exhibit H., subsection 1. 2026 Avoided Cost Calculator (ACC).

⁷ Governmental, Nonprofit, Institutional (GNI), Act 129 of 2008 Section 2806/11(C)(1)(i)(C) identifies “Federal, State and local government, including municipalities, school districts, institutions of higher education and nonprofit entities” as GNI.

⁸ Ibid.

segments was based on segment energy use, as well as requirements to achieve mandated reductions at authorized budgets.

- 1.3. Summary tables of portfolio savings goals, budget and cost-effectiveness (see Tables 1, 2, 3 and 4 of the EE&C Template Tables Excel Workbook). Introduce Table 2 with high-level overview of Act 129 energy accounting (incremental annual, gross vs. net, meter level savings vs. system level savings, weather-normalization of savings estimates, etc.).⁹ Introduce Tables 3 and 4 with a summary of the key peak demand accounting elements for Phase V (2025 IO at 147-157).

Table 2: Summary of Portfolio Energy Savings shows Market Rate Sector, Low-Income sector, Small C&I and Large C&I sector incremental and cumulative energy savings and demand reductions. Gross versus Net is not discussed at Tables 2-4 and can only be found in Table 14.

Table 4 requires the combination of EE demand reduction with load shifting demand reductions in an effort to assemble and test annual and Phase performance period demand impacts. The format of the imposed form appears to be testing whether and if performance-period demand reductions meet minimal seasonal impacts of 75 percent of reported demand reductions and purports to measure annual 15% impact minimums. This approach combines what are 5-year average DR impacts with incremental annual EE demand reductions that are two very different values. This form serves to document Phase-period demand reductions with seasonal impacts.

Please see Section 11: Tables for Pennsylvania EDC Energy Efficiency and Conservation Plan.

- 1.4. Summary of program implementation schedule over the five-year plan period. Utilize the Mapping of Program Years to Dates table above to align calendars with Act 129 program years.

Please see Section 12: Program Schedules and Milestones

- 1.5. Summary description of the EDC implementation strategy to acquire at least 15% of its consumption reduction and peak demand reduction target in each program year.

Duquesne Light's Phase V EE&C Plan includes programs that are being continued as previously implemented, modified based on previous years' experience implementing them, and newly added programs. These programs have forecast "ramp-rates" projecting estimated saving impacts across the five-year Phase V performance period as shown in Figure 1: Program Ramp-Rates. As shown the Plan provides for acquiring at least 15% of the consumption target in each of the Phase V program years.

⁹ Tables referenced in the template are found in Section 11.

Figure 1: Program Ramp-Rates

Sector	Program	2026	2027	2028	2029	2030	Total
Residential	Appliance Recycling	16.4%	18.0%	19.8%	21.8%	24.0%	100.0%
	Low Income Energy Efficiency	19.6%	19.8%	20.0%	20.2%	20.4%	100.0%
	Residential Midstream Efficiency	18.7%	19.8%	20.1%	20.5%	20.9%	100.0%
	Residential Online Marketplace	19.4%	19.7%	20.0%	20.3%	20.6%	100.0%
	Residential Behavioral (HERs)	19.2%	22.5%	22.8%	19.2%	16.2%	100.0%
	Low Income Behavioral (HERs)	31.0%	16.7%	16.7%	16.7%	19.0%	100.0%
Small/Medium C&I	Small/Medium Nonresidential	16.7%	18.6%	21.2%	23.7%	19.8%	100.0%
Large Commercial	Large Commercial Efficiency	15.0%	17.5%	22.5%	27.5%	17.5%	100.0%
Large Industrial	Large Industrial Efficiency	10.3%	17.3%	22.1%	24.0%	26.3%	100.0%
Governmental/Nonprofit	Public Agency Partnership	18.0%	22.0%	23.0%	22.0%	15.0%	100.0%
	Total Portfolio	15.6%	18.8%	21.7%	23.4%	20.6%	100.0%

1.6. Summary description of the EDC implementation strategy to acquire at least 75% of the portfolio MW compliance target in each season (2025 IO at 142). If an alternative summer or winter performance window is proposed for daily load shifting programs, provide a rationale for the alternative window. If the proposal calls for differentiated windows based on local distribution system needs, summarize the proposed taxonomy and prepare a supplemental table that maps distribution assets or transmission zones to peak demand performance windows. (2025 IO at 154).

The proposed EE&C Plan is developed to provide necessary minimum summer or winter demand reductions minimums (75%) of total demand reduction impacts through its proposed measure mix. Duquesne believes this is an appropriate area of concern and is expected to be a challenge. It is a unique requirement not seen or tested before, just the Phases I and II impact measurement requirements (top 100 hours) and the Phase III impact measurement requirement (dispatch triggered by 96% for PJM forecast peaks) were novel. Duquesne Light will monitor Summer and Winter demand reductions at the measure, project, program and portfolio levels. Duquesne Light includes in its forecast measures and measure impacts resource adequacy measures.¹⁰ Duquesne Light plans these impacts so as to render 5-years of averaged impacts to increase the probabilities of meeting the newly imposed requirement.

¹⁰ Resource adequacy measures include, but are not limited to, active managed charging, behavioral demand response, TOU rates, direct load control programs for AC, water heater, etc., smart thermostat, smart panel, battery storage as well as front of the meter measures.

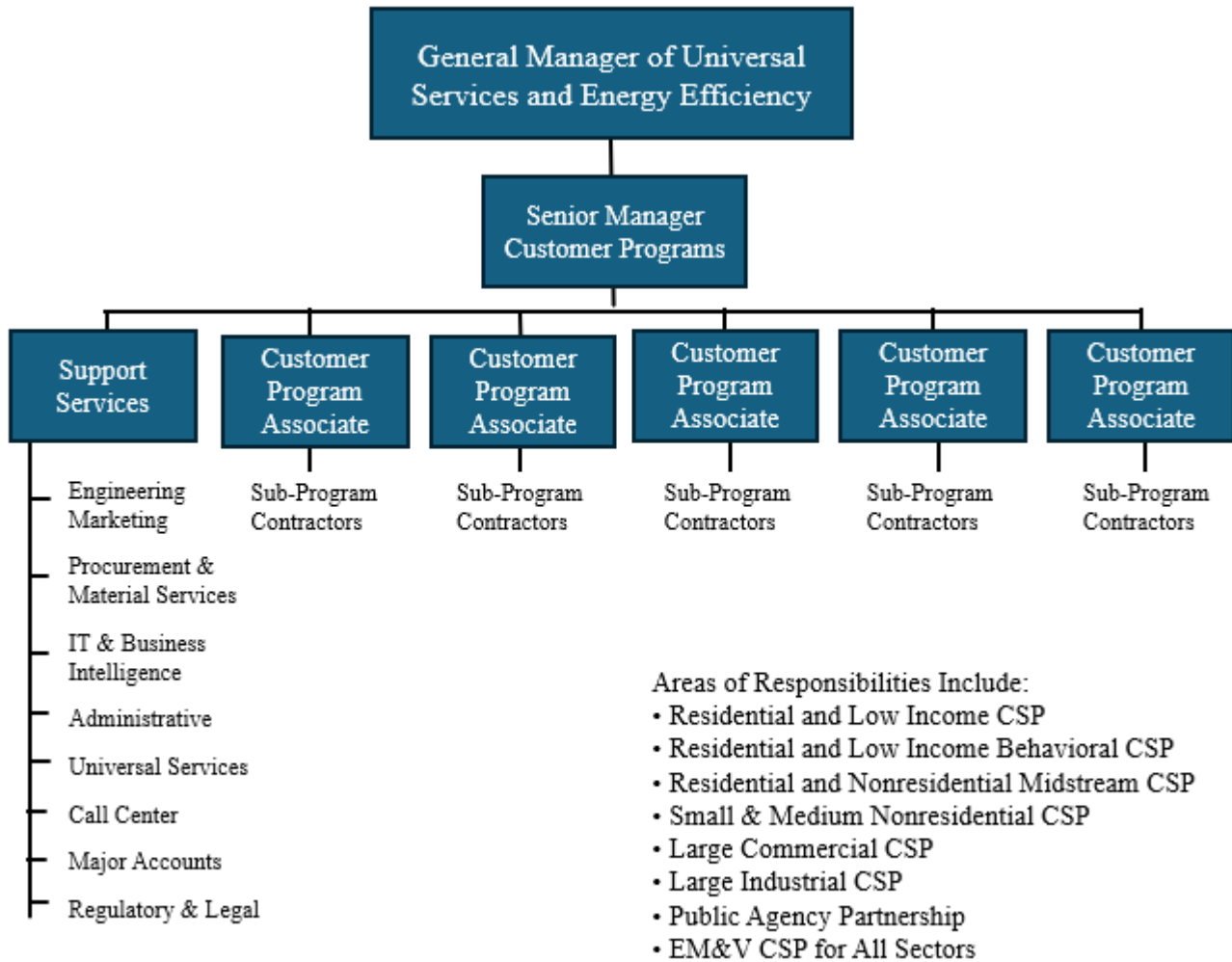
1.7. Summary description of the EDC implementation strategy to manage EE&C programs and engage customers and trade allies.

Duquesne Light delivers programs efficiently by combining internal resources with specialized contractors. Contractors and subcontractors handle implementation under agreements with Duquesne Light, while overall responsibility for meeting goals remains with Duquesne Light.

Phase V programs will be executed by CSPs with Duquesne Light providing oversight and support. Success will require careful planning, coordination, and integration into a unified operation. Clear procedures, documentation, and data systems will be maintained. This collaboration will involve CSPs, contractors, trade allies, and Duquesne Light working together.

Customers will be engaged through at least three channels. First, Duquesne Light promotes programs directly to its customers through marketing approaches such as mass media advertising, direct marketing, direct contact, events, conferences, account representatives and electronic media. Second, Duquesne Light will work with CSPs that have similar outreach responsibilities to ensure a consistent message with a specific focus on securing commitments for customers to participate in the programs. Third, Duquesne Light and its CSPs will provide information on its programs to trade allies, such as builders, architects, engineers, vendors, equipment installation contractors, retailers and others, with the objective of securing their willingness to participate and encourage their customers and clients to participate. Trade allies are engaged primarily through direct marketing, events, conferences and account representatives.

Energy efficiency is implemented under customer programs at Duquesne Light and is housed within the customer service department under the revenue management and organizational transformation function. The department's size and function are driven by the portfolio of programs offered. The size and structure also reflect the use of contractors and subcontractors. The organization is headed by one senior manager who reports to the General Manager of Universal Services and Energy Efficiency. The senior manager is responsible for the planning and implementation of the energy efficiency and conservation program. The senior manager is supported by several sector or segment specific customer program associates. There also is support staff for functions including engineering, marketing, data processing, regulatory and contract management. The organizational chart pictured below represents the structure of the organization to implement the energy efficiency and conservation plan.

Figure 2: Customer Programs Organizational Chart

1.8. Summary description of EDC’s data management, quality assurance and evaluation processes; include how EE&C programs will be updated and refined based on evaluation results and plans for secure data sharing with other program administrators.

Data Management: All energy efficiency project activities are tracked and recorded in the Program Management and Reporting System (PMRS). When projects are established, PMRS assigns project numbers that are linked to Duquesne Light’s customer information and billing system by customer service agreement identification number. Hard and electronic copy project files are organized and filed by PMRS project number. Data elements tracked in PMRS include customer data, project and measure data; energy and demand savings; as well as financial rebate and, as applicable, CSP performance payment data. Measure level data contain applicable baselines, as well as proposed and installed measure definition to support claimed savings for measures listed in Section 11, Table 8. PMRS data extraction supports all program reporting as well as evaluation measurement and verification sampling.

Quality Assurance: (A more detailed description of quality assurance is provided under Section 6.) All CSPs under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to provide a Program Management Plan (“PMP”). The PMP presents the program rationale, assumptions, approach, processes to include policies and procedures, production plan, marketing plan, performance metrics and quality assurance plan.

Procedures are in place to ensure prospective projects receive appropriate and consistent review prior to approval and incentive payment processing. This ranges from minimal residential measure rebate application processing to extensive commercial and industrial (C&I) project development and customer incentive processing. C&I incentive processing varies significantly depending on project type and size. A project review flow chart and project file content requirements are addressed in Section 6.

Evaluation Process: Projects and measure reported savings are verified pursuant to the Duquesne Light Evaluation Measurement and Verification (EM&V) Plan. The EM&V Plan ensures customer projects are verified using a systematic process that is consistent with the Statewide Evaluator’s (SWE) Audit Plan and Evaluator’s Framework for Pennsylvania Act 129 Energy Efficiency and Conservation Programs (Audit Plan). The Duquesne Light EM&V Plan specifies sample plans and applicable verification rigor consistent with the Audit Plan and is vetted with and approved by the SWE.

Program Refinements: Program refinement is continuous, resulting from experience gained through program implementation and adherence to quality assurance procedures described above. Augmenting internal process improvements, programs and processes are subject to program implementation process evaluations performed by an independent EM&V contractor.

Additionally, customer and stakeholder input are solicited during regularly scheduled Act 129 EE&C Program stakeholder meetings. Changes to programs will be requested through the applicable Commission process, if necessary. The Company will also monitor and report on all existing programs at its stakeholders’ meetings.

Duquesne Light will evaluate requests for custom measure rebates on the case-by-case basis to determine cost effectiveness and energy savings potential. Measures, including combined heat and power (“CHP”) projects, distributed energy resources, and microgrids may be considered and approved if found to be cost effective as indicated by the Total Resource Cost (“TRC”) score above 1.0, based upon project savings calculated in accordance with the PA Technical Reference Manual (“TRM”) standards and proof of positive fuel savings using the Department of Energy endorsed source fuel efficiency models.

1.9. Summary description of cost recovery mechanism.

The Act allows all EDCs to recover on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of its plan. The Act also requires that each EDC's plan includes a proposed cost-recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307, to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. To that end, Duquesne Light has

designed a surcharge and reconciliation mechanism for all customer segments. The surcharge has been designed in a manner that recovers costs of the programs from the customers who have an opportunity to participate in those programs.

The Company has successfully implemented in Phase I, Phase II, and Phase III five surcharges to recover the associated Act 129 costs. As part of the parties' settlement in Phase III,¹¹ Duquesne Light agreed to combine the surcharges for Small and Medium Commercial and Industrial customers, reducing the total number of EE&C surcharges from five to four: Residential, Small and Medium C&I, Large Commercial, and Large Industrial. The revised plan was filed and approved by the PA PUC resulting in the new surcharge effective June 1, 2020. This surcharge configuration was used throughout Phase IV and is slated to remain for Phase V. The Residential surcharge is designed to recover costs on a cents per kilowatt-hour basis with an annual reconciliation; the charges would be included in the overall distribution kWh rate. The Small and Medium Commercial and Industrial surcharges are also designed to recover costs on a cents per kilowatt-hour basis with an annual reconciliation. The Large Commercial and Industrial surcharges are each designed to recover costs through a combination of a fixed monthly surcharge and a demand-based surcharge with an annual reconciliation. All commercial and industrial customers will have a separate line-item delineation of these charges on the bill.

¹¹ Refer to the PaPUC Docket M-2015-2515375 Commission Order dated March 10, 2016, regarding the Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation Phase III Plan.

2. Energy Efficiency & Conservation Portfolio/Program Summary Tables & Charts

(The objective of this section is to provide a quantitative overview of the entire plan for the five-year period. The audience will be those who want to see the “numbers”, but not all the details.)

- 2.1. Market Rate Residential (exclusive of Low-Income), Residential Low-Income, Small Commercial & Industrial, and Large Commercial & Industrial Sector Summaries (see Table 6).¹²

See Section 11 below for Table 6.

- 2.2. Plan data: Costs, Cost-effectiveness and Savings by program, sector and portfolio (see Tables 1-6).

See Section 11 below for Tables 1-6.

- 2.3. Budget and Parity Analysis (see Table 7). EDC total annual revenue is inclusive of collections on behalf of Electric Generation Suppliers¹³ (2009 IO at 35). EDCs should use calendar year 2024 to compute the share of revenue and MWh sales by customer sector. Total annual sales should include both bundled and delivery-only sales.

See Section 11 below for Table 7.

¹² A *project* is an activity or course of action involving one or multiple energy efficiency measures, at a single facility or site. A *program* is a group of projects, with similar characteristics and installed in similar applications. Programs should be organized around a common customer class, technology, end-use, market, or delivery mechanism. The portfolio consists of all the programs in the residential, commercial/industrial small, commercial/industrial large or government/nonprofit/institutional sectors. Residential sector programs include participants with a residential rate schedule. Commercial/Industrial Small sector programs include participants with a small C/I rate schedule. Commercial/Industrial Large sector programs include participants with large C/I rate schedule. Government/Nonprofit/Institutional includes customers in any rate schedule who are Federal, State, Municipal, and Local Governments, as well as school districts, institutions of higher learning, and non-profit entities. The applicable EE&C sector designation is based on a customer's rate schedule not the size of the energy efficiency project or the type of building.

¹³ Per the January 16, 2009 Implementation Order, “the Commission interprets ‘amounts paid to the [EDC] for generation, transmission, distribution and surcharges by retail customer,’ set forth as the definition of EDC total annual revenue in 66 Pa. C.S. § 2806.1(m), to include all amounts paid to the EDC for generation service, including generation revenues collected by an EDC for an EGS that uses consolidated billing.” See January 16, 2009, Implementation Order at 35.

3. Program Descriptions

(The objective of this section is to provide detailed descriptions of each proposed program and the background on why particular programs were selected and how they form balanced/integrated portfolios.)

3.1. Discussion of criteria and process used for selection of programs:

Duquesne Light is in its seventeenth year successfully planning and implementing four prior portfolios of energy efficiency programs. The Phase I portfolio was built upon Duquesne Light's own Energy Efficiency and Demand Response Potential Study.¹⁴ Phase II planning benefitted by the SWE's 2012 Market potential Study; the Phase III EE&C Plan incorporated findings of SWE's 2015 Energy Efficiency Potential Study; the Phase IV the EE&C Plan was informed and Guided by the 2020 Energy Efficiency and Demand Reduction Potential Study and in Phase V we are guided by the 2024 Potential Study. Duquesne Light has 17 years of experience implementing programs with claimed savings exceeding all Phase-mandates and reported savings impacts independently verified at 97.6%.

Additional planning and research in preparation for development of the Phase V EE&C Plan includes an October 2024 benchmarking of residential programs, measures and incentive levels that studied programs in Pennsylvania (all EDCs), Illinois, New Jersey, New York, Vermont and Wisconsin. Also, Duquesne Light engaged its Phase IV independent evaluator, Guidehouse, to prepare a Customer Assistance Strategic Assessment Benchmarking effort to better integrate its customer assistance portfolio with Act 129 energy efficiency and demand-response planning. The Strategic Assessment used data-driven segmentation to identify vulnerable and hard-to-reach customers, aligning assistance offerings with cost-effective load management options.

In addition to the planning depth of four potential studies, two benchmarking studies and implementation experience, Duquesne Light's Phase V measure content reflects the 2026 Technical Reference Manual and its predecessors, where applicable. Phase V EE&C Plan program measure mixes are updated to current codes and standards and reflect the measures of successful programs, nationally.

- 3.1.1. Describe portfolio objectives and metrics that define program success (e.g., energy and demand savings, customers served, number of units installed, market transformation).

Portfolio objectives and metrics are taken from the Phase V Potential Study. The Commission's adoption of the study, and incorporation of study findings as compliance targets, supports Duquesne Light's application of study report findings as an initial planning basis. Adjustments were made based on Duquesne Light's experience with implementing similar programs but generally align with Potential Study projections as shown in the table below:

¹⁴ Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation and Demand Response Plan Docket No. M-2009-2093217, June 30, 2009; Part (3) Energy Efficiency and Demand Side Response Study, MCR Performance Solutions, LLC, June 26, 2009.

Figure 3: Sector Energy Use, Plan Savings and EE Potential

Sector	Energy Use	5-Year Savings MWh	Plan Savings %	P5 Potential Study
Residential	30.9%	83,958	30.6%	34.5%
Smal C&I	25.7%	76,001	27.7%	26.6%
Large Commercial & Industrial	43.5%	114,703	41.8%	38.9%
Total	100.0%	274,662	100.0%	100.0%

Given this foundation, the planning process imposed program budget limits consistent with the Act and the Commission's Implementation Order of June 18, 2025. Available funding was first allocated to each major rate class in proportions approximating annual energy consumption, then adjusted based on requirements to achieve the Commission's required reductions in the low-income segment, as well as comprehensive program requirements of the Commission's Implementation Order. Program goal allocations also incorporated demonstrated delivery channel strengths and weaknesses from Phase I, Phase II, Phase III and Phase IV in a balance to achieve reduction mandates given the Commission's funding authorization.

The Act requires certain amounts of the mandated reductions be achieved through programs serving low-income customers. In addition to mandated programs, a portfolio of programs was assembled to penetrate key markets, including hard-to-reach small C&I markets.

Figure 4: Projected Portfolio Savings

Program	Savings MWh	Savings MW
Residential Appliance Recycling	6,126	1.145
Residential Online Marketplace	6,500	3.015
Residential Midstream Incentives	20,000	1.086
Residential Low-Income Energy Efficiency	16,932	6.265
Residential Behavioral Energy Efficiency	30,200	7.050
Residential Low-Income Behavioral Efficiency	4,200	0.890
Small-Medium Nonresidential Efficiency	76,000	11.748
Large Commercial Sector Efficiency	50,000	8.504
Large Industrial Sector Efficiency	40,000	5.329
Public Agency Partnership (GNI)	24,704	3.155
Total Portfolio	274,663	48.2

- 3.1.2. Describe how programs were constructed for each sector to provide market coverage sufficient to reach overall energy and demand savings goals. Describe analyses and/or research that were performed (e.g., benchmarking of other jurisdictions, best-practices, requests for information from CSPs).

Program Portfolio Structures:

Energy efficiency potential is forecast based on customer size and building type, along with technology applications available for that type of customer and building. This approach is functional and consistent with industry standard practices. Programs are designed to (1) target identified efficiency gain potential (energy and demand), and (2) address market segment specific needs and barriers. The following chart shows customer sector building categories characterized by the Phase V Potential Study observed in the development of the energy efficiency programs described herein:

Figure 5: Customer Sector Building Stock Categories¹⁵

Residential	Small C&I	Large C&I
Single Family (SF)	Small Office	Large Office
SF Low-Income	Small Retail	Large Retail
Multifamily	Small Education – College/University	Large Education – College/University
	Small Education – Other	Large Education – Other
	Small Grocery	Large Grocery
	Small Health – Hospital	Large Health – Hospital
	Small Health – Other	Large Health – Other
	Small Industrial Manufacturing	Large Industrial Manufacturing
	Small Institutional/Public Services	Large Institutional/Public Services
	Small Lodging	Large Lodging
	Small Miscellaneous/Other	Large Miscellaneous/Other
	Small Restaurant	Large Restaurant
	Small Warehouse	Large Warehouse

The programs described in the following sections are developed to address specific market segments or delivery channels.

Residential Revenue Class:

Duquesne Light's project team analyzed residential sector summary actual data for 2007–2025 and forecast data for customer count, energy and demand statistics. Dwelling type and vintage definition was developed by analyzing American Community Survey data for Allegheny and Beaver counties, representative of housing characteristics in Duquesne Light's service area.¹⁶ The analysis supported a proportional allocation of percentages of regional housing stock into single-family, multifamily single-family low-income, and multifamily low-income. The Potential Study projects potential annual GWh savings for Duquesne Light's residential customers by segment of customer and by program potential.

¹⁵ Ibid, footnote 6.

¹⁶ Ibid, footnote 6.

The Phase V Potential Study found that single-family homes have the greatest potential with savings, specifically utilizing whole house programs; although the Potential Study admits that whole house programs may capture some of the savings achieved through space and water heater programs, along with Behavioral Energy Efficiency Reports.

Residential EE&C program planning incorporates energy and demand savings associated with implementing lighting, appliance, heating ventilation and air conditioning, building shell, water heating and other energy efficiency measures shown in Section 11, Table 7 Eligible Measures. Residential sector measures and their energy and demand savings estimates are consistent with the Pennsylvania 2026 Technical Reference Manual (TRM).

Duquesne Light developed plans to launch programs targeting the residential sector including appliance recycling, online marketplace and midstream engagement channels. These initiatives will promote comprehensive and innovative approaches that include heating, cooling, ventilation and air conditioning, high efficiency appliances, resource adequacy measures¹⁷ and a host of building shell insulation and infiltration measures. Resource adequacy measures reduce on-peak loads include networked HVAC controls, time-of-use incentives and other load management approaches.

The Low-Income Energy Efficiency Program (LIEEP) will provide participants with walk-through and comprehensive energy assessments, customer education, direct-install and comprehensive energy saving measures. Duquesne Light will continue to work directly with regional housing authorities to implement cutting edge technology demonstration projects tailored to multifamily housing building types. Duquesne Light will continue to work with its Income Eligible Advisory Group to improve services in this important sector.

In Phase V LIEEP will focus, incorporate and engage community organizations to enroll and engage customers. Organizations include but are not limited to Action Housing, Rebuilding Together Pittsburgh, Beaver County Community Action, United Way, the Urban League of Great Pittsburgh, the Latino Community Center and Bhutanese Community Association of Pittsburgh. Duquesne Light will coordinate its Act 129 LIEEP activities with its Universal Services Low-Income Usage Reduction Program (LIURP) Smart Comfort. This will include engaging one common implementer and synchronized enrollment, service provision and data collection. Comprehensive measures, announced in Phase V EE&C Plan Table 8 Addendum, will be promoted and tracked according to this distinction.

Additionally, Duquesne Light will provide two residential behavioral Home Energy Report Programs, one for market rate customers and one specialized for the low-income sector. Behavioral programs continue to be important contributors to residential sector savings impacts. Not only are behavioral programs a gateway program to other programs, they render verified savings in a cost-effective manner. Their Randomized Control Trial (RCT) measurement protocol is broadly accepted as the gold standard in impact measurement, supporting verified attributable impacts.

Small Commercial & Industrial Revenue Class:

Duquesne Light's project team analyzed commercial sector summary actual data for 2007–

¹⁷ See footnote 10 (above).

2025 as well as forecast 2015-2025 customer counts, energy and demand statistics. The project team utilized Phase I, Phase II and Phase III research containing North American Industry Classification System (NAICS) codes for Duquesne Light's larger commercial customers, to identify market segments to assist in directing its marketing efforts within the broader commercial customer sector.

The Phase V Potential Study determined the benefits available to small commercial and industrial customers. The Potential Study determined that the greatest benefits can be found among retail, office, and institutional/public service building types. Unlike the residential sector, the Potential Study forecast the greatest potential savings for small C&I to be found in interior lighting upgrades, followed by cooling and whole building programs.

The Small-Medium Nonresidential Energy Efficiency Program (C&I customers with a monthly max billing demand of less than 300 kW over the prior 12 months) provides direct-install, downstream and midstream incentive engagement channels successful in Phase IV and continued in Phase V. Traditional EE measures include lighting, refrigeration, space heating, cooling and ventilation; water heating, commercial cooking equipment, compressed air system improvements. Additional measures tested in Phase IV will be expanded in Phase V including virtual commissioning and strategic energy management, using whole building impact measurement.

Large Commercial & Industrial Revenue Classes:

The Phase V Potential Study grouped large commercial and large industrial market potential and forecast potential by commercial building type, described in Figure 5 (offices, retail, education, grocery stores, health care etc.) where one line item is labeled "Large Industrial Manufacturing." Industrial sector potential is forecast by industry (chemical manufacturing, primary metals, mining, etc.) where potential is projected as a percentage of process end-use consumption. The Potential Study did not provide an actionable industrial sector forecast.

To affect sector planning Duquesne Light relied on its extensive experience in this sector working with industrial gas, petrochemical manufacturing, primary metals and other large customers, successfully implementing many and varied often extensive projects.

Large Commercial and Industrial Customer Energy Efficiency Programs serve commercial and industrial customers with a monthly max billing demand of ≥ 300 kW over the prior 12 months.

The Large Commercial Energy Efficiency Program (CEEP) provides on-site efficiency surveys and incentives for traditional prescriptive incentives (\$/w/idget) as well as engineering-based custom recommendations (\$/kWh saved and/or \$ per kW reduced) tailored for site-specific opportunities and requirements.

The Large Industrial Energy Efficiency Energy Efficiency Program (IEEP) Phase V offerings will focus on the strategic energy management (SEM) approach. Under the SEM customers work with implementers to develop energy savings action plans, progress toward goals is tracked and with whole building measurement employed. IEEP will also provide prescriptive and custom measure incentives described above.

Governmental, Nonprofit Institutional (GNI) Sector:

Act 129 identifies¹⁸ “Federal, State and local government, including municipalities, school districts, institutions of higher education and nonprofit entities” for receipt of carve-out protection and specialized programs in Phase I through III. In Phase IV the GNI carve-out was discontinued and Duquesne Light did not implement programs specifically serving the GNI sector. Phase IV C&I program activity saw significant drops in governmental and infrastructure projects. The sector needs engagement strategies to overcome GNI sector barriers to program participation. Barriers include the separation of operational and purchasing management where equipment first-cost-based decisions ignore life-cycle cost realities, long sales cycles, lack of expertise, and lack of centrally understood and managed energy use

The Public Agency Partnership (PAPP) was implemented directly by Duquesne Light in Act 129 Phases I, II and III, and is brought back for Phase V. Duquesne Light plans an expanded effort to engage this sector and will focus on governmental infrastructure, such as water and wastewater operations, centrally located district plants and the region’s expansive primary, secondary and higher education institutions. As efficiency gain “low hanging fruit” evaporate due to previous program activities and evolving minimum federal efficiency standards, Duquesne Light will leverage its community relationships to pursue and rekindle deeper penetration into these important markets.

Commercial & Industrial Load Shifting: Large Commercial, Large Industrial and Public Agency Partnership Programs will offer C&I load shifting measures to strengthen and ensure Duquesne Light’s ability to meet the Phase V demand reduction requirements.

- 3.1.3. Describe how components such as energy efficiency, combined heat and power, renewables, load shifting, and other measures are included in the portfolio of programs as applicable.

Duquesne Light will promote cost-effective measures under its portfolio of programs in order to achieve the Commission’s mandates. These measures presently include CHP, solar power, solar, storage, and load shifting initiatives that include residential and C&I load shifting. These measures can be found listed in Section 11, Tables 8 and 9.

- 3.1.4. If the plan includes measures that promote fuel switching from electricity to fossil fuel, include a proposed minimum standard and provide justification for the threshold to receive program support. Combined heat and power projects are considered fuel switching (TRC Test Order at 84).

Duquesne Light’s Phase V EE&C Plan does not have “fuel switching” measures, other than the scrutinized CHP measure, identified above. Evaluations of all CHP projects include a complete analysis of all-fuel impacts, fossil fuel savings and increases as well as metered electricity usage reductions. This includes emission control equipment and chemical additives as well as site-specific operations and maintenance costs. As such the resulting TRC cost test adequately serves and the “minimum standard for justification”, Duquesne

¹⁸ See footnote 8.

Light routinely calculates Participant Cost-Test, GHG emissions impacts, the Utility Cost Test, however, the TRC cost test standard is more than adequate, by definition.

- 3.1.5. Confirm that the plan includes high-efficiency heat pump and heat pump water heater measures available to HEAR and other non-Act 129 program participants (2025 IO at 174). Describe how program delivery will target these bundled, or interwoven, funding opportunities for measures that encourage fuel switching from fossil fuels to funding electricity. Summarize how efficiency requirements or qualified product lists for heat pumps and heat pump water heaters will be aligned with non-Act 129 programs.

The Phase V EE&C Plan includes high-efficiency heat pump and heat pump water heater measures available to HEAR (see Section 11, Table 8: Eligible Measurers). Implementation CSP RFPs and contracted statements of work include a section on incentive braiding or “stacking” as follows:

To the extent outside monetary resources are available to participating customers, such as the federal Inflation Reduction Act Home Electrification and Appliance Rebates (formerly HEEHRA / HEAR) or Whole-House Energy Efficiency Rebates (formerly HOMES / HER), CSP will assist customer and/or Duquesne Light to complete the necessary forms for submission to the PA Department of Environmental Protection and other agency programs.

Other than CHP (addressed above at Section 3.1.4.), Duquesne Light’s Phase V EE&C Plan does not contain fuel switching measures. A data sharing partnership is being explored between the PA DEP, Resource Innovations, EDCs and others to streamline data flow and expedite braided incentive processing.

- 3.1.6. Describe any front-of-the meter (FTM) measure(s) included in the EE&C plan. Include the expected contribution to portfolio MWh and MW savings and disclose all non-Act 129 funding sources the EDC plans to leverage for FTM measure installation. Note that the contribution of FTM measures is limited to 10% of total plan savings (2025 IO at 78).

Duquesne Light makes provision for FTM measures within its listing of eligible measures. Whether conservation voltage reduction or other distribution system upgrades resulting in reduced system losses or delay system capacity upgrades, the size and type of these prospective measures is unknown at the time of this Plan filing, Duquesne Light will ensure that no more than 10% of its portfolio savings impacts derive from these types of measures.

- 3.1.7. Describe how the EDC defines “comprehensive” in the context of EE&C plan design and delivery and the comprehensive programs(s) to be offered to the residential and non-residential rate classes. Describe the measure mix or delivery mechanism that qualifies each program as comprehensive consistent with the requirements of the Phase V Implementation Order. Refer to the “Table 8 Addendum” in the Microsoft Excel version of the template tables for

a list of residential measures designated as “comprehensive” (2025 IO at 49-52 and 72).

Comprehensive measures are defined, prescribed and summarily ordered at Table 8 Addendum of the EE&C Plan Table template that is part of the Phase V Implementation Order. Duquesne Light makes no modification or exception to this Order and will employ the specified qualifications in its reporting of “comprehensive measure” impacts.

Refer to the Residential Programs described in Section 3.2, and Small Commercial Direct Install Program in Section 3.3.1, for the comprehensive measures to be offered.

- 3.1.8. If Time of Use rate(s) are part of the portfolio, describe how Act 129 support will lead to improved outcomes over simply offering the time-varying tariff through rates (2025 IO at 124).

At the time of this Plan filing, Duquesne Light began offering residential TOU rates as a pilot as of 6/1/2025. TOU rates will advance load shifting and bill reducing options.

3.2. Residential Sector (as defined by EDC Tariff) Programs – include formatted descriptions of each program organized under the following headings:

- Program Name and Program years during which program will be implemented¹⁹
- Objective(s)
- Target market – including market size to help frame participation estimates (e.g., number of households, electric sales etc.)
- Program description.
- If the program is considered comprehensive, discuss the programmatic elements that led to the comprehensive designation.
- If the program is an umbrella program (e.g., a wide-ranging residential program that includes upstream measures, home energy reports, appliance recycling, kits, efficient product rebates, and new construction), list and describe all program sub-components (or sub-programs, initiatives, solutions, etc.) that make up the program. Note that EDCs will be required to report impacts and financials separately for each program sub-component in their annual reports.
- Describe how participation in other Act 129 programs (or other components of the same umbrella program) will be coordinated and encouraged.
- Implementation strategy (including expected changes that may occur in different program years).
- Program issues and risks and risk management strategy.
- Anticipated costs to participating customers.

¹⁹ It is assumed that there are five program years, each starting June 1 and ending May 31st. The first program year (PY) is PY13 (June 1, 2021 to May 31, 2022) and the final program year is PY17 (June 1, 2025 to May 31, 2026).

- Ramp up strategy.
- Marketing strategy.
- Eligible measures and incentive strategy showing incremental cost assumptions, gross measure-level TRC ratio, and incentive levels (e.g., \$ per measure, \$ per kWh or MW saved). See Table 8.
- The basis for the proposed level of incentives and the sharing of incremental measure costs between participants and the EDC.
- Maximum deadlines for rebates including clear and reasonable rationale for the any timeframe longer than 180 days.
- Key schedule milestones.
- Assumed Evaluation, Measurement and Verification (EM&V) requirements required to document savings by the Commission’s statewide evaluator (SWE).
- Administrative requirements – include internal and external staffing levels expressed on a full-time equivalent (FTE) basis.
- Savings projections – include tables with estimated total MWh and MW totals per year and document the estimated savings contribution by measure, or measure category. Include forecasted summer and winter demand reduction separately. Compliance demand savings are the average of summer and winter MW savings at the system-level. See Table 9.
- Estimated participation – include tables with key assumptions of estimated participation. See Table 9.
- Estimated program budget (total) by year – include table with budget per year. See Table 10. The table should also show what percentage of the budget goes to incentive costs and what percentage goes to non-incentive costs.²⁰ At least 50% of plan spending should be attributed to incentives (2025 IO at 232).
- Estimated percentage of sector budget attributed to program.
- Cost-effectiveness – include gross and net TRC and net-to-gross (NTGR) ratio²¹ for each program. For gross tables, NTGR should be “1.0”. See Table 14. Gross and Net versions (2025 IO at 217-221).
- Summarize the results of any benchmarking efforts against other utility programs that were used to inform program design or program participation assumptions.
- Describe how the EDC will target and engage different housing and ownership types such as multifamily dwellings and renters and ensure that program services reach historically underserved populations.

²⁰ Per the June 18, 2020 Implementation Order, at least 50% of EE&C plan spending should come from incentives and less than 50% should be attributed to non-incentive cost categories. This requirement is at the portfolio level, not the program or sector level. *See June 18, 2020 Implementation Order* at 126.

²¹ Per the June 18, 2020 Implementation Order, EDCs are required to provide NTG ratios in addition to standard TRC ratios, with language reiterating the speculative nature of NTG ratios. *See June 18, 2020 Implementation Order* at 107.

- Other information deemed appropriate.

3.2.1. Residential Energy Efficiency

Residential Energy Efficiency market-rate customer programs include appliance recycling, an online marketplace, a midstream incentives program and behavioral home energy reports program. The program delivery channels will deliver a broad range of appliances, plug load, space heating and cooling, lighting, water heating, refrigeration, shell and whole building measure end-use categories. Individual program components are described in more detail below.

3.2.1.1 Residential Appliance Recycling Program

Program Title and Program Years: The Residential Appliance Recycling Program (“RARP”) will be implemented during program years 2026 through 2031.

Objectives: The objective of the RARP is to reduce residential energy consumption by facilitating responsible removal and recycling of inefficient appliances. The program aims to promote environmental stewardship, ensure compliance with regulatory standards, and deliver measurable energy savings for the Duquesne Light service territory, while providing customers with a safe, convenient, and accessible recycling solution.

Target Market: The target market for the RARP consists of residential customers within the Duquesne Light service territory who own inefficient appliances such as refrigerators, freezers, room air conditioners, and dehumidifiers. The program is designed to reach a broad cross-section of households, including those in urban, suburban, and rural areas. Eligibility is based on appliance type and condition, and outreach efforts are tailored to engage diverse customer segments, including those who may face barriers to participation due to language, location, or awareness.

Program Description: The RARP is designed to provide residential customers with a safe, convenient, and environmentally responsible method for recycling inefficient appliances, including refrigerators, freezers, room air conditioners, and dehumidifiers. The program offers free pick-up and recycling services, ensuring all appliances are processed in accordance with environmentally responsible standards and industry best practices for refrigerant recovery and material handling.

The program features streamlined enrollment and scheduling, verified customer and appliance eligibility, and rigorous safety and quality assurance protocols. Appliances are collected by appliance collection crews and transported to stakeholders or Duquesne Light-approved recycling facilities, with chain-of-custody procedures and documentation maintained throughout the process.

Implementation Strategy: The implementation strategy for the RARP in Phase V consists of the following:

- Participant recruitment leveraging utility customer outreach, targeted marketing (e.g., bill inserts, emails, digital ads), and contractor/vendor partnerships to drive program participation.
- Coordination of customer appointments, ensuring reliable pick-up through trained contractors.
- Safe appliance removal and transport are handled by trained providers who meet safety and compliance standards to ensure proper refrigerant recovery and environmental compliance.
- Recycling and disposal through centralized providers who follow environmental standards, including responsible refrigerant handling, and meet the documentation requirements of the program.
- Bilingual (for example Spanish and English) customer care services.

Program Issues, Risks and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program incentives, potential impacts and provides early warning regarding program under- or over-subscription.

The RARP faces several key risks, including on-site safety hazards, transport incidents, missed pickups, compliance with regulatory standards, equipment eligibility and fraud, and improper disposal or illegal resale.

To mitigate these risks, the implementer requires EPA 608 certification for facility personnel handling refrigerants, maintains a risk tracker and escalation system, and establishes tiered contractor networks with backup recycler relationships. The program implements chain-of-custody protocols with photo verification and fraud detection, enforces safety and PPE standards, and conducts annual facility compliance checks. Insurance and bonding are maintained for all vendors, and weekly risk reviews are held with program partners. Subcontractors are contractually held to performance standards, with clawbacks and holdbacks applied for noncompliance. Additional measures include mandatory vendor certification, ride-along audits, digital job checklists, daily and weekly quality assurance sampling, KPI dashboards, quarterly re-certification, and a dedicated support line for claims or missed pickups.

This risk management approach ensures regulatory compliance, operational reliability, and a positive customer experience, while maintaining transparency and accountability throughout program implementation.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers: There is no cost to participating in customers for this program. Incentive amounts are benchmarked to like regional programs and adjusted, as needed, to ensure active program participation. This is the fifth Act 129 phase for implementation of this program.

Ramp-up Strategy: During the ramp-up phase, the implementation contractor will develop the program communications plan, review historical data for eligibility enforcement and targeted outreach, and create updated program collateral. The implementation contractor will

recruit and onboard local pickup companies and recycling facilities. See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: The RARP marketing strategy is designed to maximize customer awareness and participation through a multi-channel approach, utilizing digital advertising, paid search, social media, email campaigns, direct mail, and community-based outreach. The program will utilize propensity modeling to identify customers with a high likelihood of participating. Marketing materials will be produced in English and Spanish for language accessibility.

Outreach efforts include in-person events, partnerships with community-based organizations, and cross-promotion with other Duquesne Light programs. Customer education is supported through targeted campaigns, while the call center offers multilingual support to address inquiries and facilitate enrollment.

This integrated marketing strategy ensures broad reach, equitable access, and effective communication with eligible customers.

Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions, and Incentive Levels: Eligible measures include refrigerators, freezers, dehumidifiers, and room air conditioners as shown in Section 11, Table 8: Eligible Measures.

Maximum Deadline for Rebates: Rebate deadlines do not apply to appliance recycling programs.

Program Start Date and Key Milestones: Program is set to start on June 1, 2026 and run throughout the duration of Phase V ending on May 31, 2031.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 residential programs. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services.

Estimated Participation: See the following table.

ARP Savings Targets and Estimated Participation:²²

	PY18	PY19	PY20	PY21	PY22	Total
MWh	1,003.2	1,103.4	1,214.5	1,335.5	1,469.4	6,126.0
MW	0.188	0.206	0.227	0.250	0.275	1.145
Participation	1,312.5	1,443.5	1,588.8	1,747.2	1,922.3	8,014

ARP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	471,432.0	518,489.6	570,680.8	627,577.8	690,463.9	\$2,878,644
Incentives	166,925.7	183,588.0	202,068.0	222,214.2	244,481.1	\$1,019,277
Percent Incentives	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Percent Non-Incentives	64.6%	64.6%	64.6%	64.6%	64.6%	64.6%

ARP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Appliance Recycling	\$469,277	\$516,120	\$568,072	\$624,709	\$687,308	\$2,878,644
Percent Sector Budget	6.7%	7.1%	7.6%	8.8%	9.9%	8.1%

ARP Cost Effectiveness:

- Gross TRC: 2.92
- NTG Ratio: 71.7%
- Net TRC: 2.10

3.2.1.2 Residential Online Marketplace Program

Program Title and Program Years: The Residential Online Marketplace Program (“OMP”) will be implemented during program years 2026 through 2031.

Objectives: The Residential Online Marketplace will serve residential electric customers within Duquesne Light's operating territory. The marketplace will allow eligible customers the chance to shop for energy-saving products and apply instant utility incentives at checkout. The marketplace seamlessly validates customers, ensuring eligibility for utility provided rebates. Customers can shop for products including smart thermostats, dehumidifiers, advanced power strips, room air purifiers, weatherization products and more.

Throughout the year, additional promotional discounts will be provided by product manufacturers to further discount products to Duquesne Light's customers.

Target Market: All Duquesne Light residential customers will be eligible to create an account and shop the online marketplace. Participation limits will be upheld, systematically, to ensure

²² Participation for this program are measured in units recycled.

customers receive the maximum allotted utility rebate(s). Targeted marketing campaigns will be sent to customers through various digital and print advertising based on the customer's propensity to participate in the program. Utilizing past participation data will help narrow the target audience to customers who are more likely to participate, thereby decreasing customer acquisition costs and improving overall program cost-effectiveness.

In addition to the standard offering, the program will target low-to-moderate income customers, defined for the purpose of this program as 151-225% Federal Poverty Guidelines ("FPG"), that will receive greater program benefits beyond the standard incentives after completing a qualification step in their energy efficiency journey. These enhanced incentives will offset one-third of the cost of the efficient product, with a per product incentive cap of \$500.

Program Description: The Residential Online Marketplace will serve as a web-based, e-Commerce store, similar to that of Amazon.com or Walmart.com. New customers will create an online marketplace account by entering their utility account information in combination with their personal contact information. Existing users will be allowed to log into their account by entering the email and password that is set up during initial account creation.

Eligibility for utility incentives will be based on account numbers and past participation/purchases will determine future incentives for the customer. Limiting customers to a set rebate quantity helps to ensure more customers can utilize the program funding.

Implementation Strategy: It will be imperative to maximize the number of customers who are engaging with the marketplace in its initial year. Re-engaging with customers, utilizing propensity modeling, and improving the marketing of the marketplace are vital steps to ensuring savings goals are met through increased participation.

Utilizing cross promotional marketing and identifying customers who are most likely to utilize the marketplace will be the initial priorities when the marketplace launches. The application of A/B testing, development of digital and print marketing creative, and capitalization of manufacturer promotions will be key in driving early success in the marketplace.

During Phase V, the program will identify new products to add to the marketplace and re-target past participants to improve savings opportunities.

Program Issues, Risks and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warnings regarding program under- or over-subscription. CSP implementation contract statements of work include pay-for-performance compensation. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers:

Customers will pay for marketplace products that have been discounted due to the instant application of incentives to the purchase price.

The marketplace's instant discounts to customers provide superior pricing to that of other online retailers. Also, customers can receive even further discounts during the many periodic limited time offer promotions in the marketplace.

Marketplaces provide lower costs to customers, and the marketplace in itself is a far more cost-effective approach than traditional mail-in programs. Mail-in programs require labor to set up point of purchase displays in store, intake and process rebate application forms, and manage payment processing. The marketplace provides a "one-stop shop" where products and their applicable utility incentives are displayed to the customer through an e-Commerce experience. This includes the enhanced incentives offered to low-to-moderate income customers (see Target Market above). Additional energy efficient product incentive payments are available as shown in Section 11 Table 8 Eligible Measures. Participating customers pay the remaining amounts.

Ramp-up Strategy: For Phase V, the program will enhance and expand the existing marketplace from Phase IV. The implementer will deploy a new "look and feel" to the store to give it a modern look to existing and new customers.

During ramp-up, the implementer will develop a wide variety of marketing tactics to drive improved traffic to the marketplace. They will perform data-driven propensity modeling to identify target customers who have a high likelihood of utilizing the marketplace. See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: Marketing for the online marketplace will rely primarily on digital advertising (e.g., social media and email) as they are cost-effective and reach broad audiences quickly. Also, the program will deploy targeted marketing based on the propensity model analysis to reach targeted customer segments with high likelihood to shop on the marketplace. Additional marketing tactics include Google Performance Max advertisements, direct mail, and targeted email campaigns to drive engagement with differentiated messaging.

Throughout the year, the marketplace will collaborate with manufacturers to offer limited-time deals on products such as thermostats, air purifiers, and water solutions. These special offers give customers extra incentive to buy by stacking additional instant discounts on top of the standard utility rebate, resulting in even greater savings. Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions and Incentive Levels: See Section 11, Table 8.

Maximum Deadline for Rebates: Energy efficiency measure rebates are subject to an application deadline of 180 days from date of purchase or installation.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Levels of rigor in verification are based on project scope, as

identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 residential programs. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services. Program administrative costs are shown in the following Projected Program Budget table.

OMP Savings Targets and Estimated Participation:²³

	PY18	PY19	PY20	PY21	PY22	Total
MWh	1,261.8	1,280.9	1,300.0	1,319.1	1,338.2	6,500.0
MW	0.585	0.594	0.603	0.612	0.621	3.015
Participation	5,168.9	5,247.1	5,325.4	5,403.6	5,481.9	26,627

OMP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	\$721,984	\$732,914	\$743,844	\$754,773	\$765,703	\$3,719,218
Incentives	\$292,422	\$296,849	\$301,276	\$305,703	\$310,129	\$1,506,378
Percent Incentives	40.5%	40.5%	40.5%	40.5%	40.5%	40.5%
Percent Non-Incentives	59.5%	59.5%	59.5%	59.5%	59.5%	59.5%

OMP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Marketplace	\$721,984	\$732,914	\$743,844	\$754,774	\$765,703	\$3,719,218
Percent Sector Budget	10.4%	10.1%	10.0%	10.6%	11.1%	10.4%

OMP Cost Effectiveness:

- Gross TRC: 2.21
- NTG Ratio: 100%
- Net TRC: 2.21

3.2.1.3 Residential Midstream Incentives Program

Program Title and Program Years: The Residential Midstream Incentives Program (“RMIP”) will be implemented during program years 2026 through 2031.

²³ Participation in this program is measure units delivered.

Objectives: The Residential Midstream Incentives Program will increase purchases of select efficient HVAC, hot water, and auxiliary equipment by Duquesne Light's residential customers through incentive offers to participating distributors. For many residential customers, product availability, complex rebate application requirements, and lengthy rebate processing lead times, present significant barriers to energy efficiency program participation. Providing incentives directly to participating distributors at the point of sale addresses these significant barriers and delivers an energy efficiency message while the customer is considering their product choices.

Target Market: This program is made available to Duquesne Light residential customers. Based on Total Residential Building Stock estimate of 527,951 (includes single-family ("SF"), multifamily ("MF"), and Mobile Homes).

Program Description: The Residential Midstream Incentives Program will provide incentives for HVAC, hot water, and auxiliary equipment through participating distributors to offset the higher cost and increase availability of efficient products in the market. Increased availability and lower costs thereby drive uptake of the most efficient equipment options. The residential customer receives the benefit of the incentive through increased product availability, increased market awareness, or through a pass through of a portion of the incentive from the participating distributor. Participating distributors may be working directly with the customer or through installation contractors. The rebates will encourage residential customers in Duquesne Light's territory to purchase qualified energy efficient HVAC, hot water, and auxiliary equipment for installation at their homes through a streamlined rebate process.

Implementation Strategy: The CSP will execute the following tasks:

- 1) Identify and enroll HVAC distributors active in the residential market.
- 2) Create and maintain a qualified product master list.
- 3) Verify eligible customers.
- 4) Accept regular submissions from midstream partners via an online portal.
- 5) Present Duquesne Light with new eligible measures.
- 6) Provide participating distributors in-depth training and on-going support.
- 7) Verify and process rebate submissions.
- 8) Track and report program activity.
- 9) Perform store visits.
- 10) Implement a quality control process.

The initiative provides both passthrough incentives and flexible distributor incentives that are used to mitigate risk and capitalize on opportunities. Flexible incentives can be passed

through to end use customers, offset stocking charges, motivate sales representatives or address other perceived risks to supply chain actors. The utilization of flexible incentives tends to change over time as participating distributors identify and mitigate the risks and opportunities for their business. Both passthrough and flexible incentives are considered “Customer Incentives” analogous to incentives that offset installation costs in other portfolio contexts as the energy savings opportunity may not occur without this market support.

Residential customers can qualify as low-income through Duquesne Light’s existing low- and moderate-income verification process. Customers will be allowed to provide an affidavit for self-attestation of required data. Low- and moderate-income customers may qualify for additional program benefits.

The program may adjust incentive offer based on actual or projected participation levels while maintaining program cost effectiveness and or increased customer value.

Program Issues, Risks and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light’s PMRS. The system provides comprehensive oversight of program incentives, potential impacts and provides early warning regarding program under- or over-subscription.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers: Incentive levels have historically averaged approximately one-third of efficient product incremental costs and current incentive levels range from an estimated 7% for mini-split measures and 20 to 40% for core HVAC/ Water heating measures. Incentive values increase for low- and moderate-income households. The increased offer for low- and moderate-income households will be monitored to ensure that the overall initiative stays within budgetary limits.

Participating distributors’ rebates offset a portion of the incrementally greater cost of high-efficiency HVAC, hot water, and auxiliary equipment. Anticipated customer costs reflect the remaining balance after the incentive is applied.

Ramp up Strategy: See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: Duquesne Light’s CSP will recruit, train, and manage distributor partnerships, and continue to engage in distributor networks through targeted marketing approaches. CSP will coordinate annual kick-off meetings to introduce the program to residential HVAC distributors, facilitate education group meetings, provide distributor portal for ease of participation in the program and supply a newsletter on program updates, rebates, and recognition for high-performing participating distributors.

Eligible Measures and Incentive Strategy: A rebate will be granted by participating distributors at the point of sale on a pre-determined qualified products list, as indicated below. CSP will engage Duquesne Light with new high-efficiency products to keep the qualified product list current, fresh, and appealing to the consumers. See Table 8 Eligible Measures for a listing of measures and range for incentives.

Maximum Deadline for Rebates: The Midstream Products Rebate Program offers rebates at the point of sale at participating distributors. Rebate deadlines are not applicable.

Program Start Date and Key Milestones: Program is set to start on June 1, 2026, and run throughout the duration of Phase V ending on May 31, 2031.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Levels of verification will be based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administration Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 residential programs. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services. Program administrative costs are shown in the following Projected Program Budget table.

Estimated Participation: The primary metrics for program participation are processing incentive payments for the purchase of qualified energy efficiency measures, rendering deemed savings estimates reflected in the Program Savings Targets table below.

RMIP Savings Targets and Estimated Participation:²⁴

	PY18	PY19	PY20	PY21	PY22	Total
MWh	3,744.065	3,957.344	4,028.186	4,099.028	4,171.377	20,000.0
MW	0.203	0.215	0.219	0.223	0.227	1.086
Participation	3,640	3,848	3,917	3,986	4,056	19,447

RMIP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	1,509,527	1,595,517	1,624,079	1,652,641	1,681,810	\$8,063,573
Incentives	876,779	926,725	943,314	959,904	976,847	\$4,683,569
Percent Incentives	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%
Percent Non-Incentives	41.9%	41.9%	41.9%	41.9%	41.9%	41.9%

RMIP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Midstream Incentives	\$1,509,527	\$1,595,517	\$1,624,079	\$1,652,641	\$1,681,810	\$8,063,574
Percent Sector Budget	21.7%	21.9%	21.9%	23.3%	24.3%	22.6%

²⁴ Participation in this program is measure units incented.

RMIP Cost Effectiveness:

- Gross TRC: 0.50
- NTG Ratio: 100%
- Net TRC: 0.50

3.2.1.4. Residential Behavioral Energy Efficiency

Program Title and Program Years: The Residential Behavioral Energy Efficiency Program (“R-BEEP”) will be implemented during program years 2026 through 2031.

Objectives: The objectives of the program are (1) to educate residential participants on electricity consumption using graphic information tools; (2) to change household behavior leading to less electricity usage; and (3) to deliver energy savings of more than 1% of average participant’s electric usage.

Target Market: Over the five-year Phase V performance period the average annual treatment group population is projected to be up to 178,000 residential customers.

Program Description: The program sends via direct mail R-BEEP reports that compare recipient customer’s energy use to customers with similar home type and size. R-BEEP provides for comparison of the last two months of energy consumption by 1) the most efficient of the peer group, 2) the R-BEEP recipient, and 3) the entire peer group. The reports generate verifiable savings between 1.5%-3.5% of total home energy use.

Implementation Strategy: R-BEEP reports are provided targeted customer group in each year of Act 129 Phase V, 2026-2031.

Program Issues, Risks and Risk Management Strategy: There is an attendant risk the program implementer cannot deliver the contracted R-BEEP reports and that consumers will not respond to the R-BEEP reports by changing energy use behavior. Duquesne Light will mitigate this risk by selecting an implementation contractor who has a proven track record. The selected CSP will have previously deployed R-BEEP reports on a national scale for leading energy efficiency programs. Energy savings results will be quantified using a PA PUC approved scientific measurement and verification approach previously used by most PA EDCs.

Anticipated Costs to Participating Customers: There is no cost to participating customers.

Ramp-up Strategy: See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: Large-scale, individualized direct-mail campaign and provision of a customer service web portal are used. High-use customers are selected on an opt-out basis for enrollment in the multi-year pilot.

Eligible Measures and Incentives: The R-BEEP described above is the only program measure; there are no customer incentives. R-BEEP reports will also be utilized to promote other residential program offerings to help customers reduce consumption.

Maximum Deadline for Rebates: The program does not provide rebates and no rebate deadline is applicable.

Program Start Date and Key Milestones: Program is set to start on June 1, 2026, and run throughout the duration of Phase V ending on May 31, 2031.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Duquesne Light will rely on the same measurement and verification approach already provided to more than 65 utilities across the country, including utilities in Pennsylvania. The protocol includes clearly defined test and control groups and ex-post measurement of savings.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes one dedicated full-time employee to perform management and coordination of this program. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services. Program administrative costs are shown in the following Projected Program Budget table.

Estimated Participation: Over the five-year Phase V performance period the average annual treatment group population is projected to be up to 178,000 residential customers, rendering deemed savings estimates reflected in the Program Savings Targets table below.

R-BEEP Savings Targets and Estimated Participation:²⁵

	PY18	PY19	PY20	PY21	PY22	Total
MWh	5,800.0	6,800.0	6,900.0	5,800.0	4,900.0	30,200.0
MW	1.4	1.6	1.6	1.4	1.1	7.050
Participation	129,000	174,900	178,800	142,300	125,300	150,060

R-BEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	\$961,370	\$1,127,123	\$1,143,698	\$961,370	\$812,192	\$5,005,752
Incentives	\$0	\$0	\$0	\$0	\$0	\$0
Percent Incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Percent Non-Incentives	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

²⁵ Estimated participation is customers within treatment cohorts.

R-BEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Residential Behavioral Efficiency	\$961,370	\$1,127,123	\$1,143,698	\$961,370	\$812,192	\$5,005,752
Percent Sector Budget	13.8%	15.5%	15.4%	13.5%	11.8%	14.0%

R-BEEP Cost Effectiveness:

- Gross TRC: 1.41
- NTG Ratio: 100%
- Net TRC: 1.41

3.2.2. The Residential Low-Income Energy Efficiency

Residential Low-Income Energy Efficiency is an umbrella program comprising two specific low-income residential customer program activities. Individual program components include a low-income comprehensive audit and direct install program and a tailored low-income behavioral efficiency program. The program delivery channels will deliver a broad range of direct-install measures and behavioral education to assist low-income customers reduce their electric bills. Individual program components are described in more detail in Sections 3.2.2.1 and 3.2.2.2 below.

3.2.2.1. Low-Income Energy Efficiency Program

The Residential Low-Income Energy Efficiency Program is a “direct-install” program where walk-through and comprehensive audits are performed, energy efficiency education is provided, and energy efficient products and equipment are installed at no cost to income-qualified households.

Program Title and Program Years: Low-Income Residential Energy Efficiency Program (“LIEEP”) will be implemented during Act 129 program years 2026 through 2031.

Objectives: The objective of the Residential Low-Income Energy Efficiency Program is to improve energy efficiency and reduce energy costs for income-qualified households within the Duquesne Light service territory. The program aims to deliver comprehensive energy-saving measures, including in-home energy assessments, direct installation of efficiency upgrades, and customer education, with a focus on enhancing comfort, health, and affordability for low-income residents.

Target Market: The target audience of LIEEP is income-qualified households within the Duquesne Light service territory. This includes single family and multifamily residences where occupants meet established income eligibility criteria, at or below 150% of the Federal Poverty Guidelines. The program is designed to reach customers who may face barriers to participation due to financial constraints, language, or lack of awareness, with a focus on

underserved and disadvantaged communities. Outreach efforts are tailored to engage these households through community-based organizations, multilingual communications, and accessible enrollment channels.

Program Description: The single-family component of LIEEP provides eligible households with comprehensive energy assessments and direct installation of energy-saving measures. Services include walk-through audits, energy education, and the installation of high-efficiency lighting, water-saving devices, insulation, air sealing, and smart thermostats where applicable. The program is designed to reduce energy costs, improve comfort and health, and address barriers to participation for income-qualified customers. Outreach and enrollment are facilitated through community-based organizations and targeted communications to ensure accessibility and engagement.

The multifamily component of LIEEP targets properties with both individually metered or master-metered units that represents a significant proportion of low-income residents. The program delivers in-unit energy assessments, direct installation of efficiency upgrades such as lighting, water-saving devices, and smart thermostats, as well as common area improvements including LED retrofits and controls. Coordination with property managers and owners ensures streamlined scheduling and implementation. The program aims to maximize energy and water savings, reduce maintenance costs, and enhance tenant comfort, while leveraging partnerships with community organizations to reach and serve disadvantaged populations.

Implementation Strategy: (including expected changes that may occur in different program years).

The implementation strategy for LIEEP is structured to ensure effective delivery of energy-saving measures to income-qualified households through both single family and multifamily program tracks.

For single family homes, the program begins with targeted outreach and enrollment facilitated by community-based organizations and direct communications. Eligible households receive comprehensive in-home energy assessments, followed by the direct installation of efficiency upgrades such as high-efficiency lighting, water-saving devices, insulation, air sealing, and smart thermostats. The process includes energy education and support to maximize participation and savings. Quality assurance is maintained through digital documentation, ride-along audits, and regular performance reviews.

For multifamily properties, the program coordinates with property managers and owners to identify eligible buildings and residents. Individually metered or master-metered units with a significant proportion of low-income tenants are prioritized. In-unit assessments and installations are conducted, along with common area improvements such as lighting, controls, HVAC equipment, pool pumps, beverage machine controls, washers, dryers, cooking equipment, water pumping equipment, etc. Scheduling and implementation are streamlined to minimize disruption, and partnerships with community organizations help ensure broad engagement. The program leverages data tracking, compliance checks, and ongoing communication with stakeholders to monitor progress and maintain high standards of service delivery.

Duquesne Light will track low-income customer participation through its Program Management and Reporting Systems (“PMRS”). Through linkage to Duquesne Light’s customer information system, PMRS records low-income status and records savings achieved in low-income households.

Duquesne Light will refer confirmed low-income customers who participate in any general residential program to its Act 129 low-income programs, Universal Service programs, LIHEAP, and LIURP. The Company will also coordinate with natural gas distribution companies (NGDC) and community-based organizations, as applicable, to provide comprehensive low-income services.

Duquesne Light will facilitate this coordination by inviting representatives from the NGDCs with overlapping service territories to its Act 129 Stakeholder meetings and will place the issue of Duquesne Light/NGDC coordination on the agenda of those meetings. Duquesne Light has actively participated in several stakeholder meetings with NGDCs throughout Phases III and IV in conjunction with the Income Eligible Advisory Group to gain valuable stakeholder input. Duquesne Light will also work with NGDCs to, where possible, provide joint rebates when the NGDC provides rebates to customers below 150% of the federal poverty level and to provide inter-utility audits to customers whose total household income is below 150% of the federal poverty level when available.

Duquesne Light will track the numbers of, and reasons for, LIEEP jobs that do not move forward and the total number of LIEEP baseload and heating jobs all separately tracked for low-income single-family, master metered multifamily and individually metered multifamily tenants. In addition, the average LIEEP job costs and energy savings will be tracked. These data will be provided at the IEAG working group meetings.

Program Issues, Risks and Risk Management Strategy: The program faces several key risks, including:

- Customer Participation Barriers: Challenges such as lack of trust, privacy concerns, limited time, competing priorities, and low awareness may hinder enrollment, especially among disadvantaged populations.
- Landlord Approval and Split Incentive Barriers: For multifamily properties, property owner/manager consent will be required. Property owners and managers have low incentive to invest in in-unit energy savings that benefit residents.
- Health and Safety Risks: Deferred maintenance or health and safety issues in homes may prevent or delay installation of energy efficiency measures.

To address these risks, the program employs the following mitigation strategies:

- Community-Based Outreach: Partnering with trusted community organizations and using multilingual campaigns to build trust and increase awareness among target audiences.
- Flexible Scheduling and Enrollment: Offering evening and weekend appointments, proactive outbound calling, and in-home enrollment to accommodate customer needs.

- **Owner and Property Manager Engagement:** Providing consent toolkits, no-cost direct install of measures where feasible, and clear communication of program and downstream benefits to property owners and managers to facilitate participation in multifamily properties.
- **Health and Safety Routing:** Triaging health and safety issues and braiding funding with other programs to address deferred maintenance before energy upgrades.

All portfolios and programs are tracked and monitored through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets, potential impacts and provides early warning regarding program under- or over-subscription. The CSP will continue to transfer program data for review, verification, and submission into Duquesne Light's PMRS. All of these program elements have been operating during the previous Act 129 Phases. These activities are not new to Duquesne Light's implementation team. Implementation CSP contract statements of work are performance-based, include production schedules, and performance payments are tied to independent measurement. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers: For single family homes, LIEEP remains no-cost for households at or below 150% FPG. For multifamily properties, in-unit work is no-cost provided that 45% or more of the units are low-income, and units are individually metered.

Ramp-up Strategy: The ramp-up LIEEP focuses on readiness, stakeholder alignment, and early engagement of eligible households. Initial activities include finalizing contracts and Memorandums of Understanding (MOUs) with trade allies and community-based organizations, configuring program management systems, and preparing marketing and outreach materials.

Enrollment channels will be established to facilitate customer access, including web, phone, and in-person options, with multilingual support available. Early outreach will leverage community events, targeted communications, and partnerships to build awareness and drive participation. The program launches with a controlled soft open, allowing for validation of data flows, eligibility checks, and Quality Assurance (QA) sampling. See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: The LIEEP marketing strategy is designed to maximize customer awareness and participation through a multi-channel approach, utilizing digital advertising, paid search, social media, email campaigns, direct mail, and community-based outreach. The program will utilize propensity modeling to identify customers with a high likelihood of participating. Marketing materials will be produced in English and Spanish for language accessibility.

Outreach efforts include in-person events, partnerships with community-based organizations, and cross-promotion with other Duquesne Light programs. Customer education is supported through targeted campaigns, while the call center offers multilingual support to address inquiries and facilitate enrollment. This integrated marketing strategy ensures broad reach, equitable access, and effective communication with eligible customers.

Additionally, Duquesne will work with the Income Eligible Advisory Group to coordinate a wholistic community initiative for targeted customers designed to provide coordinated “wrap-around” supportive services (including, for example, assistance related to energy costs, housing, mental health, food insecurity, etc.).

Eligible Measures and Incentive Strategy: LIEEP will provide a broad array of direct-install measures, depending upon applicable dwelling space heating and water heating equipment. Eligible measures are described below. No customer incentives are provided under the LIEEP, all LIEEP measures are provided at no cost to income qualified customers. For more specific details on the measures, see Section 11, Table 8.

Under LIEEP, income qualified residential customers will be scheduled for a virtual assessment or in-home energy audit that will include direct install measures as indicated in the below, as well as energy education. For the virtual assessment, the direct install measures will be drop shipped to the customer in the form of an energy efficiency kit and customers may be referred for direct installation of eligible HVAC, water heat, health & safety, and insulation/air sealing measures.

Eligible Direct Install Measures:

LED Nightlights
LED Lighting
Advanced Power strips (Tier 1)
ENERGY STAR Dehumidifier
Refrigerator Replacement
Room AC Replacement
Window Heat Pump
Freezer Replacement
Connected Thermostat- Electric Heat
Heat Pump Water Heater
Ductless Mini-Split Heat Pump (16 SEER / 9.0 hspf) – Electric Heat
ENERGY STAR Central Air Conditioner (13 SEER to 16 SEER)
ENERGY STAR Air Source Heat Pump 16 SEER/9.0 HSPF or Higher

Air Sealing – Electric Heat
Ceiling Insulation - Electric Heat
Basement Wall Insulation – Electric Heat
Exterior Wall Insulation - Electric Heat
Floor Insulation - Electric Heat
Electric Hot Water Kit
H&S measures, Comprehensive

Basis for the Proposed Level of Incentives and the Sharing of Incremental Measure Costs between Participants and the EDC:

LIEEP measures are provided at no cost to income qualified customers. Multifamily facility upgrade cost-shares are negotiated on a case-by-case basis depending upon the percentage of low-income occupants in the facility, facility need and savings opportunity.

Maximum Deadline for Rebates: No standard, or other, prescriptive rebates are provided under this program and no “Maximum Deadline for Rebates” is applicable.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission’s Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 residential programs. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services.

LIEEP Savings Targets and Estimated Participation:²⁶

	PY18	PY19	PY20	PY21	PY22	Total
MWh	3,318.2	3,353.2	3,386.2	3,418.2	3,456.2	16,932.0
MW	1.228	1.241	1.253	1.265	1.279	6.265
Participation	42,968	43,421	43,849	44,263	44,755	219,256

²⁶ Participation is units of measures installed.

LIEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	\$2,977,974	\$3,009,388	\$3,039,006	\$3,067,727	\$3,101,832	\$15,195,927
Incentives	\$1,778,106	\$1,796,862	\$1,814,547	\$1,831,696	\$1,852,060	\$9,073,271
Percent Incentives	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%
Percent Non-Incentives	40.3%	40.3%	40.3%	40.3%	40.3%	40.3%

LIEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Low-Income Efficiency	\$2,977,975	\$3,009,388	\$3,039,006	\$3,067,727	\$3,101,833	\$15,195,930
Percent Sector Budget	42.8%	41.3%	40.9%	43.2%	44.9%	42.6%

LIEEP Cost Effectiveness:

- Gross TRC: 2.01
- NTG Ratio: 100%
- Net TRC: 2.01

3.2.2.2. Low-Income Behavioral Efficiency Program

Program Title and Program Years: Low-Income Behavioral Energy Efficiency Program (“LI-BEEP”) will be implemented during program years 2026 through 2031.

Objectives: The objectives of the program are (1) provide income qualified participants education about electricity consumption, cost and potential energy efficiency bill savings using graphic information tools; (2) change household behavior leading to less electricity usage; and (3) deliver energy savings of more than 1% of average participant’s electric usage.

Target Market: Over the five-year Phase V performance period the average annual participation is projected to be up to 13,760 income qualified residential customers.

Program Description: Specialized low-income home energy reports are provided to a targeted an average income qualified customer population of approximately 13,760 customers each year of the Phase V performance period. Savings impact measurement is based on documented savings comparing the program participant population energy use behavior to a low-income non-participating control group. The remaining programmatic approaches and methodologies are consistent with Plan content described in the R-BEEP at Section 3.2.1.4.

Implementation Strategy: LI-BEEP reports are provided targeted customer group in each year of Act 129 Phase V, 2026-2031.

Program Issues, Risks and Risk Management Strategy: There is an attendant risk the program implementer cannot deliver the contracted LI-BEEP reports and that consumers will not respond to the LI-BEEP reports by changing energy use behavior. Duquesne Light will

mitigate this risk by selecting an implementation contractor who has a proven track record. Energy savings results will be quantified using a PA PUC approved scientific measurement and verification approach previously used by most PA EDCs.

Anticipated Costs to Participating Customers: There is no cost to participating customers.

Ramp-up Strategy: See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: Large-scale, individualized direct-mail campaign and provision of a customer service web portal are used. High-use customers are selected on an opt-out basis for enrollment in the multi-year pilot.

Eligible Measures and Incentive Strategy: The LI-BEEP described above is the only program measure; there are no customer incentives. LI-BEEP reports will also be utilized to promote other residential program offerings to help customers reduce consumption.

Maximum Deadline for Rebates: The program does not provide rebates and no rebate deadline is applicable.

Program Start Date and Key Milestones: Program is set to start on June 1, 2026, and run throughout the duration of Phase V ending on May 31, 2031.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Duquesne Light will rely on the same measurement and verification approach already provided to more than 65 utilities across the country, including utilities in Pennsylvania. The protocol includes clearly defined test and control groups and ex-post measurement of savings. M&V and EM&V will employ the Randomized Control Trial measurement protocol.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 residential programs. The Residential Customer program associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services. Program administrative costs are shown in the following Projected Program Budget table.

Estimated Participation: Over the five-year Phase V performance period the average annual participation is projected to be between 9,200 and 17,200 treatment population, the five-year average annual participant projection is 13,760 income qualified residential customers, rendering deemed savings estimates reflected in the Program Savings Targets table below.

LI-BEEP Savings Targets and Estimated Participation:²⁷

	PY18	PY19	PY20	PY21	PY22	Total
MWh	1,300.0	700.0	700.0	700.0	800.0	4,200.0
MW	0.275	0.148	0.148	0.148	0.170	0.890
Participation	15,100	17,200	10,800	9,200	16,500	13,760

LI-BEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	252,134.4	135,764.7	135,764.7	135,764.7	155,159.6	\$814,588
Incentives	\$0	\$0	\$0	\$0	\$0	\$0
Percent Incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Percent Non-Incentives	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

LI-BEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Residential Sector Budget	\$6,954,095	\$7,286,910	\$7,431,287	\$7,107,520	\$6,910,428	\$35,690,239
Low-Income Behavioral Efficiency	\$252,134	\$135,765	\$135,765	\$135,765	\$155,160	\$814,588
Percent Sector Budget	3.6%	1.9%	1.8%	1.9%	2.2%	2.3%

LI-BEEP Cost Effectiveness:

- Gross TRC: 1.15
- NTG Ratio: 100%
- Net TRC: 1.15

3.3. Small Commercial & Industrial Sector (as defined by EDC Tariff) Programs – include formatted descriptions of each program organized under the same headings as listed above for residential programs. Additionally, include Tables 8, 9, 10, 14 (Gross) and 14 (Net).

The Small-Medium Nonresidential Customer Energy Efficiency Program (C&I customers with a monthly max billing demand of less than 300 kW over the prior 12 months) provides direct-install, downstream and midstream incentive engagement channels successful in Phase IV and are continued in Phase V. Traditional EE measure include lighting, refrigeration, space heating, cooling and ventilation: water heating, commercial cooking equipment, compressed air system improvements. Additional measures tested in Phase IV will be expanded in Phase V including virtual commissioning and strategic energy management, and whole building impact measures.

3.3.1. Small-Medium Nonresidential Energy Efficiency Program

Program Title and Program Years: Small-Medium Nonresidential Energy Efficiency Program (SNEEP) will be implemented during program years 2026 through 2031.

²⁷ Estimated participation is customers within treatment cohorts.

Objectives: Downstream: SNEEP Downstream prescriptive incentives serve to offset the incrementally higher cost of energy efficiency equipment, making the buyer indifferent selecting the higher cost. Equipment overcoming the “first-cost” barrier. SNEEP Downstream incentives emphasize networked lighting controls with commissioning, advanced rooftop unitary controls and demand-controlled ventilation, and a tune-and-save verified with smart-thermostats and building management system data. Downstream SNEEP also provides virtual commissioning which has proven successful in Phase IV.

Midstream: SNEEP Midstream is designed to influence the equipment purchasing decisions targeting a broad range of commercial and industrial products: Lighting, lighting controls, packaged and unitary air conditioning and heat pumps, chilled water systems high-efficiency pumping system, air compression systems and controls. diversify the midstream measure offering. The initiative moves incentives up the supply chain to the distributors and manufacturers that have the greatest influence on equipment stocking and sales. It provides incentives to offset the incrementally higher cost of the high-efficiency equipment to overcome customer “first-cost” objections to purchase and install the higher efficiency equipment. A similar offering was fully subscribed in Phase IV and has been, as a result, expanded in Phase V in response to sector demonstrated interest and need.

Direct-Install: SNEEP Direct-Install initiative provides customers with a single source of information, energy assessments, technical assistance, and financial incentives. The program incorporates an end-to-end approach including marketing, the site survey and final equipment installation. The program is designed to deliver immediate and measurable savings through the distribution of starter kits and direct retrofit of existing equipment.

Target Market: The SNEEP targets Duquesne Light's commercial and industrial sector customers with a monthly max billing demand of less than 300 kW over the prior 12 months. Its Midstream offering serves customers that would ordinarily obtain equipment through commercial business-to-business dealers, distributors, and contractors. Downstream target markets are offices, retail, grocery, hospitality, restaurants and warehouses. The direct-install services likewise engage a diverse range of small businesses such as offices, independent retail shops, gas stations, restaurants, shopping center stores, convenience stores, and micro-businesses.

This group of customers is considered hard-to-reach because the cost to provide services often does not exceed the savings and avoided cost benefits for the activity. The SNEEP delivery channels attempt to affect this outcome while overcoming the sector's significant barriers to program participation. The targeted market is challenged by meeting day-to-day cash requirements of their businesses, they focus on equipment “first-cost” out-of-pocket expenses and less on future life-cycle costs. Business owners often lack energy efficiency expertise and must address many competing priorities. Some small business owners are not native English speakers and do not understand the intricacies of energy efficiency.

Program Description:

SNEEP downstream incentives provides a simplified method to make efficient choices on pre-defined energy efficiency measures without requiring complex analysis or participation rules. Incentives and claimed savings are based on a combination of predetermined

technologies and encoded calculation methods for existing equipment. The prescriptive component covers the majority of common energy-saving measures across most customers and end uses. Participants can choose from a menu of incentives for a wide range of pre-defined end uses, such as lighting, HVAC, variable frequency drives (VFD), commercial plug load, and kitchen and refrigeration equipment. The downstream activities include virtual commissioning and tailored or “custom” measures to meet site-specific needs and savings opportunities.

Projected Small-Medium Downstream Savings Impacts:

	PY18	PY19	PY20	PY21	PY22	Total
MWh	3,480.5	3,863.3	4,416.3	4,939.1	4,121.9	20,821
MW	0.6	0.7	0.8	0.8	0.7	3.6

SNEEP provides midstream incentives directly to distributors and manufacturers, rather than to end users. Incentives target efficient products, offsetting the higher costs, increasing product availability, and effectively driving uptake of the most efficient equipment options. Incentives are structured to mitigate the price premium between conventional and high-efficiency products but can mitigate adoption barriers that go beyond first cost. By working with market actors directly, equipment stocking patterns are altered over time to move inefficient products off the shelves and to enable faster adoption and decreased customer costs for efficient equipment.

Projected Small-Medium Midstream Savings Impacts:

	PY18	PY19	PY20	PY21	PY22	Total
MWh	8,358.2	9,277.3	10,605.3	11,860.7	9,898.5	50,000.0
MW	1.3	1.4	1.6	1.8	1.5	7.5

SNEEP direct-install actions are turnkey, end-to-end solutions that include free energy assessments, simple proposals, and direct installation of energy-efficient technologies conducted by a third-party implementation contractor. Face-to-face interaction with customers is required to explain this program and to overcome objections regarding its validity (i.e., “it is too good to be true”). The program's incentives are designed to encourage early equipment replacement and target discretionary retrofit opportunities among small business customers.

Projected Small-Medium Direct-Install Savings Impacts:

	PY18	PY19	PY20	PY21	PY22	Total
MWh	865.8	961.0	1,098.6	1,228.6	1,025.4	5,179.4
MW	0.1	0.1	0.1	0.2	0.1	0.7

SNEEP Measures:

Downstream measures include HVAC equipment (heat pumps and unitary packaged equipment), refrigeration tune-up, HVAC-tune-up, controls, electronically commutated

motors (ECM), ECM fans, variable frequency drives (VFD) for HVAC and pumping, process fans and process pumps.

Midstream measures include lighting, lighting controls, packaged and unitary air conditioning and heat pumps, chilled water systems high-efficiency pumping system, air compression systems and controls as well as a host of commercial food services measures (ice machines, steam cookers, ovens, fryers, holding cabinets, griddles, cooktops and dishwashers)

Direct-install measures include power strips, rooftop controls, demand-controlled ventilation, compressed air system components, refrigeration system measures, food services equipment (above), lighting, lighting controls, VFDs, ECMs

See Table 8 Eligible Measures for a complete listing of measures and range for incentives.

Implementation Strategy:

SNEEP Downstream Implementation Strategy:

SNEEP Downstream provides customers with ongoing, one-on-one guidance for identifying comprehensive energy efficiency opportunities, assisting with the application and implementation process, obtaining technical assistance, and coordinating with trade allies on projects to create a cohesive program delivery. Through this channel SNEEP recruits and engages trade allies, which are an important source of prospective projects. The implementation strategy includes:

- Account-based marketing that targets decision-makers to increase awareness, encourage enrollment, and move the best prospects toward participation.
- One-on-one outreach to raise awareness, engage customers and trade allies, and deliver the highest quality customer experience.
- Engaging and training trade allies to increase participation and contribute to market transformation.
- Engineering support services, tools, and information provided to trade allies and customers.
- Quality assurance and quality control through randomized on-site project verification and M&V.

Given the changes to Pennsylvania's commercial lighting market over the last several years, the initiative will focus on networked lighting controls (NLC) with commissioning. NLC are controls that are networked, addressable, and utilize software or intelligent controllers to combine multiple lighting control strategies in a single space. The implementer works with manufacturers and their regional representatives to build the local market by promoting NLC technologies and educating customers and local trade allies. For HVAC efficiency, the CSP will promote advanced rooftop unitary controls, demand-controlled ventilation, and a "tune and save" package verified with smart thermostat and building management system data.

SNEEP Midstream Implementation Strategy:

The Implementation contractor delivers the program as a turnkey solution and serves as a single point of contact for distributors and manufacturers. The CSP also issues and maintains participation agreements, identifies and enrolls targeted suppliers, provides training, processes applications, tracks and reports on program activity, and supports program EM&V. Initial engagement targets organizational CEOs and sales managers to discuss opportunities for increasing inventories, by incorporating proven sales strategies, and to get full buy-in throughout an organization. Prior to signing a participation agreement, the CSP ensures that distributors meet program criteria, and then during the enrollment process, the CSP learns distributors' business models and challenges and engages staff across the entire organization.

The initiative provides both passthrough incentives and flexible distributor incentives that are used to mitigate risk and capitalize on opportunities. Flexible incentives can be passed through to end use customers, offset stocking charges, motivate sales representatives or address other perceived risks to supply chain actors. The utilization of flexible incentives tends to change over time as participating distributors identify and mitigate the risks and opportunities for their business. Both passthrough and flexible incentives are considered “Customer Incentives” analogous to incentives that offset installation costs in other portfolio contexts as the energy savings opportunity may not occur without this market support.

To document lighting baselines, a customer affidavit is completed for lighting projects. The lighting measures target a specific subset of products that provide both baseline and control savings to maximize impacts. The Program may adjust an incentive offer based on actual or projected participation levels while maintaining program cost effectiveness or increasing customer value.

SNEEP Direct-Install Implementation Strategy:

Phase V builds on proven approaches from previous phases, while introducing targeted enhancements to improve program performance and customer experience. The implementation contractor delivers services as the single point of contact. Direct install delivery is a traditional form of energy efficiency delivery to small business customers consisting of the following:

- No-cost energy assessments that can occur while the business maintains operations.
- A simple-to-understand proposal with key opportunities and costs for energy retrofit upgrades.
- A proposal with recommendations for efficiency measures and the direct installation of certain low-cost measures.
- The implementer obtaining the customer's written approval and facilitating equipment installation by pre-selected contractors.
- Incentives cover up to 80 percent of equipment and installation costs.
- Proper disposal of used equipment.
- Quality assurance and quality control through randomized on-site project verification.

The CSP utilizes a pre-qualified pool of local installation contractors. Qualified customers participate by contacting the program implementation contractor who performs a

complementary audit. Using the audit data, the CSP generates a proposal with estimated energy savings information, Duquesne Light's incentives, and the customer's share of the cost on the spot for each customer. This cost-share structure ensures customers are invested and committed to the project. Upon acceptance, the contractor schedules the work and installs the measures. Following installation, the installation contractor collects only the customer's share of the project's cost and Duquesne Light then pays the incentive directly to the implementation contractor.

During Phase V, expected changes throughout the program years include the introduction of Small Business Starter Kits for immediate savings, expanded measure bundles, and enhanced virtual commissioning to maximize energy savings and persistence. Additional contractor training, refreshed marketing materials, and advanced assessment tools will also be deployed to address emerging market needs. Sector-specific, multilingual outreach and streamlined enrollment, supported by a designated program point of contact and digital self-service tools, will ensure hard-to-reach and underserved business corridors are actively engaged. Partnerships with local trade allies and community organizations will be leveraged to accelerate project origination and deeper measure adoption.

Program Issues, Risks and Risk Management Strategy: Program elements have been implemented successfully in several Act 129 phases program risk is mitigated by replicating proven approaches and processes. All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warnings regarding program under- or over-subscription. CSP implementation contract statements of work include pay-for-performance compensation. Provisions in CSP contract language provide for shifting funds from under-performing programs. Duquesne Light reserves the right to hire multiple CSPs should any single CSP not be able to meet program requirements or if Duquesne Light determines it is appropriate to deliver some program elements directly.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers:

SNEEP Downstream incentive levels have historically averaged approximately one-third of efficient product incremental costs, initially set targeting a simple payback period of 2 years. Incentive levels were then adjusted to be approximately consistent with statewide treatment and as needed to promote program participation. As was the case in Phase IV, the Phase V Implementation Order²⁸ requirement for at least 50% of EE&C Plan spending, at the Plan level, to come from incentives has caused incentive levels to increase.

SNEEP Midstream: Incentives are provided to distributors as passthrough and/or flexible incentives depending on the measure and sector; discounts are applied at the point of sale providing reduced initial cost and increased product availability. Measure incentives are structured to mitigate the price premium between conventional and high-efficiency products. Incentive levels range by end-use with lighting offers covering approximately 40% of the cost, and non-lighting offers covering 15 to 20% of the incremental cost. With higher unit costs for non-lighting equipment and limited ability to offset those costs, a flexible incentive

²⁸ PA Public Utility Commission Energy Efficiency and Conservation Program Implementation Order, Docket No. M-2025-3052826, June 18, 2025, Section H.1: Determination of Phase V Allowable Costs, page 231.

is a strong tool to influence the supply chain to stock and sell higher efficiency equipment which also secures operational savings for the customer.

SNEEP Direct-Install participants receive a free energy assessment to identify cost-effective opportunities for saving energy and can receive a limited quantity of no-cost energy-saving products for immediate savings. The incentive levels are set so that the program will cover up to 80 percent of the total installed cost, requiring customers to pay 20 percent of the cost. Participating customers may have to pay for the installation of non-standard program measures and incidental project costs not directly associated with implementation of pre-approved program measures.

Ramp-up Strategy: This program was implemented in Phases II, III, and Phase IV, so Phase V program ramp-up will be minimized by replicating many of the proven approaches and processes. Implementation service RFPs will be issued, responses reviewed, and contract statements of work executed according to the implementation schedules provided in Section 12. See Figure 1: Program Ramp Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy:

For the SNEEP Downstream engagement channel, the most successful avenue for marketing comes from one-on-one communication with customers using dedicated program field staff in partnership with local trade allies. In past program cycles, trade allies have helped identify opportunities and gauge customer interest in pursuing individual efficiency upgrades or a comprehensive plan of upgrades, and field staff have leveraged their long-term relationships with customers, their knowledge, and their analysis of customer data (e.g., energy use, demand, sector analysis) to generate projects. Trade allies such as equipment vendors, consulting engineers, and energy service companies or channel partners have been key actors in promoting, identifying, and delivering services to customers.

SNEEP Midstream offerings are marketed primarily by the implementation CSP that develops and delivers presentations to distributors and manufacturers through a combination of phone calls, personal emails, webinars, and in-person visits to maximize market share. Presentations demonstrate the financial benefits of promoting high-efficiency measures, from increased sales revenue and program incentives. Additionally, the implementation CSP conducts outreach through participation in and memberships with selected key trade associations, attendance at key trade shows, and training event sponsorships. The CSP will craft program participation messages for key customer decision-makers by leveraging electronic collateral, including customer spotlights, brochures, and fact sheets. Available services are also posted on Duquesne Light's Act 129 website.

SNEEP Direct-Install relies on cold calls and walk-in contact. The implementation CSP identifies hard-to-reach customers by analyzing customer data and prioritizing these customers by geography, energy intensity, and business type. Armed with a list of potential customers, the CSP canvases small businesses quickly by going door-to-door. The CSP supplements door-to-door sales with direct mailings and targeted digital marketing campaigns to raise awareness before reaching the door to "warm up" the audience and enable the CSP to approach small businesses more effectively. The marketing strategy for Phase V

will utilize sector-based, multilingual outreach. Available services are posted on Duquesne Light's Act 129 website. Additionally, the CSP conducts outreach through participation in and memberships with selected key trade associations, attendance at key trade shows, and training event sponsorship.

Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions and Incentive Levels: See Section 11, Table 8.

Maximum Deadline for Rebates: Midstream Incentives offer rebates at the point of sale at participating distributors; no rebate deadlines are applicable. Downstream energy efficiency rebates are subject to an application deadline of 180 days from the date of purchase and installation.

Program Start Date and Key Milestones: Refer to Section 12 Chart 2: Small Commercial and Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commissions Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on cost of the project (as no customer incentives are provided). Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes three dedicated full-time employees to perform management and coordination of all Act 129 commercial and industrial sector programs. The Customer Program Associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services.

SNEEP Savings Targets and Estimated Participation:²⁹

	PY18	PY19	PY20	PY21	PY22	Total
MWh	12,705	14,102	16,120	18,028	15,046	76,000
MW	2.0	2.2	2.5	2.8	2.3	11.7
Participation	27,887	30,954	35,384	39,573	33,026	166,825

SNEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	4,374,562	4,855,612	5,550,649	6,207,731	5,180,724	\$26,169,278
Incentives	2,110,159	2,342,202	2,677,468	2,994,424	2,499,027	\$12,623,280
Percent Incentives	48.2%	48.2%	48.2%	48.2%	48.2%	48.2%
Percent Non-Incentives	51.8%	51.8%	51.8%	51.8%	51.8%	51.8%

²⁹ Participation is units of measures installed.

SNEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Small-Medium C&I Sector	\$4,374,562	\$4,855,612	\$5,550,649	\$6,207,731	\$5,180,724	\$26,169,278
All Small-Medium Efficiency	\$4,374,562	\$4,855,612	\$5,550,649	\$6,207,731	\$5,180,724	\$26,169,278
Percent Sector Budget	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SNEEP Cost Effectiveness:

- Gross TRC: 2.63
- NTG Ratio: 82.3%
- Net TRC: 2.16

3.4. Large Commercial & Industrial Sector (as defined by EDC Tariff) Programs – include formatted descriptions of each program organized under the same headings as listed above for residential programs. Additionally, include Tables 8, 9, 10, 14 (Gross) and 14 (Net).

Large Commercial/Industrial Sector Programs include formatted descriptions of each program organized under the same headings as listed previously for residential and small commercial and industrial sector programs. Customers served under this sector are commercial and industrial customers having a monthly max billing demand of ≥ 300 kW over the prior 12 months. To best serve large business customers, Duquesne Light offers a suite of solutions designed to influence customer behavior and purchasing decisions as described in the following pages.

3.4.1. Large Commercial Sector Energy Efficiency Program

Program Title and Program Years: Large Commercial Energy Efficiency Program (CEEP) will be implemented during program years 2026 through 2031.

Objectives: The CEEP is a downstream program that provides Duquesne Light's large commercial customers interested in reducing their energy consumption with streamlined access to energy efficient technologies and improvements in operational processes that result in measurable energy and demand savings. This program is designed to influence the selection of high-efficiency equipment in retrofit, new construction, and end-of-life replacement scenarios by offering expedited, quantifiable, and easy-to-understand incentive options.

The program aims to reduce or bypass common barriers to participation, such as lack of energy efficiency information, limited access to qualified vendors and installers, and challenges in quantifying savings or securing capital. Through both prescriptive and custom incentive tracks, the program supports a flexible approach that accommodates a wide range of technologies and project types, enabling large business customers to implement efficient solutions tailored to their operational needs. The program also emphasizes sector-based outreach and partnerships with trade allies to maximize participation and ensure that energy and cost savings are realized across diverse market segments.

Target Market: The CEEP Program targets Duquesne Light's large commercial customers with a monthly max billing demand of ≥ 300 kW over the prior 12 months and targets all cost-effective energy efficiency retrofit and time-dependent opportunities. Program marketing has a sector-based focus, targeting specific energy efficiency opportunities within primary customer sectors, such as offices, retail, grocery, hospitality, restaurants and warehouses.

The program continues to target partnerships within the trade ally community. These trade allies are true stakeholders in the process and typically have established relationships and contacts with customers. The selected CSP continues to recruit trade allies and provide training and support to these key players that help spread the program's message and deliver solutions to large commercial customers.

Program Description: The CEEP helps Duquesne Light's large commercial customers and/or their trade allies select the most efficient electric technologies when they consider purchasing new equipment or retrofitting existing inefficient technologies. CEEP offers two core participation tracks: prescriptive and custom.

The prescriptive component offers a simplified method to make efficient choices on pre-defined energy efficiency measures without requiring complex analysis or participation rules. Incentives and claimed savings are based on a combination of predetermined technologies and encoded calculation methods for existing equipment. The prescriptive component covers the majority of common energy-saving measures across most customers and end uses. Participants can choose from a menu of incentives for a wide range of pre-defined end uses, such as lighting, HVAC, variable frequency drives (VFDs), commercial plug load, and kitchen and refrigeration equipment.

The custom component makes it possible to include more complex and site-specific measures and projects. Custom incentives enable more comprehensive approaches to energy savings, which often occur in major renovation and new construction projects. The custom component is available for energy efficiency technologies or multi-measure projects that do not fall under the prescriptive component, ranging from complex commercial HVAC projects to industrial process improvements. Custom projects must be able to show specific and verifiable energy savings and costs, typically developed by a third-party firm.

Program components include energy use auditing, provision of targeted financing and incentives, project management and retrofit measure installation, training, and technical assistance. Energy audits results provide business customers a readily available, reliable source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality.

Implementation Strategy: The CEEP provides customers with ongoing, one-on-one guidance for identifying comprehensive energy efficiency opportunities, assisting with the application and implementation process, obtaining technical assistance, and coordinating with trade allies on projects to create a cohesive program delivery. The CSP also recruits and engages trade allies, which are an important source of prospective projects. The implementation strategy includes:

- Account-based marketing that targets decision-makers to increase awareness, encourage enrollment, and move the best prospects toward participation.
- One-on-one outreach to raise awareness, engage customers and trade allies, and deliver the highest quality customer experience.
- Engaging and training trade allies to increase participation and contribute to market transformation.
- Engineering support services, tools, and information provided to trade allies and customers.
- Quality assurance and quality control through randomized on-site project verification and M&V.

Retrocommissioning (RCx), Monitoring-Based Commissioning (MBCx), Virtual Commissioning (VCx) and Strategic Energy Management (SEM)/Virtual SEM (vSEM) Solutions. RCx/MBCx/VCx and SEM/vSEM provide large commercial customers with an additional layer of energy-saving opportunities beyond equipment solutions. RCx/MBCx and SEM/vSEM Solutions target existing commercial facilities with energy savings opportunities related to facility or process operations and maintenance.

Technology and Operations Focus. Given the drastic changes in Pennsylvania's commercial lighting market over the last several years, the CSP will focus on controls savings and technologies such as networked lighting controls (NLC) to generate savings. NLC are controls that are networked, addressable, and utilize software or intelligent controllers to combine multiple lighting control strategies in a single space. Additionally, the CSP will seek to pair prescriptive upgrades (NLC adders, variable frequency drives) with custom plant and controls optimization, MBCx, and SEM/vSEM to lock in persistence and on-peak reductions.

Program Issues, Risks and Risk Management Strategy: The CEEP's core design was implemented successfully in all prior phases, Phase V program risk is mitigated by replicating proven approaches and processes. All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warnings regarding program under- or over-subscription. CSP implementation contract statements of work include pay-for-performance compensation. Provisions in CSP contract language provide for shifting funds from under-performing programs.

The CSP will continue to transfer program data for review, verification, and submission into Duquesne Light's PMRS. All of these program elements have been operating during the previous Act 129 Phases. These activities are not new to Duquesne Light's implementation team. Implementation CSP contract statements of work are performance-based, include production schedules, and performance payments are tied to independent measurement.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers: CEEP Downstream incentive levels have historically averaged approximately one-third of efficient product incremental costs, initially set targeting a simple payback period of 2 years. Incentive levels were then adjusted to be approximately consistent with statewide treatment and as needed to promote program participation. As was the case in Phase IV, the Phase V

Implementation Order requirement for at least 50% of EE&C Plan spending, at the Plan level, to come from incentives has caused incentive levels to increase.

Ramp-up Strategy: Phase V program ramp-up will be minimized by replicating many of the proven approaches and processes from prior Act 129 program phases. See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: Though a variety of marketing approaches are employed, experience has established that the most successful avenue for marketing comes from one-on-one communication with customers using dedicated program field staff in partnership with local trade allies. Throughout past program cycles, trade allies have helped identify opportunities and gauge customer interest in pursuing individual efficiency upgrades or a comprehensive plan of upgrades, and field staff have leveraged their long-term relationships with customers, their knowledge, and their analysis of customer data (e.g., energy use, demand, sector analysis) to generate projects. Trade allies—such as equipment vendors, consulting engineers, and energy service companies or channel partners—have been key actors in promoting, identifying, and delivering services to customers.

To support one-on-one outreach, the marketing plan includes:

- Targeting key market segments. Using market segmentation research, including market verticals, the implementer allocates program personnel by subject-matter expertise to key markets for better penetration.
- Participating in associations. The CSP conducts outreach through participation in and memberships with selected key trade associations and attendance at key trade shows, reaching a large number of potential customers in one place. Market segmentation data helps refine which associations provide maximum benefits.
- Supporting trade allies. Engaging trade allies is another key way of raising awareness, improving participation rates, and contributing to market transformation. Trade allies are an extension of the program team and provide customers with expertise. The implementer supports trade allies with training, program staff to assist them, and marketing materials and enables them to provide continuous feedback on the program.
- Delivering a paid media campaign. As with Phase IV, the CSP will utilize a paid media campaign to raise awareness before reaching the door. This campaign will “warm up” the audience and enabled the CSP to approach small businesses more effectively. This campaign will include print and digital media.
- Providing access to online marketing/website. Available services will be posted on Duquesne Light’s Act 129 website. Emails and digital tactics drive traffic to the site and emphasize how to participate in the program. Customers may also access incentive applications from Duquesne Light’s website.
- Hosting events. The CSP will hold events throughout the year that cover all small business sectors to raise awareness and encourage greater program participation. Event efforts will focus on sponsorships, partnerships, speaking opportunities, and event attendance.

- **Distributing Collateral.** The CSP will craft program participation messages for key customer decision-makers by leveraging print collateral, including customer spotlights, brochures, and fact sheets.

Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions and Incentive Levels: See Section 11, Table 8.

Maximum Deadline for Rebates: Duquesne Light will assess rebate deadlines on a case-by-case basis. The maximum deadline to pay rebates by the CEEP will generally be 180 days from the date of installation of eligible energy efficiency measures. However, this time frame may not be appropriate for particularly large or complex projects, such as CHP projects, which may take 18 months or more between project commitment and final measurement. For large, complex and expensive projects, Duquesne Light will closely monitor and document installation and timing of commissioning and commercial operation. The project is not done when the customer reports it or based on the date of an invoice; the project is complete when Duquesne Light, or its designated CSP, performs site-verification and attests to the project completion.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3: Large Commercial and Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 commercial and industrial sector programs. The Customer Program Associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services.

CEEP Savings Targets and Estimated Participation:³⁰

	PY18	PY19	PY20	PY21	PY22	Total
MWh	7,500.0	8,750.0	11,250.0	13,750.0	8,750.0	50,000.0
MW	1.3	1.5	1.9	2.3	1.5	8.504
Participation	11,975	13,971	17,970	21,954	13,971	79,834

³⁰ Participation for Large Commercial and Large Industrial Business Solutions programs is represented in projected measures delivered.

CEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	1,373,989	1,602,987	2,060,984	2,518,980	1,602,987	\$9,159,927
Incentives	578,808	675,276	868,212	1,061,148	675,276	\$3,858,721
Percent Incentives	42.1%	42.1%	42.1%	42.1%	42.1%	42.1%
Percent Non-Incentives	57.9%	57.9%	57.9%	57.9%	57.9%	57.9%

CEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Large Commercial Sector	\$1,373,989	\$1,602,987	\$2,060,984	\$2,518,980	\$1,602,987	\$9,159,927
Large Commercial Efficiency	\$1,373,989	\$1,602,987	\$2,060,984	\$2,518,980	\$1,602,987	\$9,159,927
Percent Sector Budget	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

CEEP Cost Effectiveness:

- Gross TRC: 2.56
- NTG Ratio: 89.9%
- Net TRC: 2.49

3.4.2. Large Industrial Energy Efficiency Program

Program Title and Program Years: The Large Industrial Downstream Initiative (Industrial Energy Efficiency Program or IEEP) will be implemented during program years 2026 through 2031.

Objectives: To provide large industrial customers with a broad selection of energy efficiency measures across multiple end uses in order to achieve minimum verified gross energy savings of 40,000 MWh and 7.2 MW for the IEEP over the five-year phase, while maintaining high customer satisfaction.

Target Market: Large industrial customers are here defined as those having a monthly max billing demand of ≥ 300 kW over the prior 12 months, with a focus on industries common to Duquesne Light's service area, such as primary metal manufacturing and fabricated metal products, as well as food processing, chemicals, pharma, biotech, and plastics manufacturing, data centers, and others.

Program Description: The IEEP will serve Duquesne Light's large industrial customers (monthly max billing demand of ≥ 300 kW over the prior 12 months) in Pittsburgh and in Allegheny and Beaver counties. The program will focus on industrial facilities, such as primary metal manufacturing and fabricated metal products, as well as food processing, chemicals, pharma, biotech, and plastics manufacturing, data centers, and others. These sites have complex systems and significant opportunities for prescriptive and custom energy efficiency projects, including load shifting and process optimization.

The program will offer prescriptive and custom elements, with demand saving opportunities woven throughout. It will target electric end uses that present high potential for energy

efficiency improvements, such as lighting, motors and drives, compressed air, HVAC, refrigeration, process optimization, and process heating and cooling. Projects will be identified through comprehensive energy efficiency audits to identify actionable projects tailored to each site's unique systems. Robust marketing and trade ally engagement will drive project completion. A call center will provide ongoing support.

Customers with high energy savings potential and site engagement will receive hands-on support and use of an energy management platform to track projects and energy savings. Sites with fewer opportunities will benefit from ongoing access to flexible energy management training modules and quarterly workshops designed to support continuous improvement. All enrolled customers will receive access to technical support and energy management training modules on demand. The program will also include comprehensive marketing and trade ally engagement and training to enhance program outcomes.

Implementation Strategy: The program will use targeted outreach and tailored messaging to engage industrial customers, focusing on segments with high energy savings potential. Marketing efforts will be multi-channel, including digital content, outreach materials, and trade ally engagement, all designed to drive participation and satisfaction. Trade allies will play a key role in outreach and project delivery, supported by training, tools, and a dedicated webpage to improve visibility and access.

Customer engagement will be customized based on readiness and opportunity. High-potential sites will receive hands-on support, including site assessments and access to an energy management platform for tracking projects and savings. Other facilities will benefit from flexible, on-demand training and workshops.

Over time, the program is expected to evolve based on performance data and market feedback. Adjustments may include shifting certain measures from custom to prescriptive to streamline participation, refining incentive structures to improve project completion rates, and enhancing reporting systems. Continuous improvement, strong relationships, and proactive pipeline development will ensure the program remains effective and responsive throughout its duration.

Program Issues, Risks and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program incentives, potential impacts and provides early warning regarding program under- or over-subscription.

Three potential issues and their risk management strategies include:

- Engagement level of existing trade ally network: Low engagement can be mitigated by performing a "listening tour" of one-on-one meetings with each trade ally firm.
- Third Party evaluation: Risks in working with a new evaluator may be mitigated by engaging in early communication, fostering a collaborative environment, and inviting early input on proposed M&V plans.
- Varying Customer Interest: for various reasons, a customer's attention to energy efficiency programs can increase or decrease throughout the program cycle, leading

to business slowdown or significant ramp up. The program will mitigate this issue by ensuring outreach to a diverse base, so if one segment is impacted, savings can still be achieved across the program.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers:

Many of the services, such as SEM and Virtual Commissioning, are provided at no cost to the participant. IEEP Downstream incentive levels have historically averaged approximately one-third of efficient product incremental costs, initially set targeting a simple payback period of 2 years. Incentive levels were then adjusted to be approximately consistent with statewide treatment and as needed to promote program participation. As was the case in Phase IV, the Phase V Implementation Order³¹ requirement for at least 50% of EE&C Plan spending, at the Plan level, to come from incentives has caused incentive levels to increase.

Ramp-up Strategy: Phase V program ramp-up will be minimized by replicating many of the proven approaches and processes from prior Act 129 program phases. See Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy: The program launch centers on implementing a comprehensive, DLC-approved marketing strategy designed to drive industrial customer enrollment at no cost to participants. The approach emphasizes understanding customer operations and communicating benefits that matter most to end users. Marketing efforts will include research, segmentation, outreach materials, digital content, and trade ally engagement.

Audience segmentation is based on industry type, energy usage, and program fit, allowing for tailored messaging and outreach strategies. Marketing efforts will use a multi-channel approach—email, social media, geofenced ads, events, and trade ally networks—to reach decision-makers with relevant, plain-language content backed by proof points and success stories. A mobile-friendly, multilingual website will serve as the digital hub, simplifying enrollment and connecting customers to trade allies and financing options. Available services are also posted on Duquesne Light's Act 129 website.

Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions and Incentive Levels: See Section 11, Table 8.

Maximum Deadline for Rebates: Duquesne Light will assess rebate deadlines on a case-by-case basis. The maximum deadline to pay rebates by the CEEP will generally be 180 days from the date of installation of eligible energy efficiency measures. However, this time frame may not be appropriate for particularly large or complex projects, such as CHP projects, which may take 18 months or more between project commitment and final measurement. For large, complex and expensive projects, Duquesne Light will closely monitor and document installation and timing of commissioning and commercial operation. The project is not done when the customer reports it or based on the date of an invoice; the project is complete with Duquesne Light, or its designated CSP, performs site-verification and attests to the project completion.

³¹ PA Public Utility Commission Energy Efficiency and Conservation Program Implementation Order, Docket No. M-2025-3052826, June 18, 2025, Section H.1: Determination of Phase V Allowable Costs, page 231.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3: Large Commercial and Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 commercial and industrial sector programs. The Customer Program Associates will administer the program on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, legal, data processing and clerical staff, as well as contracted CSP services.

IEEP Savings Targets and Estimated Participation:

	PY18	PY19	PY20	PY21	PY22	Total
MWh	4,109	6,922	8,843	9,605	10,521	40,000.0
MW	0.548	0.922	1.178	1.280	1.402	5.329
Participation	3,443,138	5,799,622	7,409,523	8,047,628	8,815,230	33,515,141

IEEP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	1,603,421.9	2,700,803.6	3,450,512.1	3,747,668.7	4,105,130.5	\$15,607,537
Incentives	1,037,239.5	1,747,126.1	2,232,106.0	2,424,334.0	2,655,572.9	\$10,096,379
Percent Incentives	64.7%	64.7%	64.7%	64.7%	64.7%	64.7%
Percent Non-Incentives	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%

IEEP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
Large Industrial Sector	\$1,603,422	\$2,700,804	\$3,450,512	\$3,747,669	\$4,105,131	\$15,607,537
Large Industrial Efficiency	\$1,603,422	\$2,700,804	\$3,450,512	\$3,747,669	\$4,105,131	\$15,607,537
Percent Sector Budget	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

IEEP Cost Effectiveness:

- Gross TRC: 4.40
- NTG Ratio: 89.9%
- Net TRC: 4.17

3.5. Government/Nonprofit/Institutional Sector (as defined by 66 Pa. C.S. § 2806.1) – Qualitatively describe how the Government/Nonprofit/Institutional (GNI) Sector will be served. Highlight any key differences in the planned program delivery strategy between the GNI and C&I sectors.

Program Title and Program Years: The Public Agency Partnership Program (PAPP) will be implemented during program years 2026 through 2030.

Objectives: PAPP engages local government in a partnership to implement an Energy Efficiency Action Plan. The program will systematically inventory potential for energy efficiency improvements in local government departments and jurisdictional agencies. It will execute project agreements to co-fund identified energy efficiency projects.

Target Market: Consistent with Act 129, the Public Agency Partnership Program serves customers that includes federal, state and local governments, municipalities and school districts as well as healthcare systems, institutions of higher education and other non-profit entities.

Program Description: Public Agency Partnerships are established through execution of a Memorandum of Understanding (MOU) by and between Duquesne and selected local governmental agencies. The MOU establishes working groups comprised of Duquesne and agency representatives that identify project areas within agency departments (and jurisdictional agencies). Working groups define project scopes of service and establish project agreements to co-fund agreed to projects. The project agreements between Duquesne Light and Partnership agencies contain the terms to leverage local agency staff to reach, pre-screen and enroll program participants. The utility and the agency split specified program costs. The Partnership MOU puts in place dedicated contacts and a working group structure to identify and evaluate energy efficiency project opportunities within all governmental departments and sub-agencies.

Implementation Strategy:

Key elements of the implementation process follow (1) Duquesne Light executes a Partnership MOU with the Public Agency (2) Duquesne Light facilitates working group meetings with the Public Agency and jurisdictional agencies (3) the working group collaborates on the development proposed project concept papers (4) public agency working group members obtain feedback on the proposed projects and the working group makes necessary adjustments to the concept paper (5) Duquesne Light prepares a project agreement and resolution for approval by the public agency governing body (6) Duquesne Light and the public agency implement the project plan consistent with the terms of the project agreement.

Patterned after successful programs operating in other parts of the country, a key element of the PAPP is co-funding by Duquesne Light and the Partnership agency of energy efficiency audits and measure implementation. PAPP will utilize local contractors and/or other survey and installation entities based on availability, cost, and quality of service. Whenever possible, PAPP will utilize non-profit, community-based organizations to perform the energy efficiency surveys and measure installation.

Program Issues, Risks and Risk Management Strategy:

All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. The PAPP was implemented successfully in both Phases I and II, and III, Duquesne Light assigns minimal developmental risks associated with implementing this program.

Basis for the Proposed Level of Incentives and Anticipated Cost to Participating Customers:

PAPP Partners will fund portions of identified energy efficiency projects consistent with adopted project agreements.

Ramp-up Strategy:

This program was originally launched on December 1, 2009 and continued through Phase III ending May 2021. PAPP was discontinued in Phase IV when the mandatory GNI carve-out was eliminated, but this resulted in fewer comprehensive projects implemented by this sector. In Phase V the proven program is brought back to address key unique barriers. Duquesne Light has many existing agreements and relationships with its governmental counterparts, no extended ramp-up is anticipated, see Figure 1: Program Ramp-Rates for projected energy savings for each year of the Phase V performance period.

Marketing Strategy:

Local government agencies are engaged directly by Duquesne Light under the local government partnership model. Each partnering agency assists in communicating with all governmental departments and jurisdictional agencies.

Eligible Measures and Incentive Strategy showing Incremental Cost Assumptions and Incentive Levels: See Section 11, Table 8Maximum Deadline for Rebates:

Duquesne Light will assess rebate deadlines on a case-by-case basis. The maximum deadline to pay rebates by the PAPP will generally be 180 days from the date of installation of eligible energy efficiency measures. However, this time frame may not be appropriate for particularly large or complex projects, such as water and wastewater treatment plant projects, which may take 18 months or more between project commitment and final measurement. For large, complex and expensive projects, Duquesne Light will closely monitor and document installation and timing of commissioning and commercial operation. The project is not done when the customer reports it or based on the date of an invoice; the project is complete with Duquesne Light, or its designated CSP, performs site-verification and attests to the project completion.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial / Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase V EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements:

The Duquesne Light Customer Programs organization staffing plan includes two dedicated full-time employees to perform management and coordination of all Act 129 commercial and

industrial sector programs that include governmental/educational and nonprofit segments (see Figure 3 or 47). The Commercial Program Coordinator will administer the program, with support by the C&I Program Coordinator. A specialized implementation CSP will be selected by competitive solicitation and will support utility staff by providing direct customer interface, project development and engineering services as well as facilitating project meetings and logistical support. In the conduct of program management and oversight, Duquesne Light's Customer Programs organization staff will also be supported by additional part-time engineering, marketing, purchasing, regulatory, data processing and clerical staff. Program administrative costs are shown in the following Projected Program Budget table.

PAPP Savings Targets and Estimated Participation:

	PY18	PY19	PY20	PY21	PY22	Total
MWh	4,449.4	4,780.2	4,999.7	5,156.4	5,318.6	24,704.3
MW	0.568	0.694	0.726	0.694	0.473	3.155
Participation	7,104	7,632	7,983	8,233	8,492	39,445

PAPP Estimated Program Budget:

	PY18	PY19	PY20	PY21	PY22	Total
Program Cost	\$2,000,757	\$2,445,370	\$2,556,523	\$2,445,370	\$1,667,297	\$11,115,316
Incentives	\$1,310,753	\$1,602,032	\$1,674,851	\$1,602,032	\$1,092,294	\$7,281,962
Percent Incentives	65.5%	65.5%	65.5%	65.5%	65.5%	65.5%
Percent Non-Incentives	34.5%	34.5%	34.5%	34.5%	34.5%	34.5%

PAPP Estimated Percentage of Sector Budget Attributed to Program:

	PY18	PY19	PY20	PY21	PY22	Total
GNI	\$2,000,757	\$2,445,370	\$2,556,523	\$2,445,370	\$1,667,297	\$11,115,316
PAPP	\$2,000,757	\$2,445,370	\$2,556,523	\$2,445,370	\$1,667,297	\$11,115,316
Percent Sector Budget	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

PAPP Cost Effectiveness:

- Gross TRC: 2.31
- NTG Ratio: 89.9%
- Net TRC: 2.23

4. Program Management and Implementation Strategies

(The objective of this section is to provide detailed description of how EDC plans to manage and implement programs, including their approach to and use of Conservation Service Providers (CSPs).)

4.1. Overview of EDC Management and Implementation Strategies:

- 4.1.1. Describe the types of services to be provided by EDC as well as consultants, trade allies, and CSPs. Indicate which organizations will provide which services and the basis for outsourcing versus staffing in-house. Reference reporting and EM&V information from Sections 5 and 6 below.³²

The delivery organization size and function are largely driven by the portfolio of programs fielded. The portfolio proposed by Duquesne Light is structured under three broad programs: residential, non-residential and behavioral.

The Programs provide incentives for a full range of measures to assist customers of all sizes and in all key market segments to overcome barriers to adopt energy efficiency measures. These programs put in place a baseline program design, with set incentive levels and measure content. The design provides an overarching programmatic structure with calculated incentives for customized projects or itemized incentives for standard measures. Under this structure, each program can promote specific technologies or target specific market segments incorporating specified savings impacts and incentive levels in a consistent and common offering.

Duquesne Light implements programs effectively and economically. To achieve this, it uses CSPs with expertise and experience in program implementation and operations. Success depends on special services offered by CSPs to implement and overcome market segment specific barriers. Duquesne Light works together with CSPs and contractors to provide the services for successful implementation of the plan.

Program implementation requires significant planning and operation management functions. In addition to initiating the contracting process, each contractor is managed and integrated into an organized and cohesive operation. Program procedural guidelines are developed and followed. Documentation is maintained and electronic data structures are developed and managed.

Customers are engaged through at least three channels. First, Duquesne Light promotes the programs to its customers through marketing approaches such as mass media advertising, direct marketing, direct contact, events, conferences, account representatives and electronic media. Second, the Duquesne Light contractors and subcontractors have similar responsibilities, with specific focus on securing commitments for customers to participate in the programs. Third, trade allies, such as builders, architects, engineers, vendors, equipment

³² Services to be offered by EDC or others may include marketing, customer recruiting, demonstration projects, audits and or installation of new efficiency measures, verification of installations and or baseline usage, response to customer concerns, program tracking and program evaluation.

installation contractors, retailers and others, are informed of the Duquesne Light programs, with the objective of securing their willingness to participate and secure their customers and clients to participate. Trade allies are also engaged, primarily through direct marketing, events, conferences and account representatives.

The programs are designed to overcome key barriers to customer participation. In general, the barriers to greater customer participation in energy efficiency are the need for information, technical assistance, and financial assistance. The programs are also designed to encourage comprehensiveness in terms of including multiple measures, taking account of interactive savings between measures, and advancing new designs and technologies.

Depending on the specific program in the portfolio for Duquesne Light, available services are expected to include:

- Benchmarking of energy use based on utility bills.
- Walk-through energy assessments to pre-screen and qualify the facility to optimize measure selection and implementation.
- Investment grade energy audits for specific measures and energy savings.
- Life-cycle cost-benefit analysis.
- Virtual commissioning.
- Project and construction planning and management.
- Project documentation and operator training.
- Post installation quantification of savings.
- Providing guidance about alternative financing assistance.
- Quantifying environmental benefits.
- Marketing to prospective customers based on leads from Duquesne Light as well as resources of the CSP.
- Educating customers and recruiting participants.
- Conducting walk-through or preliminary energy audits.
- Securing customer approval to proceed with targeted or comprehensive investment grade energy audits.
- Recommending measures with estimates of energy and demand savings.
- Preparing benefit and cost analyses and identification of financing options.
- Completing customer applications to reserve program incentive funds and submitting to Duquesne Light for approval.
- Performing or assisting customers with equipment specification, vendor selection, bidding and project management.
- Conducting post-installation inspections.

- Verifying savings estimates.
- Coordinating applications for incentive payments.
- Conducting project completion and follow-up services.
- Conducting customer satisfaction surveys.

Reporting is conducted based on the requirements of the regulatory authorities, Duquesne Light management and CSPs. Section 5 below presents Duquesne Light's proposed reporting criteria and supporting information systems.

EM&V is conducted for each program. The scope and level will depend on the nature of the program and split of responsibilities between regulatory authorities, Duquesne Light management and CSPs. Section 6 below presents Duquesne Light's approach to EM&V.

- 4.1.2. Describe how the risk categories of performance, technology, market, policy, and evaluation can affect the programs and any risk management strategies that will be employed to mitigate those risks.³³

Performance risk refers to the ability of programs to achieve their individual goals in the context of overall corporate goals for Duquesne Light relating to energy efficiency programs. This risk will be mitigated by offering a variety of programs addressing key customer classes and market segments within the customer classes. There are programs for each customer class and subprograms for market segments within the customer class. The programs allow both itemized and customized solutions in terms of measures for commercial and industrial sectors. Comprehensive solutions are encouraged. Performance risk is further mitigated through regular reporting and timely management to identify and resolve issues through the PMRS as described in Section 5. CSP payments as well as incentive reservations and payments are facilitated through PMRS which provides for real-time management of program incentives and progress towards goals. Key performance indices will be created collaboratively between Duquesne Light and its selected CSP for tracking to occur no less than annually.

Technology risk refers to the possibility that energy conservation measures will not perform as well as expected in achieving expected savings. The risk is mitigated by designing programs to foster the installation of proven technologies for the specific energy conservation measure. The program design allows for certain technologies and not others. However, advanced technologies will be encouraged where greater energy savings and cost-effectiveness are expected. The risk is further mitigated by QA/QC performed by Duquesne Light or its implementation contractor as well as activities in EM&V to identify and resolve technology performance concerns.

³³ Performance risk is the risk that, due to design or implementation flaws, the program does not deliver expected savings. Technology risk is the risk that technologies targeted by a program fail to deliver the savings expected. Market risk is the risk that customers, or other key market players (e.g., contractors), choose not to participate in a program. Evaluation risk is the risk that independent EM&V will, based on different assumptions, conclude that savings fall short of what the implementers have estimated.

Market risk refers to the ability to recruit sufficient participants for the programs. Mitigation of market risk is pursued through efforts by Duquesne Light, CSPs, and trade allies to encourage participation by end-use customers. Where barriers to information, technical assistance and financial incentives are identified as continuing issues, adjustments to program designs have been and will continue to be considered to improve participation levels. Market risk is being mitigated during this process of planning and filing for program approval. In Phase IV dialogue with large customers continued and thoughts associated with the Phase V design are included in the proposed programs.

Evaluation risk refers to the possibility that energy savings results are open to question. Mitigation of this risk is achieved by an open and transparent planning process for EM&V. Programs are planned and implemented in a manner to support verification and ensure availability of required evaluation data. The plan should be based on policies and procedures that are widely accepted in the discipline. The risk is mitigated further by implementation of the plan in a collaborative manner and with careful documentation of significant deviations. Finally, issues will continue to be identified and solutions proposed where evaluation risks become real.

Duquesne Light will continue its past practice of sound QA/QC by encouraging participation of its EM&V contractor early in the project process, particularly to gain support and alignment for projects that include new technology or are particularly large or complex.

- 4.1.3. Describe how EDC plans to address human resource and contractor resource constraints to ensure that adequate personnel and contractors are available to implement the EE&C plan successfully.

Human resource constraints refer to the ability of Duquesne Light to recruit and retain qualified personnel to manage and implement the proposed programs. Duquesne Light has involved individuals within the organization in the planning process for the energy efficiency program. Several programs were specifically designed to leverage the resources of external governmental agencies and community engagement channels. Currently six positions are filled in the department at Duquesne Light. Five of these positions have been in effect since Phase I and the staffing of these positions has been consistent. From a transition from plan-to-plan standpoint, that consistency has added value to the meeting of the mandated goals. Duquesne Light can also draw on employees from other functional groups (e.g., engineering, major accounts, rates, etc.) as needed to address specialized or technical inquiries from customers.

Contractor resource constraints refer to the ability of Duquesne Light to secure sufficient support from CSPs. Duquesne Light has recruited CSPs on a competitive basis by sending requests for proposals to a significant pool of potential contractors. Prior to selecting contractors and signing agreements, Duquesne Light will confirm the ability of the CSPs to fulfill their responsibilities while adhering to the Commission approved CSP contract. RFPs are sent to the CSPs currently listed on the Commission registry as well as interested parties and this process will continue for newly approved programs.

A broader issue could be the long-term availability of qualified technicians and professionals with skills such as energy auditing, energy savings analysis, project engineering and measures installation. Duquesne Light continues to cooperate with educational institutions and training organizations to increase the supply of qualified personnel in the Pittsburgh job market. One unique strategy with long-run potential is to stimulate interest in the field for energy efficiency via programs targeted to achieve energy savings in educational facilities and in the homes of students and staff at those facilities.

- 4.1.4. Describe “early warning systems” that will be utilized to indicate progress towards the goals and whether they are likely to be met. Describe EDC’s approach and process for shifting goals and funds, as needed, between programs and adding new measures/programs.

As in prior Phases, progress toward goals will be reported on a regular basis rather than waiting until the end of the program cycle. The progress reporting process has been developed by Duquesne Light in consultation with regulatory authorities. Furthermore, CSPs are directly involved through regular reporting, documentation of issues, and development of plans to resolve issues in meeting goals.

Duquesne Light implements programs in a manner to facilitate adjustments of individual programs funds and goals in order to achieve corporate goals. Each program is managed with a total budget as well as a budget for each year of implementation. This approach allows for at least an annual review and decision on the budget for the subsequent year. Key performance indices will be created collaboratively between Duquesne Light and its selected CSP for tracking to occur no less than annually.

As further protection to help ensure funds are well managed, Duquesne Light pays for CSP performance in two steps. For applications submitted and approved by Duquesne Light, Thirty percent (30%) of the of the performance payment shall be a Project Commitment Progress Payment (PCPP) payable 30 days after a Project has progressed in PMRS system to “Pending Customer Acceptance”. The remaining up to seventy percent (70%) of the performance-based budget payment shall be a Project Installation Progress Payment (PIPP) payable 30 days after Duquesne Light’s review and approval of Project documentation and project has progressed in PMRS system to “Project Complete.”

These plans provide flexibility to Duquesne Light to re-allocate program budgets. For example, some programs may be oversubscribed so that more funds could be added to meet customer demand for participation and shifted away from programs that are undersubscribed.

New programs may be added over time to reach underserved customers and market segments. In particular, CSPs with expertise and experience in certain market segments may be recruited to address specific opportunities.

Similarly, new technologies may be encouraged as programs are implemented. Duquesne Light is open to offering incentives for new technologies, whether as an existing program, new program or sub-program.

Finally, Duquesne Light expects to file as required with regulatory authorities when considering significant adjustments to programs or adding new programs and new technologies.

- 4.1.5. Provide implementation schedules with milestones. Describe the status of CSP solicitations and transition plans for programs or sections that change CSPs from Phase IV to Phase V.

RFPs have been sent for all except one and contracts are being negotiated. See Section 12, Charts 1 through 4 for implementation schedules and milestones.

- 4.1.6. Provide a brief overview of how stakeholders will be engaged throughout Phase V. Describe how low-income communities and other marginalized populations will be represented in stakeholder engagement.

During the planning process, individual stakeholder meetings were held to discuss Duquesne Light's program plans for Phase V. Participants included and invitations were extended to regulatory parties such as Office of Consumer Advocate, Office of Small Business Advocate, Duquesne Light's Income Eligible Advisory Group ("IEAG"), lighting vendors, CSPs, EM&V contractor, gas distribution companies, and CAUSE PA.

During Phase V, Duquesne Light plans to hold stakeholder meetings to provide updates as needed and maintain ongoing dialogue with partnerships established during the planning of Phase V programs. For example, Duquesne Light and the gas distribution companies will continue to work together to encourage participation beyond the current Smart Comfort low-income program by holding IEAG meetings in conjunction with other scheduled stakeholder meetings to facilitate efficiency in time and travel. In addition, Duquesne Light agrees that it will seek input from IEAG on marketing materials to income eligible or marginalized populations. Furthermore, DLC will conduct a stakeholder meeting with the Housing Alliance of Pennsylvania, PHFA, other interested affordable housing trade groups, and other interested stakeholders in Phase V to coordinate and tailor the measures targeted in the development of affordable housing opportunities. Additionally, a data sharing partnership is being explored between the PA DEP, Resource Innovations, EDCs and others to streamline data flow and expedite braided incentive processing.

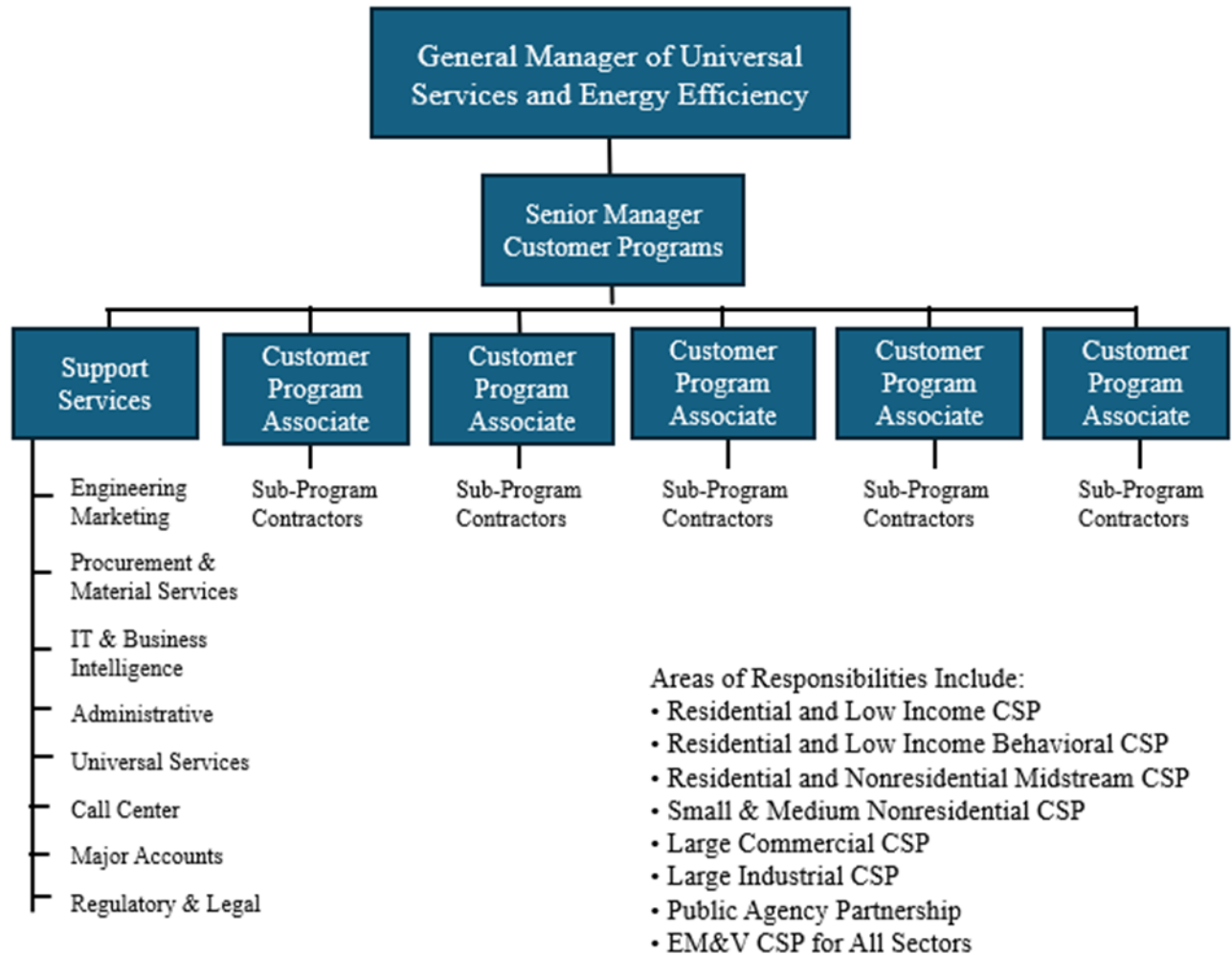
Opportunities for increased coordination with CBO's, other weatherization, energy efficiency, or housing remediation assistance programs will be discussed at IEAG meetings and IEAG recommendations will be considered in good faith.

Based upon input from NGDCs, Duquesne Light and its non-residential CSP(s) will hold additional stakeholder meetings after plan approval to discuss the logistics around continued partnership with the NGDCs to increase awareness of rebate opportunities under the Phase V plan.

4.2. Executive management structure:

- 4.2.1. Describe EDC 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 Quality Assurance/Quality Control (QA/QC). Include EDC organization chart for the management team responsible for implementing EE&C plan.

Energy efficiency is implemented under customer programs at Duquesne Light and is housed within the customer service department under the customer experience function. The department's size and function are driven by the portfolio of programs offered. The size and structure also reflect the use of contractors and subcontractors. The organization is headed by one senior manager who reports to the General Manager of Universal Services and Energy Efficiency. The senior manager is supported by several sector or segment specific customer program associates. There also is support staff for functions to include engineering, marketing, IT and business intelligence, universal services, regulatory, legal, major accounts and contract management. The organizational chart pictured below represents the structure of the organization to implement the energy efficiency and conservation plan.

Figure 6: Customer Programs Organizational Chart

Each customer program associate is responsible for overall program management, including planning, reporting progress on program metrics, internal communication, external communication, budgeting and financial management. The customer program associate will call upon staff support for assistance within the energy efficiency program. Support for the programs is available for procurement and contract management, marketing, and data tracking and reporting. Additionally, quality assurance and quality control functions performed by engineering and other support staff will support the customer program associate.

CSPs are expected to provide a quality control plan. The plan provides quality control on projects, regulatory compliance processes and performance auditing. The plan allows Duquesne Light to access files, data and related program operating information. The plan is designed to minimize customer service issues, protect confidential information and prevent duplicate applications for incentive payments.

- 4.2.2. Describe approach to overseeing the performance of CSPs and other contractors and how they can be managed to achieve results within budget and ensure customer satisfaction.

Contractors and implementers of programs are subject to detailed planning requirements. The detailed plans include tasks, milestones, schedules, budgets, metrics of performance and personnel assignments. Regular reports on progress are required with sufficient information to allow the identification of issues and planning for improvements. Each contractor is subject to specific policies and procedures to guide their activities. Hard copy and/or electronic documentation methods may be required as appropriate. Regarding customer satisfaction, contractors and implementers are expected to foster and participate in obtaining feedback from their clients; results will be provided to Duquesne Light, whether directly or through a third party.

- 4.2.3. Describe basis for administrative budgets and the proposed approach to accounting for EDC staff time who manage the EE&C plan.

The EE&C Plan budget may be defined broadly into two components: (1) incentive costs and (2) all other costs excluding incentives, termed administration costs or “Admin.” Admin may be broken into two parts, Program Admin and Portfolio Admin.

Program Admin: Program Admin includes those direct costs to program implementation. For programs implemented by CSPs, Program Admin is paid under the terms of discrete implementation contracts that may include minimal start-up costs and other fees but are primarily paid based on performance \$/annualized kWh savings. Program Admin performance payments are derived based on historical implementation costs and market-based responses to competitive solicitations.

Portfolio Admin: Portfolio Admin is comprised of cost to implement the EE&C Plan, generally referred to as a “Portfolio” of programs. These costs are for cost elements that do not vary by program but are common to all programs. Portfolio Admin costs include EDC labor, overarching marketing costs; tracking system, data management and communication costs; program measurement costs, quality assurance, and other implementation services such as the cost to respond to requests by the Commission and its SWE. The basis for these costs was initially benchmarked to programs in other states, now based on historical activity within the Commonwealth. Portfolio Admin is estimated at 10% of the EE&C Plan budget.

4.3. Conservation Service Providers (CSPs):

- 4.3.1. Provide detailed justifications for why the EDC did or did not choose to use a CSP to perform specific EE&C plan functions. Identify whether the EDC or its CSP(s) will use Community Based Organizations (CBOs) to deliver its Act 129 programs and describe the expected roles(s) for CBOs within the broader CSP strategy.

Duquesne Light issued six RFPs for Phase V servicing residential, non-residential customers, behavioral programs and EM&V. CSP registration on the PA PUC Act 129 CSP Registry is

required to contract services in excess of 10% of the Plan budget, and as such, is a requirement in these solicitations. Therefore, all directly contracted implementers evaluators or service providers whose compensation exceeds 10% the Phase V EE&C Plan budget will be registered CSPs. Duquesne Light examined in detail the programmatic functional tasks required and the best fit for CBO partners to be involved in program implementation. LIEEP will engage a range of CBOs to enroll and engage customers. Additionally, LIEEP will work with faith-based partners across the service territory to reach customers through trusted channels.

- 4.3.2. List any selected CSPs, describe their qualifications and basis for selection (include contracts in Appendix). If the EDC plans to forego the competitive bidding process for any CSP, describe the rationale. Confirm that the contract value of CSP contracts that are not bid competitively is less than 1% of the total plan budget (2025 IO at 226).

Duquesne Light issued an RFP for Phase V EM&V servicing residential, commercial and industrial customers. CSPs were asked to participate in a pre-bid meeting signifying their interest and were required to respond to the formal RFP. A team evaluated the responses, and selection was made based upon the firm possessing substantial qualifications in energy efficiency as it related to the particular segment under review. The selected bidder, Guidehouse, scored highest on comprehensive and achievable work plan. They are a leader in the EM&V field and have worked previously with Duquesne Light and one other EDC in the Commonwealth. The Company's contract with this CSP is being filed contemporaneously with this Plan. Contracts for the CSPs described in Section 4.3.1. will be filed at the Commission for approval. These contracts include all the work, measures, and detailed requirements for each of the program segments for which they were selected. One such CSP agreement is included as Section 13, CSP Agreement.

- 4.3.3. Describe all pending CSP solicitations for which the EDC plans to retain CSP services but has not selected the winning bidder.

It is anticipated that CSPs may be sought for the following segments:

- Residential programs
- Behavioral program
- Low-income programs
- Comprehensive residential and nonresidential programs
- Commercial sector programs
- Industrial sector programs
- Implementation services

4.4. Coordination with Other State Conservation Programs:

- 4.4.1. Describe how the EDC plans to collaborate with gas and water utility and other state or federal programs to achieve savings, detailing coordinated program management, tracking and reporting of outside funds, and implementation strategies. EDCs may claim the full gross verified savings for any EE&C project they support if they also incentivize or directly install eligible electric measures (2025 IO at 186-187).

Program marketing materials and implementation approach ensures customers are aware of other complementary incentive opportunities (e.g., IRA funds). Implementation CSP's proprietary software configured to show more opportunities for residents and address funding gaps within the home assessment report providing immediate visibility and unlocking rebate braiding or stacking.

Implementation CSPs have contract statements of work requiring, where outside monetary resources are available to participating customers, such as the federal Inflation Reduction Act Home Electrification and Appliance Rebates (formerly HEEHRA / HEAR) or Whole-House Energy Efficiency Rebates (formerly HOMES / HER), CSP will assist customer and/or Duquesne Light to complete the necessary forms for submission to the PA Department of Environmental Protection and other agency programs. Duquesne Light's tracking and reporting system is able to track external funding.

Additionally, Duquesne acknowledges the requirement for an ASHRAE Level 2 audit in order to qualify for these IRA-funded incentives. Noting the Commission's order that the EDCs only claim savings for installed measures that they incentivized or directly installed, Duquesne will evaluate contributing to the cost of these audits on a case-by-case basis. When evaluating whether, and to what extent, to offset the cost of the audit, Duquesne will take into consideration both the magnitude of savings, and likelihood of completion, of the specific project measures for which the Company could claim credit.

- 4.4.2. Discuss how the EDC will highlight the availability of multiple funding sources and provide prospective Act 129 participants information where they can learn more about external funding opportunities (2025 IO at 190).

As described above, implementation CSPs have the systems, processes and contract requirements to inform customers of available external funding. Duquesne Light's PMRS tracking and reporting system has data fields to track and report the occurrence of such "braided" incentives.

- 4.4.3. Propose a process to facilitate Alternative Energy Portfolio Standards (AEPS) registration for C&I participants of Act 129 programs to register their energy-efficiency projects and take advantage of the elevated AEC pricing. EDCs can design this support in a way that aligns with the needs of its customers and treat the cost of AEPS registration support as a recoverable administrative cost (2025 IO at 182-184).

Act 129 energy efficiency measures may qualify for Tier I and/or Tier II Alternative Energy Credits under AEPS Act 213. Duquesne Light, and its program implementing CSPs, will provide program participants with information about AEPS credits, at the time

of program enrollment and incentive application processing. Customers will be encouraged to registration their Act 129 project with the AEPS Program to earn AEPS credits. Program customer-facing media will refer program participants to the PENNAEPS Portal.

- 4.4.4. Describe plans to address health and safety issues that arise in the delivery of Act 129 services. Identify whether any programs will provide health and safety measures or services. Discuss any plans to refer Act 129 participants that could not be treated due to health and safety issues to other program administrators.

Duquesne Light closely coordinates its Act 129 Low-Income Energy Efficiency Program (LIEEP) and its Universal Services Low-Income Usage Reduction Program (LIURP) Smart Comfort. Where LIEEP falls short of implementing health and safety measures, per se, Smart Comfort can and does install such measures. Duquesne Light uses a common contractor for LIEEP and LIURP, the visits and assessments are implemented by the same crews and coordinated with regional natural gas distribution utilities. In this way Duquesne Light ensures no customer lacks consideration and attention to health and safety measures.

- 4.4.5. Discuss strategies to collect information about dual participation to facilitate accurate reporting on braided funding opportunities and calculation of the “leverage ratio” by program. The Phase V Implementation Order defines the leverage ratio as the amount of known external funding for Phase V EE&C projects relative to the incentives issued by the Act 129 program (2025 IO at 159).

As described above in Section 4.4.1., Act 129 programs are implemented by contactors with techniques and tools to inform customers about external funding and they have contracts requiring them to do so. As stated above in both Sections 4.4.1 and 4.4.2, the PMRS tracking system is capable of tracking such outside incentives. If these outside incentives manifest, Duquesne Light will track them, calculate the ratio of outside-to-inside program incentives, and report the result as a “leverage ratio.”

5. Reporting and Tracking Systems³⁴

(Objective of this section is to provide detailed description of reporting and the critical data management and tracking systems that EDCs need in order to implement programs and which Commission, and its statewide EE&C Plan Evaluator, need to access.)

5.1. Indicate that the EDC will provide semiannual and annual reports as prescribed in the June 18, 2025 Implementation Order.

Duquesne Light's Program Management and Reporting System (PMRS) provides information reported to the Commission's appointed Act 129 EE&C Statewide Evaluator (SWE). Program activity reports are provided in form and format specified by the SWE pursuant to SWE semiannual, annual and numerous ad hoc data requests. Examples are provided below.

Figure 7: Data Elements for Residential Program Tracking Data

Data Point	Required Field Name	Format	Notes
Operating Company	EDC	Text	Name of EDC
Program Year	YEAR	Numeric	Program Year that savings will be claimed
Program Quarter	QUARTER	Numeric	Quarter that savings will be claimed
Project Number	PROJECTNUM	Text	Unique identifier for the program participant. A count of the distinct values of this field will generally equal the EDC reported participant count for the quarter
Measure Number	MEASURENUM	Text	Unique identifier for the record in database
Program Name	PROGRAM	Text	Name of program in EE&C plan that savings accrue to
Sub-Program Name	SUBPROGRAM	Text	Initiative within program that savings belong to
Sector Name	CUSTSEGMENT	Text	Residential or Residential Low-Income
Service Zip Code	SERVICEZIP	Numeric	Postal code of service address

³⁴ This Section may be modified if the Commission's statewide EE&C Plan Evaluator develops further reporting and tracking systems that are approved by the Commission.

Data Point	Required Field Name	Format	Notes
Premise Type	PREMISETYPE	Text	SF-Attached, SF-Detached, MF, Manufactured, etc.
Measure Category	MEASURECATEGORY	Text	General category measure belongs to (End-use, technology etc.)
Measure Name	MEASURENAME	Text	Specific name of measure
Measure Lifetime	MEASURELIFE	Text	EUL of measure
TRM Measure	TRMMEASURE	Boolean	Equal to 1 if savings are calculated using a TRM protocol, zero otherwise
TRM Measure Number	TRMMEASURENUM	Text	Protocol in the 2026 PA TRM. Null for non-TRM measures
Quantity	QTY	Numeric	Number of units installed or rebated
Quantity Units	QTYUNIT	Text	Description of the unit of measurement or the QTY field (lamps, tons, square feet, etc.)
Installation Date	INSTALLDATE	MM/DD/YYYY	When the measure was installed and operable
Recorded Date	RECORDDATE	MM/DD/YYYY	Date the savings were recorded in the system of record
Rebate Paid Date	REBATE DATE	MM/DD/YYYY	When the rebate check was issued to the participant
Reported Energy Savings	REPORTEDKWH	Numeric	Total reported energy savings for the measure (equal to per-unit savings multiplied by # units)
Reported Demand Savings	REPORTEDKW	Numeric	Total reported peak demand savings for measure
Rebate Amount	REBATEAMOUNT	Numeric	Total incentive payment associated with measure

Figure 8: Data Elements for Upstream Lighting Program Tracking Data

Data Point	Required Field Name	Format	Notes
Operating Company	EDC	Text	Name of EDC
Program Year	YEAR	Numeric	Program Year that savings will be claimed
Program Quarter	QUARTER	Numeric	Quarter that savings will be claimed
Measure Number	MEASURENUM	Text	Unique identifier for the record in database
Program Name	PROGRAM	Text	Name of program in EE&C plan that savings accrue to
Sub-Program Name	SUBPROGRAM	Text	Initiative within program that savings belong to
Manufacturer	MANUFACTURER	Text	Name of measure manufacturer
Distributor	DISTRIBUTOR	Text	Distributor name, address, telephone, email
Measure Lifetime	MEASURELIFE	Text	EUL of measure
Measure Name	MEASURENAME	Text	Specific name of measure (usually qualitative description such as “13W A-line CFL” or “10W BR30 Dimmable”)
Measure Shape	MEASURESHAPE	Text	Bulb shape (e.g., spiral, A-line, flood/reflector, candelabra, etc.)
Measure Type	MEASURETYPE	Text	Technology (i.e., CFL, LED, etc.)
Measure Wattage	MEASUREWATTS	Numeric	Bulb / fixture wattage
Measure Lumens	MEASURELUMENS	Numeric	Bulb lumen range
Measure Features	MEASUREFEATURE	Text	Other specialty features (e.g., color, non-medium screw base, Wi-Fi-enabled, etc.)
Model Number	MODELNUM	Alphanumeric	Model number
SKU Number	SKUNUM	Alphanumeric	SKU number

Data Point	Required Field Name	Format	Notes
TRM Measure	TRMMEASURE	Boolean	Equal to 1 if savings are calculated using a TRM protocol, zero otherwise
TRM Measure Number	TRMMEASURENUM	Text	Protocol in the 2026 PA TRM Null for non-TRM measures
Quantity	QTY	Numeric	Total number of units of products sold
Quantity Units	QTYUNIT	Text	Description of the unit of measurement for the QTY field (e.g., packs, bulbs, watts, etc.)
Pack size	PACKSIZE	Numeric	Number of bulbs in pack
Recorded Date	RECORDDATE	MM/DD/YYYY	Date the savings were recorded in the system of record
Invoice Number	INVOICENUM	Numeric	Invoice number under which the product was charged to the EDC or implementation contractor
Invoice Submission Date	INVOICEDATE	MM/DD/YYYY	Date invoice submitted by partner
Rebate Paid Date	REBATE DATE	MM/DD/YYYY	When the rebate check was issued to the partner
Energy Savings Unit Basis	EESAVINGSUNITS	Text	Basis for energy savings, e.g., per bulb
Reported Energy Savings	REPORTEDKWH	Numeric	Total reported energy savings for the measure (equal to per-unit savings multiplied by # units)
Demand Savings Unit Basis	DRSAVINGSUNITS	Text	Basis for demand savings, e.g., per bulb
Reported Demand Savings	REPORTEDKW	Numeric	Total reported peak demand savings for measure
Retail Price	RETAILPRICE	Numeric	Original retail price or MSRP of product
Rebate Amount	REBATEAMOUNT	Numeric	Total incentive payment associated with measure

Data Point	Required Field Name	Format	Notes
Rebate Unit Basis	REBATEUNIT	Text	Basis for rebate, e.g., per bulb, per pack, etc.
Rebated Price	REBATEDPRICE	Numeric	Rebated price of product
Retailer Location	RETAILLOC	Text	Retailer location (address of store, not of headquarters)

Figure 9: Data Elements for Non-Residential Program Tracking Data

Data Point	Required Field Name	Format	Notes
Operating Company	EDC	Text	Name of EDC
Program Year	YEAR	Numeric	Program Year that savings will be claimed
Program Quarter	QUARTER	Numeric	Quarter that savings will be claimed
Project Number	PROJECTNUM	Text	Unique identifier for the program participant. A count of the distinct values of this field will generally equal the EDC reported participant count for the quarter
Measure Number	MEASURENUM	Text	Unique identifier for the record in database
Program Name	PROGRAM	Text	Name of program in EE&C plan that savings accrue to
Sub-Program Name	SUBPROGRAM	Text	Initiative within program that savings belong to
Sector Name	CUSTSEGMENT	Text	Small C&I, Large C&I, or GNI
Service Zip Code	SERVICEZIP	Numeric	Postal code of service address
Premise Type	PREMISETYPE	Text	Descriptor of type of business. Mapped to the HOU or EFLH tables where applicable.
Measure Category	MEASURECATEGORY	Text	General category measure belongs to (end-use, technology, etc.)

Data Point	Required Field Name	Format	Notes
Measure Name	MEASURENAME	Text	Specific name of measure
Measure Lifetime	MEASURELIFE	Text	EUL of measure
TRM Measure	TRMMEASURE	Boolean	Equal to 1 if savings are calculated using a TRM protocol, zero otherwise
TRM Measure Number	TRMMEASURENUM	Text	Protocol in the 2026 PA TRM. Null for non-TRM measures
Quantity	QTY	Numeric	Number of units installed or rebated
Quantity Units	QTYUNIT	Text	Description of the unit of measurement for the QTY field (lamps, tons, square feet, etc.)
Installation Date	INSTALLDATE	MM/DD/YYYY	When the measure was installed and commercially operable
Recorded Date	RECORDDATE	MM/DD/YYYY	Date the savings were recorded in the system of record
Rebate Paid Date	REBATE DATE	MM/DD/YYYY	When the rebate check was issued to the participant
Reported Energy Savings	REPORTEDKWH	Numeric	Total reported energy savings for the measure (equal to per-unit savings multiplied by # units)
Reported Demand Savings	REPORTEDKW	Numeric	Total reported peak demand savings for measure
Rebate Amount	REBATEAMOUNT	Numeric	Total incentive payment associated with measure

5.2. Program Tracking Systems:

- 5.2.1. Provide a brief overview of the data tracking system for managing and reporting measure, project, program and portfolio activities, status, and performance, as well as EDC and CSP performance and expenditures.

Duquesne Light has designed, developed, and updated a PMRS for tracking, managing and reporting measure, project, program and portfolio activities. The PMRS v2.0 is a cloud-based modern tracking and reporting system introduced and operated in Phase IV and will continue with modifications in Phase V. The PMRS supports and facilitates program operation,

management and reporting for use by program managers and sub-segment program managers. PMRS serves three primary purposes:

- 1) Enable CSPs and internal management to create and/or upload program activities
- 2) Provide the capability to review and approve activities
- 3) Provide comprehensive reporting to support Duquesne Light's internal and Commission reporting requirements, described above.

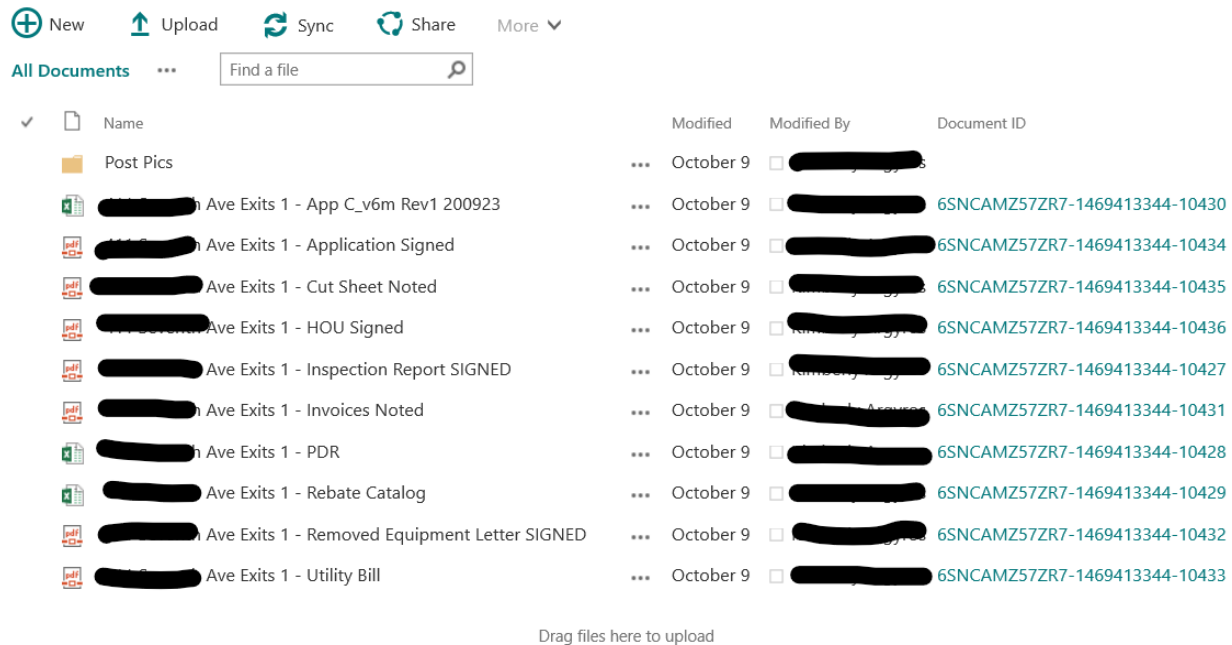
- 5.2.2. Describe the software format, data exchange format, and database structure the EDC will use for tracking participant and savings data. Provide examples of data fields captured.

PMRS is a system using a web front-end which stores data in the back end via a relational MS SQL Server database engine. Duquesne Light customer information is captured via web service calls to Duquesne Light's customer care and billing system. Once a customer's data is captured in PMRS the data is managed within that system. The database is populated by entering data by webform or by uploading the measures and financial flat files from SSPMs/CSPs. The system accepts measure and financial files in "flat file" format, such as comma separated values ("CSV") files, or in structured formats like JSON. The PMRS reads and extracts the data from these files and stores the values in the PMRS database. There are currently more than 350 unique data elements within the database; this number has increased over time in order to capture additional customer-, measure-, and project-level attributes to meet program delivery needs, SWE reporting requests and functional changes needed for Phase V. PMRS uses a custom reporting engine to produce reports from the database. Reports and supporting data for Commission review and audit are provided in hard copy as well as published for download through SharePoint and/or the system's reporting interface. In preparation for Phase V, Duquesne Light is updating its current PMRS to incorporate additional, API-based mechanism of data import and export.

- 5.2.3. Describe how CSPs will integrate with the tracking system and the procedures to ensure the upload and exchange of data from CSPs to the EDCs is sound.

CSPs will use a mixture of webforms, flat-file uploads, and web APIs to integrate with PMRS for the purposes of program activity reporting. In addition to fully automated validation of input variables (both in terms of scope and content of variables), there are several explicit approval actions that occur during the project development and review process. After loading data, CSPs review the individual measures and the project summary before submitting the project for approval. Duquesne Light program managers then review the project, approving both the measures and the overall project while comparing the data with supporting documentation. The combination of input data validation and several rounds of review ensure that Duquesne's tracking system data is sound.

The reporting capabilities of the PMRS also support robust review and analysis of program activity data. Data elements tracked in PMRS address customer data, customer contact data, project and measure data; as well as financial rebate, CSP performance payment data, and measure/project (TRC) cost effectiveness screening. The following are illustrative

Figure 12: SharePoint Screenshot – Project Support Files

- 5.2.4. Indicate that the EDC will fulfill all quarterly and annual data requests issued by the Commission and its SWE. Describe the level of access and mechanism for access for Commission and its SWE.

Duquesne Light will fulfill all quarterly and annual data requests issued by the Commission and its statewide evaluator. Measure-level project data will be available on-demand through the PMRS reporting interface. Additional project supporting documentation will be supplied on request through a secure file exchange mechanism (SharePoint). The reporting system can provide specialized reports if requested by SWE or the Commission's Bureau of Technical Utility Services ("TUS") once the phase begins. Access to SharePoint and PMRS can be provided to TUS and SWE as requested.

- 5.2.5. Describe the cybersecurity procedures the EDC will use to protect the personally identifiable information of program participants.

Duquesne Light takes cybersecurity, and the security of its customers' information, very seriously. Data files containing customer information are encrypted both in transit and at rest when exchanged with the Company's CSPs. Access to Duquesne Light's tracking system requires two-factor authentication (passkey or authenticator app), is protected by Microsoft Defender for Cloud, and excludes system access from users outside of the United States. Additionally, the system supports role-based access ensuring that users only have access to customer and project information that is relevant to their role within the EE&C program.

The web interface for the Company's tracking system is secured using industry standard SSL encryption. Duquesne Light's tracking system utilizes column-level encryption to protect personally identifiable information.

6. Quality Assurance and Evaluation, Measurement and Verification

(Objective of this section is to provide detailed description of how the EDC's quality assurance/quality control, verification and internal evaluation process will be conducted and how this will integrate with the statewide evaluation activities)

6.1. Describe overall approach to quality assurance and quality control.

EE&C program QA/QC is incorporated into program planning and implementation as described below:

Program Planning: Program target markets and measure content are based on an energy efficiency potential forecast that is a systematic and comprehensive inventory of regional efficiency gain opportunities. Program approaches to deliver identified energy efficiency services are developed using benchmarked program approaches and best practices, tailored to Duquesne Light regional needs and opportunities.

Program Implementation: All CSPs under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to provide a Program Management Plan ("PMP"). The PMP presents the program rationale, assumptions, approach, processes, and other key material in an integrated form. Duquesne Light staff will monitor the PMP as well as the KPI to hold the CSPs accountable for delivery.

The PMP addresses the following key sections:

- Program overview and assumptions.
- Program policies and procedures.
- Production plan.
- Marketing plan.
- Technical specifications.
- Performance metrics and reporting.
- Quality assurance plan.
- Data management plan.
- Invoice and measure reporting tools.
- Appendices:
 - Program forms.
 - Marketing materials.
 - Subcontractor contracts.

- 6.2. Describe procedures for measure and project installation verification, quality assurance and control, and savings documentation.

Procedures for Project Review, Approval and Processing

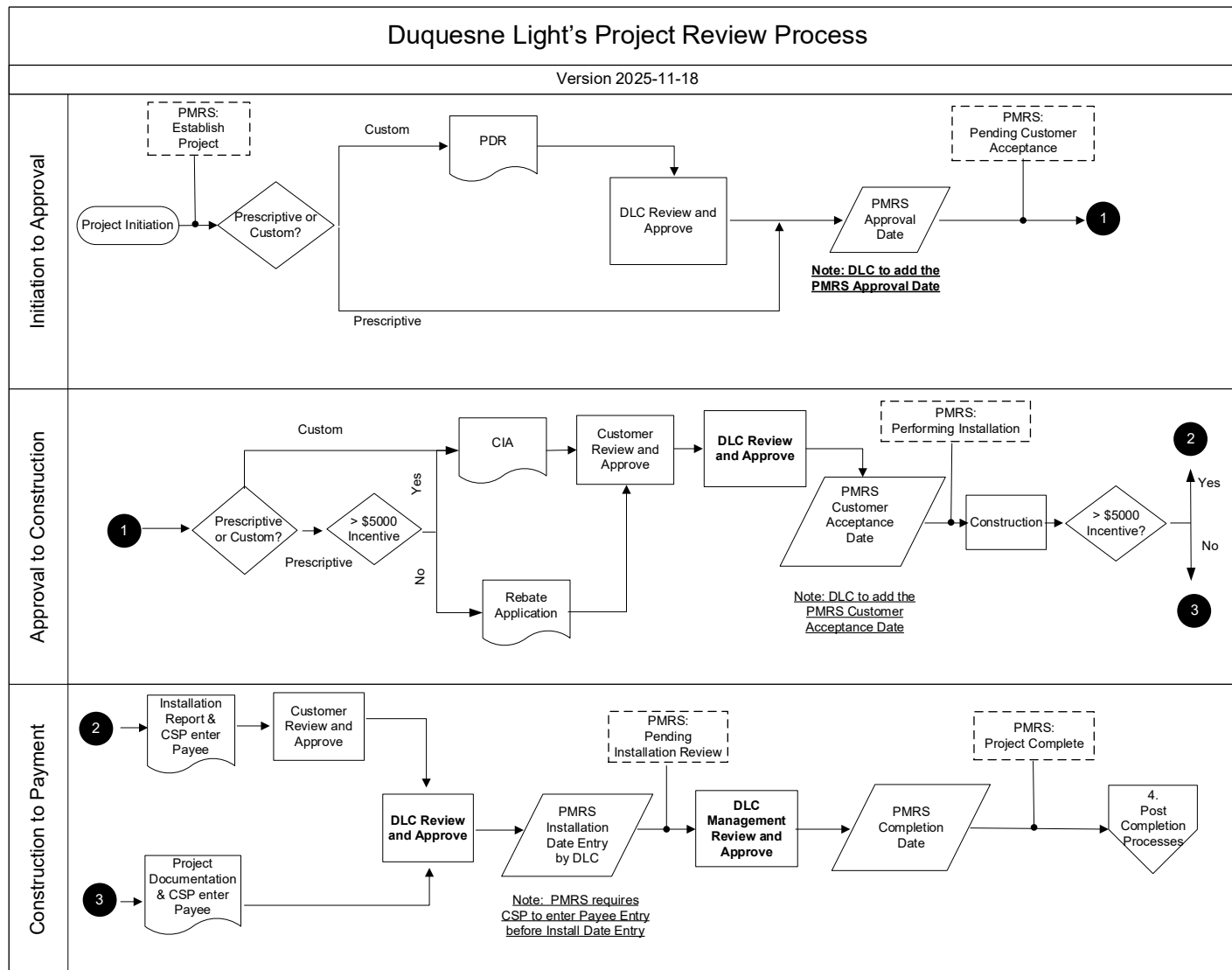
Procedures are in place to ensure prospective projects receive appropriate and consistent review prior to approval and incentive payment processing.

Residential incentive application processing is accomplished by a fulfillment contractor or a contracted CSP. This is comprised of verification to ensure the customer is a Duquesne Light customer, the product information is correct, the product is eligible under the program to receive incentives, and that invoices corroborate product identification and are dated within the eligible program period.

Commercial and industrial (C&I) project and customer incentive processing varies depending upon the type and size of the project. Project development, review and approval processes are shown below in the project review flow chart built upon the following three project phases:

- Initiation to Approval: Projects are established in PMRS. If the prospective project is a custom measure project, a Project Description Report (PDR) is required. If the project is approved for advancing, Duquesne Light approves the project in PMRS, and the project is advanced to the participating customer for acceptance.
- Approval to Construction: Depending upon project type (prescriptive or custom) and amount of the incentive payment a Customer Incentive Agreement (CIA) or Rebate Application is required. A CIA or Rebate Application is presented to the customer for approval. Duquesne Light or contracted CSP reviews and confirms customer acceptance and enters the Customer Acceptance Date into PMRS. The project is advanced in PMRS to “Performing Installation.”
- Construction to Payment: If the incentive amount is greater than \$5,000, an installation report, customer review and approval is required; otherwise, project documentation is advanced to Duquesne Light and payee information is populated in PMRS. Duquesne Light reviews for approval submitted Installation Reports and other project documentation. Pending successful management review, the completion date is entered into PMRS and the customer incentive payment is prepared.

Figure 13: Project Review Process



Duquesne Light reviews project file content for completeness and accuracy. If the project is composed of prescriptive measures, savings calculations are verified to be consistent with current TRM requirements. If the project is comprised of custom measures, the project file is reviewed to ensure a measurement and verification plan has been developed and adhered to and that the project file contains all applicable engineering reports, savings measurements, and cost documentation. The following is a working document used for reviewing project file content:

Figure 14: Project File Review List**PROJECT FILE REVIEW LIST****Program Name:****Project No:***One of the following are required from each section below (varies by implementer and project scope):***Customer Enrollment**

- Rebate Application
- Customer Incentive Agreement
- Customer Signed Project Package
- Memorandum of Understanding

☐
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Project Definition

- Project Description
- Electric bills/Audit Report/Studies
- Equipment Inventory (baseline)
- Equipment Inventory (retrofit)
- Savings calculations (Appendix C or Appendix D)
- Cost Estimates
- TRC Screening

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Installation Report

- Site inspection documentation (reports/pictures)
- Cost documentation (invoices/purchase orders/supplier quotations)
- Specification sheets
- Other (Vendor provided installation verification)

☐
☐
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☐
Measurement & Verification

- PA TRM Algorithms & Inputs
- Pre- and Post-measurement
- Calibrated Simulation
- HOU
(Measure Specific)

☐
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☐
Memorandum & Correspondence
☐
Notes:

Evaluation Measurement and Verification: Projects and measure reported savings are verified pursuant to the Duquesne Light Evaluation Measurement and Verification (EM&V) Plan. The EM&V Plan ensures customer projects are verified according to a consistent and systematic process that is consistent with the Statewide Evaluator's (SWE) Audit Plan and Evaluator's Framework for Pennsylvania Act 129 Energy Efficiency and Conservation Programs (Audit Plan). The Duquesne Light EM&V Plan specifies sample plans as well as applicable verification rigor consistent with the Audit Plan and is vetted with, and approved by the SWE.

6.3. Describe process for collecting and addressing participating customer, contractor and trade ally feedback (e.g., suggestions and complaints).

All CSPs under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to perform customer feedback surveys. The CSP contracts will be submitted to and approved by the Commission. For contractor implemented programs, customers are provided Duquesne Light direct contact information along with an open solicitation for feedback and comments.

Depending upon program target markets, would-be providers of program implementation are evaluated, in-part, based on their ability to engage and leverage trade associations and contractor networks to promote energy efficient technologies and practices. Active and direct engagement of customers, contractors and trade associations has and will continue to characterize Duquesne Light's EE&C program planning and implementation.

6.4. Describe any planned market and process evaluations and how results will be used to improve programs.

Process evaluation methods, research objectives, timing and frequency, quality control and evaluation components are provided under Section 3 of Duquesne Light's Phase IV SWE approved EM&V Plan. The Phase V EM&V Plan is not available at this time, but Duquesne Light anticipates similar treatment and structure as seen in prior phases. The primary research issues center around assessing program design and operation. Specific researchable issues are briefly listed below:

- Document and review program operations (e.g. Program Management Plans) to provide baseline description of program operations and management to compare design and operational practices with the program theory.
- Design and utilize interview and survey techniques to describe and assess program operations, which can be compared to original design intent, and to measure participant satisfaction and program performance, which can be analyzed to identify gaps between program goals and results.
- Identify and recommend changes in a program's operational procedures or systems that can be expected to improve the program's efficiency or cost-effectiveness.

Process evaluation content is incorporated into impact evaluation research activities; therefore, it is conducted in the same frequency and timing as impact evaluation activities. The results of

process evaluations are communicated with program planning and implementation team members on a semiannual basis.

6.5. Describe strategy for coordinating with the EM&V contractor and the SWE.

As in prior Phases, Duquesne Light will continue periodic SWE conference calls, participation in scheduled Program Evaluation Group meetings, response to data requests and providing SWE pre-defined semiannual and annual program reporting. In addition, biweekly calls with the EM&V contractor occur for coordination.

6.6. Describe the approach to incorporating changes to codes and standards, which may occur during Phase V of Act 129. (TRM Order at 12-14).

Duquesne Light will incorporate changes to codes and standards in accordance with the process described in the TRM Order at 12-14. In preparation for any required changes to baselines or savings methodologies, Duquesne Light will modify its incentive eligibility requirements and/or update its PMRS tracking system to properly calculate measure impacts.

7. Cost Recovery Mechanism

(Objective of this section is to provide detailed description and estimated values for cost recovery mechanism.)

- 7.1. Provide the total allowable EE&C costs based on 2% of 2006 revenue. Confirm alignment with the EDC budget limit specified in the 2025 IO Section A.2.

Figure 15: Total Allowable EE&C Costs

	2006 Total	2% of Total
DLC Revenue	\$723,299,451	\$14,465,989
EGS G&T	\$253,998,128	\$5,079,963
Act 129 Annual Budget		\$19,545,952

- 7.2. Description of plan to fund the EE&C plan in accordance with 66 Pa. C.S. 1307 and 2806.1. Plan costs include both incentives and administrative costs. Administrative costs may include capital expenditures for any equipment and facilities that may be required to implement the EE&C plan, as well as depreciation, operating and maintenance expenses, a return component based on the EDC's weighted cost of capital, and taxes (2025 IO at 231). Demonstrate that all such costs are reasonable and prudent, considering the goals of Act 129.

The Act allows all EDCs to recover on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of its plan. The Act also requires that each EDC's plan includes a proposed cost-recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307 to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. To that end, Duquesne Light has designed a surcharge and reconciliation mechanism for all customer segments. The surcharge has been designed in a manner that recovers costs of the programs from the customers who have an opportunity to participate in and receive the benefits of those programs.

- 7.3. Provide data tables (see Tables 10, 11, 12, 13 and 14).

See Section 11 for tables.

- 7.4. Provide and describe tariffs and a Section 1307 cost recovery mechanism, pursuant to the requirements of the June 18, 2025 Implementation Order at 231, that will be specific to Phase V Program costs. Provide all calculations and supporting cost documentation.

The tariff sets forth the monthly surcharge rates by customer class to recover the program budgets. Since the proposed cost recovery method is different for residential, small/medium C&I and large C&I customer classes, a formula and description of the formula is defined for each customer class surcharge. Four surcharges are defined to recover costs as reasonably close as

possible for each customer class and segment within the class, i.e. commercial or industrial customers. The formulas are in accordance with the provisions of Section 1307 cost recovery surcharge and include reconciliation of over or under collections. Duquesne will not impose any interest on over or under collections, per the Commission's Phase V Implementation Order at 248.

- 7.5. Describe how the cost recovery mechanism will ensure that measures approved are financed by the same customer class that will receive the direct energy and conservation benefits.

The Company proposes to implement four surcharges to recover costs as close as reasonably possible to the customer class receiving the benefit. The costs are first defined for the three specific customer classes – residential, commercial and industrial. Commercial and Industrial (“C&I”) customers were separated into small and medium C&I and large C&I customer segments because of the diversity in the size of C&I customers in the Company's service territory to allow for more reasonable cost recovery. Small and medium C&I customers are those customers with a monthly max billing demand of less than 300 kW over the prior 12 months. Large C&I customers are those customers with a monthly max billing demand of ≥ 300 kW over the prior 12 months. This segmentation of customers is appropriate because it aligns programs and program costs with the current tariffed rates for distribution service. C&I program costs were then assigned for recovery first based on program description (e.g. Large C&I). Duquesne adopted the use of the Peak Load Contribution demand measure in the application of its cost recovery mechanism for Large C&I customers. The tariff modification for the Phase I Plan was filed with the Commission on November 9, 2009, and was approved by a Secretarial Letter issued on November 24, 2009, at Docket No. M-2009-2093217. The Commission proposed a modification to the Large Commercial Surcharge and the Large Industrial Surcharge in an Opinion and Order dated February 2, 2010, at Docket No. M-2009-2093217. As a result of this modification, Duquesne Light implemented the rate design using a fixed customer charge to recover the administrative costs and a demand charge, using Peak Load Contribution, to recover the incentive costs for Large Commercial and Large Industrial customers. Duquesne filed a revised tariff supplement on February 22, 2010, which became effective April 1, 2010. The fixed customer charge component of the surcharge and the demand charge component of the surcharge are set forth as two separate line-item charges on the customer bill. Duquesne Light used this same surcharge structure in Phases II, III, IV and will continue this same surcharge structure in Phase V.

- 7.6. Describe how Phase V costs will be accounted for separately from costs incurred in prior phases.

Phase I Plan costs were recovered and reconciled in December 2014 at which time the Phase I surcharge in Rider No. 15 of the tariff was set to zero. Phase II Plan costs were recovered and reconciled through May 31, 2016, when the Phase II Plan ended. The Phase III Plan costs were recovered and reconciled through May 31, 2021, when the Phase III Plan ended. The Company will transition from the Phase IV cost recovery methodology to the Phase V cost recovery methodology in compliance with the Phase V Implementation Order (Order page 248). By April 30, 2026, The Company will submit a 1307e reconciliation of actual Phase IV expenses incurred

with actual Phase IV surcharge revenue received for the 12 months ending March 31, 2026. The net over- or under-recovered amount shall be reflected as a separate line item, without interest, as an e-factor adjustment of the EEC Phase V rates effective June 1, 2026. In addition, as a separate line item, the Phase V rates effective June 1, 2026, shall include projections of the: expenses to finalize any Phase IV measures installed and commercially operable on or before May 31, 2026; expenses to finalize any contracts; and other Phase IV administrative obligations. The reconciliation of actual Phase IV expenses with actual EEC Phase IV surcharge revenue for April and May 2026 shall be reconciled with EEC Phase V revenue and expense for the 12 months ending March 31, 2027. Thereafter, the Company will reconcile actual Phase V expenses incurred with actual Phase V surcharge revenue received for the 12 months ending March 31 of each year for the term of the Phase V Plan.

All costs associated with the Phase V Plan will be identified and tracked in PMRS. On or about May 1 of each year, the Company will file with the Commission its proposed Phase V surcharge rates effective June 1 of that year. The proposed Phase V surcharge rates will be designed to recover the projected program costs for upcoming Plan year and include a provision for the net over- or under- collection for the previous Plan year.

8. Cost Effectiveness

(Objective of this section is to provide detailed description of the cost-effectiveness criteria and analyses. It can refer to appendices with program data.)

- 8.1. Provide in table format the values contained in the Outputs tab of the Avoided Cost Calculator.³⁵ Additionally, a completed copy of the Avoided Cost Calculator should be provided with the filing. Discuss any sensitivities or key considerations associated with the forecast of avoided costs.

Avoided Cost Calculator Outputs for market-rate and low-income participants are provided in this section (below) and in Section 14: Avoided Cost Calculator.

See Figure 16 and Attachment A. There are no sensitivities or key considerations to discuss.

- 8.2. Confirm use of a 3% real discount rate and a 5% nominal discount rate TRC Test Order at 15).³⁶

Avoided costs are calculated by applying a 5.0% discount rate and 2.0% annual inflation rate rendering a real-discount rate rounded to 3%. See Avoided Cost Calculator, General Inputs tab provided in Section 14.

- 8.3. Explain and demonstrate how the proposed plan will be cost-effective as defined by the TRC Test specified by the Commission (TRC Test Order at 17).³⁷

Avoided electric energy and capacity costs are used for the purposes of determining the Phase V EE&C Plan cost-effectiveness and are developed in compliance with the Commission's 2026 TRC Order.³⁸ Duquesne Light developed the data inputs to support the avoided costs analysis and implemented the inputs in the Avoided Cost Calculator (ACC) as prescribed by the order and provided by the SWE. The following methodology was used to calculate energy and capacity price inputs to determine avoided costs:

Energy Prices: Forecast energy prices are provided for 20 years, in three multi-year periods consistent with the applicable TRC orders. Energy prices for each of the calendar years 2026-2029 were calculated using futures prices quoted by the New York Mercantile Exchange ("NYMEX") on the last trading day of the prompt month 3 months prior to the EE&C plan filing date. Prices for Real Time LMP Western Hub Futures contracts on September 22, 2025 are utilized in the ACC tool.³⁹ There are no traded futures contracts for the Duquesne Light Locational Marginal Pricing (LMP) zone, so costs are based on PJM Western Hub futures prices

³⁵ Available at

http://www.puc.state.pa.us/filing_resources/issues_laws_regulations/act_129_information/total_resource_cost_test.a.spx

³⁶ See 2026 Total Resource Cost (TRC) Test Order, at Docket No. M-2024-3048998, entered November 7, 2024.

³⁷ *Id*

³⁸ See *id*.

³⁹ CME NYMEX Data https://www.cmegroup.com/trading/energy/electricity/pjm-western-hub-peak-calendar-month-real-time-lmp_quotes_settlements_futures.html

with an adjustment to the DLC zone based on the PJM state of the market report for 2024/2025 for annual cost differences between Western Hub and the DLC zone. Prices are separated into Summer and Winter months and an average was calculated for the planning year (July – June, futures contract periods).

For calendar years 2026-2037, natural gas futures prices were used by applying the heat rates provided in the ACC for on peak of 11,030 BTU/kWh and for off peak of 7,596 BTU/kWh⁴⁰ to the applicable the natural gas price. Gas prices are a blend of prices quoted from Henry Hub futures prices from CME Group based on the last trading date of the prompt month 3 months prior to the EE&C filing date and natural gas prices published in the EIA 2025 AEO. The blended price phases in the EIA prices over a 7-year period with greater weight applied to the EIA price each year. Basis differentials were added to the gas price based on the average Tetco-M3 basis swap to Henry Hub futures as provide by the Intercontinental Exchange⁴¹. Prices are separated into Summer and Winter months and an average was calculated for the planning year (July – June, futures contract periods).

Energy prices for calendar years 2036-2045 utilized EIA's Annual Energy Outlook 2025 forecast price for generation for the MAAC region.⁴²

Capacity Prices: Capacity (generation) prices are based on the PJM Reliability Pricing Model (RPM) Base Residual Auction results for the Duquesne Light Zone for planning periods from an average of the 2024/2025, 2025/2026 and 2026/2027 adjusted net zonal load price. The last planning period result was escalated through 2045 using the inflation rate of 2% as provided in the tool.⁴³

⁴⁰ Phase V Avoided Cost Calculator, General Inputs tab.

⁴¹ TETCO M-3 basis data available at <https://www.theice.com/marketdata>.

⁴² Source: EIA AEO Mid Atlantic Natural Gas Price Forecast in Real Dollars: B.2.b.iii Page 16.

⁴³ Ibid.

**Figure 16: Duquesne Light Act 129 EE&C Plan Phase V Avoided Costs
For Non-Low-Income Program Activity**

PA ACT 129 Program Year	Year	DLC Zone Summer (\$/MWh)		DLC Zone Winter (\$/MWh)		DLC DLC Zone Shoulder (\$/MWh)		DLC Generation Capacity (\$/kW/year)		DLC Transmission Capacity (\$/kW/year)		DLC 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	2026	\$88.30	\$59.27	\$91.75	\$80.40	\$74.35	\$63.24	\$72.59	\$72.59	\$61.07	\$0.00	\$59.28	\$0.21	\$3.92	Segment 1
19	2027	\$98.32	\$68.77	\$106.29	\$94.75	\$85.26	\$73.51	\$46.05	\$46.05	\$62.54	\$0.00	\$64.43	\$0.12	\$4.01	
20	2028	\$106.23	\$76.51	\$115.43	\$103.05	\$92.17	\$80.32	\$46.97	\$46.97	\$64.06	\$0.00	\$69.93	\$0.18	\$3.88	
21	2029	\$105.44	\$76.48	\$115.23	\$102.83	\$91.14	\$79.49	\$48.05	\$48.05	\$65.61	\$0.00	\$76.21	\$0.18	\$3.79	
22	2030	\$71.85	\$43.16	\$80.10	\$69.01	\$58.32	\$47.58	\$35.61	\$35.61	\$67.20	\$0.00	\$81.30	\$0.29	\$3.63	
23	2031	\$71.72	\$43.12	\$78.58	\$68.02	\$57.49	\$47.06	\$36.47	\$36.47	\$68.83	\$0.00	\$83.27	\$0.29	\$3.55	Segment 2
24	2032	\$71.96	\$43.33	\$80.84	\$69.62	\$58.06	\$47.50	\$37.36	\$37.36	\$70.49	\$0.00	\$85.29	\$0.30	\$3.62	
25	2033	\$74.47	\$45.12	\$84.82	\$72.41	\$60.50	\$49.23	\$38.26	\$38.26	\$72.20	\$0.00	\$87.35	\$0.31	\$3.86	
26	2034	\$77.20	\$47.04	\$89.23	\$75.50	\$63.33	\$51.23	\$39.19	\$39.19	\$73.95	\$0.00	\$89.47	\$0.32	\$4.14	
27	2035	\$79.69	\$48.81	\$93.06	\$78.18	\$65.96	\$53.09	\$40.14	\$40.14	\$75.74	\$0.00	\$91.63	\$0.32	\$4.38	
28	2036	\$81.77	\$50.29	\$96.25	\$80.43	\$68.03	\$54.57	\$41.11	\$41.11	\$77.57	\$0.00	\$93.85	\$0.33	\$4.58	Segment 3
29	2037	\$81.71	\$50.30	\$95.87	\$80.22	\$67.96	\$54.56	\$42.10	\$42.10	\$79.45	\$0.00	\$96.13	\$0.34	\$4.55	
30	2038	\$81.12	\$49.95	\$94.21	\$79.13	\$67.29	\$54.16	\$43.12	\$43.12	\$81.37	\$0.00	\$98.45	\$0.35	\$4.46	
31	2039	\$80.72	\$49.73	\$93.00	\$78.35	\$66.84	\$53.90	\$44.17	\$44.17	\$83.34	\$0.00	\$100.84	\$0.36	\$4.38	
32	2040	\$81.14	\$50.07	\$93.77	\$78.94	\$67.28	\$54.27	\$45.24	\$45.24	\$85.36	\$0.00	\$103.28	\$0.36	\$4.41	
33	2041	\$82.44	\$51.02	\$96.64	\$80.97	\$68.69	\$55.29	\$46.33	\$46.33	\$87.43	\$0.00	\$105.78	\$0.37	\$4.55	
34	2042	\$83.87	\$52.07	\$99.83	\$83.22	\$70.24	\$56.41	\$47.45	\$47.45	\$89.55	\$0.00	\$108.34	\$0.38	\$4.71	
35	2043	\$85.35	\$53.14	\$103.11	\$85.54	\$71.83	\$57.57	\$48.60	\$48.60	\$91.71	\$0.00	\$110.96	\$0.39	\$4.87	
36	2044	\$86.35	\$53.90	\$105.26	\$87.08	\$72.92	\$58.38	\$49.78	\$49.78	\$93.94	\$0.00	\$113.65	\$0.40	\$4.97	
37	2045	\$87.13	\$54.49	\$106.85	\$88.24	\$73.75	\$59.01	\$50.99	\$50.99	\$96.21	\$0.00	\$116.40	\$0.41	\$5.05	

Figure 17: Duquesne Light Act 129 EE&C Plan Phase V Avoided Costs

Low-Income Sector Program Activity

PA ACT 129 Program Year	Year	DLC Zone Summer (\$/MWh)		DLC Zone Winter (\$/MWh)		DLC DLC Zone Shoulder (\$/MWh)		DLC Generation Capacity (\$/kW/year)		DLC Transmission Capacity (\$/kW/year)		DLC 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	2026	\$106.97	\$77.94	\$110.42	\$99.07	\$93.02	\$81.91	\$72.59	\$72.59	\$61.07	\$0.00	\$59.28	\$0.21	\$3.92	Segment 1
19	2027	\$117.36	\$87.81	\$125.33	\$113.80	\$104.31	\$92.55	\$46.05	\$46.05	\$62.54	\$0.00	\$64.43	\$0.12	\$4.01	
20	2028	\$125.65	\$95.94	\$134.86	\$122.47	\$111.60	\$99.74	\$46.97	\$46.97	\$64.06	\$0.00	\$69.93	\$0.18	\$3.88	
21	2029	\$125.26	\$96.29	\$135.05	\$122.64	\$110.96	\$99.30	\$48.05	\$48.05	\$65.61	\$0.00	\$76.21	\$0.18	\$3.79	
22	2030	\$92.06	\$63.37	\$100.31	\$89.22	\$78.53	\$67.79	\$35.61	\$35.61	\$67.20	\$0.00	\$81.30	\$0.29	\$3.63	
23	2031	\$92.33	\$63.74	\$99.19	\$88.63	\$78.10	\$67.67	\$36.47	\$36.47	\$68.83	\$0.00	\$83.27	\$0.29	\$3.55	Segment 2
24	2032	\$92.98	\$64.36	\$101.87	\$90.65	\$79.09	\$68.53	\$37.36	\$37.36	\$70.49	\$0.00	\$85.29	\$0.30	\$3.62	
25	2033	\$95.92	\$66.56	\$106.27	\$93.86	\$81.94	\$70.67	\$38.26	\$38.26	\$72.20	\$0.00	\$87.35	\$0.31	\$3.86	
26	2034	\$99.08	\$68.92	\$111.11	\$97.37	\$85.21	\$73.10	\$39.19	\$39.19	\$73.95	\$0.00	\$89.47	\$0.32	\$4.14	
27	2035	\$102.00	\$71.12	\$115.37	\$100.49	\$88.28	\$75.40	\$40.14	\$40.14	\$75.74	\$0.00	\$91.63	\$0.32	\$4.38	
28	2036	\$104.53	\$73.05	\$119.01	\$103.19	\$90.79	\$77.33	\$41.11	\$41.11	\$77.57	\$0.00	\$93.85	\$0.33	\$4.58	Segment 3
29	2037	\$104.93	\$73.52	\$119.09	\$103.44	\$91.17	\$77.78	\$42.10	\$42.10	\$79.45	\$0.00	\$96.13	\$0.34	\$4.55	
30	2038	\$104.80	\$73.63	\$117.89	\$102.81	\$90.97	\$77.84	\$43.12	\$43.12	\$81.37	\$0.00	\$98.45	\$0.35	\$4.46	
31	2039	\$104.87	\$73.88	\$117.15	\$102.50	\$90.99	\$78.05	\$44.17	\$44.17	\$83.34	\$0.00	\$100.84	\$0.36	\$4.38	
32	2040	\$105.78	\$74.71	\$118.40	\$103.57	\$91.92	\$78.90	\$45.24	\$45.24	\$85.36	\$0.00	\$103.28	\$0.36	\$4.41	
33	2041	\$107.57	\$76.15	\$121.77	\$106.10	\$93.82	\$80.42	\$46.33	\$46.33	\$87.43	\$0.00	\$105.78	\$0.37	\$4.55	
34	2042	\$109.50	\$77.70	\$125.46	\$108.85	\$95.87	\$82.04	\$47.45	\$47.45	\$89.55	\$0.00	\$108.34	\$0.38	\$4.71	
35	2043	\$111.49	\$79.28	\$129.25	\$111.68	\$97.97	\$83.71	\$48.60	\$48.60	\$91.71	\$0.00	\$110.96	\$0.39	\$4.87	
36	2044	\$113.02	\$80.56	\$131.93	\$113.75	\$99.58	\$85.04	\$49.78	\$49.78	\$93.94	\$0.00	\$113.65	\$0.40	\$4.97	
37	2045	\$114.33	\$81.69	\$134.05	\$115.44	\$100.95	\$86.21	\$50.99	\$50.99	\$96.21	\$0.00	\$116.40	\$0.41	\$5.05	

Avoided costs are applied at the measure level and are based upon individual measure estimated useful life (EUL) and energy savings time-of-use and seasonal profiles. Measure EULs are taken from the 2026 TRM. Measure energy savings profiles were taken from the Phase V Avoided Cost Calculator or modeled using annual hourly savings profiles aggregated into time-of-use periods annunciated in 2026 TRM, Volume 1, Tables 1-3 and 1-4.

Assessment of measure, project, program and ultimately portfolio cost-effectiveness requires development of both benefits (described above) and costs. The Total Resource Cost (TRC) test used to determine cost-effectiveness incorporates utility program implementation or administration costs, as well as measure costs. Projected administration costs are provided in Tables 1, 7, 10, 11, 13 and 14. The measure costs included in TRC results are summarized in Tables 8. Consistent with the TRC Order, measure costs are either referenced to the California Database of Energy Efficient Resources (DEER), the SWE incremental cost database, or identified measure cost studies.⁴⁴ These costs are reported on an annual basis in compliance with SWE prescribed EDC annual reporting requirements.

8.4. Provide TRC data tables on a gross and net TRC basis. See Section 11 Tables 14 - Gross and Table 14 – Net.

See Section 11 for Table 14 – Gross and Table 14 - Net.

⁴⁴ Ibid.

9. Plan Compliance Information and Other Key Issues

(The objective of this section is to have specific areas in EE&C plan where the Commission can review miscellaneous compliance items required in legislation and address key issues in EE&C plan, portfolio, and program design.)

9.1. Plan Compliance Issues.⁴⁵

- 9.1.1. Describe how the plan provides a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers in accordance with the 2025 IO.

EE&C Plan savings projections for each sector are proportionally aligned with Phase V Potential Study Tables 6, 48, 50 and 52. The forecast values themselves were changed to match the amount in the Commission's Phase V mandate. At the Tables cited above, the Potential Study states Duquesne Light's Act 129 potential as 287,700 MWh and the Commission target is 261,583 MWh.

EE&C Plan forecast measure detail is directly linked to CSP response to competitive solicitations, issued by Duquesne Light, for the design and implementation of the programs presented in this Plan. Accordingly, the measure mix was taken from proposals selected based on CSP expertise and innovation. Phase V Plan measures (see Section 11, Table 8) were reconciled with content of the 2026 Technical Reference Manual (TRM) and information provided in the SWE saturation studies and potential forecast.⁴⁶

In Duquesne Light's EE&C Plan, low-income sector targets represent the largest proportional share of sector savings since initiation of Act 129 EE programs in 2009, up from 5.3% in Phase IV to 7.2% in Phase V. Residential sector programs retain and expand successful online marketplace and midstream rebate offerings. The small-medium nonresidential sector program provides direct-installation, downstream and midstream incentives with program targets and budgets exceeding large commercial, large industrial and GNI sector programs. In Phase V, the PAPP was brought back to better serve the GNI sector. The portfolio as designed pays the greatest attention to serving Duquesne's disparate customer segments.

Program goal allocation and associated program budgets were adjusted to accommodate the Commission's Implementation Order that required segment carve-out for the low-income residential segment. Reporting requirements will be met along with specified program comprehensiveness requirements.⁴⁷ Goal allocation for the remaining customer segments was based on segment energy use, previous delivery channel strengths and weaknesses, as well as requirements to achieve mandated reductions at authorized budgets.

⁴⁵ These sub-sections may reference other chapters of the plan as they may restate what was included elsewhere in the plan and are collected here only for convenience of review.

⁴⁶ Ibid.

⁴⁷ Ibid.

- 9.1.2. Provide a statement delineating the manner in which the EE&C plan will achieve the requirements of the program under 66 Pa. C.S. §§ 2806.1(c) & (d).

The following table shows the projected cumulative portfolio and program reductions in consumption (energy) and peak period demand reduction estimated for the program year ending May 31, 2031:

Figure 18: Projected Portfolio Savings

Program	Savings MWh	Savings MW
Residential Appliance Recycling	6,126	1.145
Residential Online Marketplace	6,500	3.015
Residential Midstream Incentives	20,000	1.086
Residential Low-Income Energy Efficiency	16,932	6.265
Residential Behavioral Energy Efficiency	30,200	7.050
Residential Low-Income Behavioral Efficiency	4,200	0.890
Small-Medium Nonresidential Efficiency	76,000	11.748
Large Commercial Sector Efficiency	50,000	8.504
Large Industrial Sector Efficiency	40,000	5.329
Public Agency Partnership (GNI)	24,704	3.155
Total Portfolio	274,663	48.2

- 9.1.3. Provide a statement delineating the manner in which the EE&C plan will achieve the Low-Income requirements prescribed in the June 18, 2025 Implementation Order. Additionally, describe any EDC plans to harmonize Act 129 program delivery with Low-Income Usage Reduction Programs and other external energy efficiency, conservation, and healthy housing programs (such as the Weatherization Assistance Program).

Consistent with Act 129 and the Commission's Implementation Order, Duquesne Light's Phase V EE&C Plan contains two provisions to provide services to households at or below 150% of the federal poverty income guidelines. These provisions are: 1) to obtain a minimum of 7.2% of the total EE&C Plan consumption reduction requirements, and 2) the 7.2% low-income mandate must be achieved by programs that ONLY serve low-income populations. The EE&C Plan is constructed to comply with the Commission's requirements to omit programs capable of serving both income qualifying and non-income qualifying participants.

Duquesne Light plans to continue to utilize the same partner to administer both the Act 129 Low-Income Energy Efficiency Program and Smart Comfort – Low-Income Usage Reduction Program (LIURP). This has proven successful since Phase III. This practice ensures that low-income customers who need and want services are provided with a seamless delivery of services. The Company will also continue to work closely with the local natural gas distribution companies, community-based organizations, state weatherization agencies

and other groups working to serve this group of hard-to-reach customers. The Company will continue to target those customers on the Customer Assistance Program (CAP) with high electric usage. The CAP representative will continue to refer all customers that enroll in CAP to the partner administering the Income Eligible programs offered within both ACT 129 and LIURP. Lastly, the Company will continue to partner with the Income Eligible Advisory Group to gain insight from their expertise. This guidance will help ensure that all customers get the service they need.

The target savings for the Phase based upon the mandated target are shown in Figure 19.

Figure 19: LIEEP Projected Energy Savings

	May 31, 2031
	MWh
Mandated Reductions	261,583
Low Income Requirement	18,933
	7.2%

- 9.1.4. Describe how the EDC will ensure that no more than 2% of funds available to implement the plan shall be allocated for experimental equipment or devices. Describe any planned pilot programs in Phase V and list the key research questions and metrics that will be used to assess the viability of each pilot program.

Duquesne Light's Phase V EE&C does not contain an emerging technology pilot program. No expenses for experimental equipment anticipated.

- 9.1.5. Describe how the plan will be competitively neutral to all distribution customers even if they are receiving supply from an EGS.

Duquesne Light is under threat of punitive penalties of up to \$20 million for not achieving mandated savings targets. 67 percent of utility energy sales are provided by EGS.⁴⁸ Duquesne Light has tremendous and severe cash penalties for not achieving Commission mandates; it will not treat suboptimally customers using two-thirds of its energy throughput as it relates to program participation. Further, since the Act 129 surcharge is a distribution charge paid by all customers, including shopping customers, it is reasonable to assume they are eligible to participate since they pay into the surcharge. Given these facts it is not reasonable to assume Duquesne Light might contemplate treating "shopping" customers differently when compared to bundled service customers.

- 9.1.6. If the plan includes midstream delivery of non-residential lighting, include a description of how participating distributors will document that the replaced lighting equipment is not LED.

⁴⁸ EIA 2023 for 861 form reporting "Bundled" versus "Delivery" energy sales.

The Small-Medium Nonresidential Midstream Program, which includes lighting measures, records project and customer information. Measure installations are verified according to the Phase V evaluation framework that Duquesne Light anticipates will retain field site-verification using random sampling to meet 85% confidence and 15% precision. As a part of program enrollment, participating distributors record project information and Duquesne Light will require enrollment documentation to include baseline lighting sources. EM&V that historically includes verification of baselines, can verify baseline conditions using its interview of site-cognizant personnel and compare the results with program enrollment documentation. The baseline conditions documented by independent EM&V can incorporate into its program realization rates findings where projects were found to replace LEDs with LEDs.

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.

Previous sections of this plan describe in detail the specific manner in which the program is designed to address specific consumption profiles and respond to diverse customer needs. Since the early 1970s, utility-sponsored energy efficiency programs have developed and refined a series of approaches to effectively reduce energy consumption in the residential, commercial and industrial sectors. Critical elements to program success have been identified, tested, and replicated by utilities nationwide. All of the measures that make up the EE&C plan for Duquesne Light will draw upon the lessons learned in these other initiatives and will focus on reducing kWh and kW usage within each specific customer sector.

Duquesne Light believes that all residential approaches (mass market/rebates, home energy reports and whole home performance/retrofits) are appropriately focused on achieving long-term, sustainable energy efficiency savings. Likewise, programs focused on producing kWh and kW savings in the commercial sector will primarily achieve reductions through rebates and/or other identified funding sources, education, upstream partnerships, and direct installation of measures in customer facilities. Programs serving the industrial sector will focus on producing kWh and kW savings through rebates and/or other identified funding sources through incentives and upstream partnerships. Because the funding levels for each specific measure are evaluated on the level of savings that can be reasonably achieved over the useful life of the measure, the applicable screening methods strongly favor funding measures that provide longer-term savings.

The Plan will facilitate the selection and installation of energy efficient equipment, foster construction of energy efficient structures, and encourage and reward energy efficient behaviors.

Cost-effectiveness determination counts as benefits the present value of life cycle avoided costs. Longer measure lives yield greater life-cycle savings and associated avoided costs. The Cost-effectiveness rules penalize short life "popcorn" measures and reward long-life comprehensive sustainable measure savings. The Plan has a TRC ratio of 2.04:1, effectively demonstrating a Plan comprised of longer term, longer life measures.

9.2.2. Describe, by sector, how the EDC will address consumer education for its programs.

Effective customer education is essential to successfully implementing Duquesne Light's Phase V portfolio of EE&C programs. Comprehensive consumer marketing campaigns will generate both demand for energy efficiency measures and an increased understanding of the benefits of energy efficiency. Duquesne Light will use a wide variety of tools, channels, and techniques to ensure that it reaches its diverse customer base with appropriate customer education.

Residential low-income customers are served by two programs highly focused on customer education. LIEEP puts "feet on premises" to perform home energy assessments and engage in customer "kitchen table" talks to communicate assessment findings and educate customers on strategies to lower their electric bills. The LI-BEEP provides home energy reports, tailored to its low-income treatment groups, with sector-specific outreach and content, educating customers on low-cost, no-cost approaches to save on their electric bills. The Residential OMP informs and engages customers by directing them to energy efficient products and provides incentives to offset the incrementally higher cost of higher efficiency equipment.

Small-medium nonresidential customers receive audits and direct installation of energy efficient equipment. This underserved and under-resourced segment requires door-to-door canvassing to reach and thereby overcome barriers to participation. Midstream incentives cause distributors to stock and discount high efficiency equipment where, and at the time, customers and contractors reach out to purchase. Virtual commissioning studies high intensity energy users and enrolls them in energy action plans to lower energy costs, effectively operating entirely on customer education.

Large Commercial and Industrial customers receive on-site audits including a systematic inventory of energy savings options with cash offers to offset the cost to implement recommended measures. Large Industrial customers receive strategic energy management services where parties meet, discuss energy use, and develop an action plan to increase efficiency where measurement is based on the "whole building" impacts of equipment and operational improvements. PAPP GNI participants, execute memoranda of understanding, to create energy action plans, and commit jurisdictional agencies to study and improve their operational efficiencies and lower energy costs.

All of these activities are central to their respective program's implementation and can be characterized as customer education.

9.2.3. Describe how the EDC will provide the public with information about the results from the programs.

Since the inception of the Phase I Act 129 Plan, Duquesne Light has posted all plans and reports to the Customer Programs Energy Efficiency website where any interested party can also see the results from the programs. Participation data will include (but not be limited to) information concerning the level of customer participation, the calculated energy savings,

description of the associated environmental benefits and other significant program milestones and information.

10. Appendices

- A. Approved CSP contract(s).
- B. Calculation methods and assumptions. Describe methods used for estimating all program costs, including administrative, marketing, and incentives costs; include key assumptions. Describe assumptions and present all calculations, data and results in a consistent format.

Appendix A: CSP Services Agreement

CSP SERVICES AGREEMENT

This CSP Services Agreement, dated _____ 2025 is made by and between Duquesne Light Company (“DLC” or “Company”) and _____. (“CSP”).

WHEREAS, CSP is in the business of providing information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption services in the utility industry; and

WHEREAS, DLC is an electric distribution company (“EDC”) in Pennsylvania; and

WHEREAS, Act 129 of House Bill 2200 (“Act 129”) was signed into law by Governor Rendell on October 15, 2008, requiring each EDC to create and submit an energy efficiency and conservation plan by July 1, 2009, and the Pennsylvania Public Utility Commission (“Commission”) has developed processes and procedures for the review of EDC filings; and

WHEREAS, the Commission issued an Order at Docket number M-2025-3052826 providing for Phase V energy efficiency and conservation plans from June 1, 2026 through May 31, 2031; and

WHEREAS, CSP will provide services regarding the implementation of DLC’s EE/Conservation Plan as required by Act 129 and the Commission’s Orders; and

WHEREAS, CSP certifies that it was approved by and is a member of the Commission’s Registry of Conservation Service Providers and will maintain such registration with the Commission for the term of this Agreement; and

WHEREAS, DLC is relying upon the skill and expertise of CSP to implement the Plan and to meet the needs of DLC and to provide the services necessary for the proper and effective energy efficiency and conservation plan compliance.

NOW, THEREFORE, in consideration of the premises and of the mutual benefits and covenants contained herein, the parties hereto, intending to be legally bound hereby, agree as follows:

1. **DEFINITIONS**

“**Applicable Law**” means any applicable constitution, charter, act, statute, law, ordinance, code, rule regulation, judgment, decree, writ, order, permit, approval or the like of any Governmental Authority.

“**Company**” shall mean Duquesne Light Company.

“Company’s Site” shall mean 411 Seventh Avenue, Pittsburgh, PA 15219.

“Price” shall mean the purchase price or prices stated in Exhibit D of the CSP Agreement.

“PPUC Approval” shall mean a final decision issued by the PPUC approving the Program for the years 2026-2031, consistent with Duquesne Light’s application for the Program filed with the PPUC by November 30, 2025 and authorized by the PPUC for implementation by March 31, 2026.

“CSP Agreement” shall mean this Agreement, along with Exhibits A, B, C and D.

“Services” shall mean CSP services, Work Product and any other work performed by CSP necessary to fulfill CSP’s obligations under the CSP Agreement.

“Subcontractor” shall mean vendors, suppliers and subcontractors of any tier and any other persons or entities contracting directly or indirectly with CSP for or in regard to the CSP Agreement.

“Work” shall mean CSP services. Work Product and other work performed by Contractor as necessary to fulfill CSP’s obligations under the CSP Agreement.

“Work Product” shall mean studies, reports, evaluations, designs, drawings, procedures, specifications, plans and all other documentation and deliverables which are prepared, produced or acquired by CSP for the Work or at the request or direction of Company in connection with the Plan’s requirements for reduction in demand and consumption.

2. CONDITION-PRECEDENT CLAUSE

This CSP Agreement is not effective until PPUC Approval is issued. Within three (3) Business Days following PPUC Approval, either party may notify the other, in writing, if the PPUC approves the Program with material changes from Duquesne Light’s filed program plan that are unacceptable to that party. This Purchase Order is effective five (5) Business Days following PPUC Approval if neither party has informed the other, in writing, of unacceptable PPUC-mandated material Program changes.

3. ENGAGEMENT OF CSP; CSP’S WORK

Subject to the terms and conditions of this CSP Agreement, DLC hereby engages CSP to properly and completely design, submit and assist with the implementation of an energy efficiency and conservation plan in compliance with Act 129 of House Bill 2200. CSP shall perform the Work in a professional and workmanlike manner and with accuracy and reasonable care and skill. Specifically, the Services to be provided are shown on Exhibit A.

4. CSP’S ACKNOWLEDGMENT

CSP, by performing the Work and/or delivering the Work Product, by any performance under this CSP Agreement and/or by written acknowledgement, accepts the offer contained in this Agreement and such acceptance of the offer is expressly limited to the terms and conditions as set forth herein. Any term or condition proposed by CSP, which is different from, conflicts with or adds to any of the provisions of this CSP Agreement, shall be deemed to materially alter the

provisions of this CSP Agreement and is hereby objected to and rejected by DLC. Except as expressly provided herein, under no circumstances shall any term or condition of the CSP's sales documents or otherwise become part of this CSP Agreement.

5. PROJECT SCHEDULE

(a) CSP shall design, submit and assist with the implementation of an energy efficiency and conservation plan to meet all the needs and requirements of DLC, applicable laws and applicable standards, and to allow DLC to properly and efficiently implement a Plan as defined in the Scope and Exhibit A. Company shall be entitled to implement reasonable provisions and procedures for monitoring performance quality and rate of progress. Such is set forth in more detail in Exhibit A.

(b) (i) Except as expressly set forth herein, CSP is authorized to commence the Work and shall perform the Work in accordance with and within the time schedule contained in the project schedule attached hereto as Exhibit B (the "Project Schedule").

(ii) If at any time CSP determines that it is behind schedule or is unable to meet any milestone set forth in the Project Schedule, CSP shall, within five (5) days of its knowledge of such delay, promptly notify DLC, in writing, of any anticipated material departure from the Project Schedule and if CSP has reason to believe that a milestone or the Completion Date will not be met and shall specify in said notice corrective action planned by CSP to timely complete the Work or any portion thereof; provided, however, that such notice shall not relieve CSP of any of its obligations under the CSP Agreement or its obligations to take all actions necessary to achieve the timely and proper completion of the Work. At all times, CSP shall take such actions as may be necessary to facilitate the timely and proper completion of the Work on or prior to any applicable milestones set forth in the Project Schedule or by the Completion Date.

(iii) CSP understands and agrees that time is of the essence with respect to the dates and times set forth in the Project Schedule, including, but not limited to, the Completion Date, and for performance of the Work.

6. PRICE AND PAYMENT

The price or compensation to be paid to CSP is shown in Exhibit D. Compensation shall be performance based, and rewards are provided for achieving successful results and deductions are made for not achieving successful results, as agreed to in Exhibit D.

Unless otherwise agreed upon, statements must be submitted monthly, within 30 days after the end of a billing month. Itemized statements for services and expenses should be submitted directly to Dave Defide, Duquesne Light Company, 411 Seventh Avenue, Mail Drop 15-3, Pittsburgh, PA 15219. If any (portion) of the Work does not conform to the requirements of the CSP Agreement upon inspection by Company, a corresponding portion of the Price may be withheld by Company until the nonconformity is corrected. Invoices shall be paid within 75 days.

7. WARRANTIES

CSP represents warrants and guarantees that the Work provided under the CSP Agreement shall be: (a) provided in accordance with, and conform to, the requirements of the CSP Agreement; (b) provided in accordance with the standard of care consistent with generally accepted industry

practices and procedures in CSP's particular area of expertise; and (c) suitable for the specified purposes.

CSP represents, warrants and guarantees that it is not an affiliate of Duquesne or any other Pennsylvania EDC. If CSP should merge with a Pennsylvania EDC during the term of the CSP Agreement, then the CSP shall immediately notify Duquesne and provide for automatic termination of the CSP Agreement.

CSP represents, warrants and guarantees that it will conduct criminal background checks for all employees of the CSP that will have access to confidential customer information, enter a customer's premises or otherwise have personal contact with an EDC customer.

If, during the sixty-day period following completion of the Work, it is shown there is an error in the Work caused solely by CSP's failure to meet such standards and Company has notified CSP in writing of such error within that period, CSP shall re-perform, at no additional cost to Company, such Work as may be necessary to remedy such error.

Company shall have no liability for defects in the Work attributable to CSP's reliance upon or use of data, design criteria, drawings, specifications or other information furnished by Company.

8. OWNERSHIP RIGHTS

CSP warrants that the Work shall not infringe or misappropriate the intellectual property rights of any third parties. Company shall have exclusive use of and own title, rights and interests in and to all Work. All Work shall be considered "work made for hire."

At all times, each party shall retain all of its rights in its drawings details, designs, specifications, databases, computer software, copyrights, trade and service marks, patents, trade secrets, and any other proprietary property.

9. FACILITIES, SUPPLIES AND EQUIPMENT

To the extent that CSP's Work must be performed at Company's Site, Company shall furnish the facilities, supplies and equipment which Company determines are reasonably required for CSP to perform Work under the CSP Agreement.

10. TERMINATION

Company may terminate all or part of the CSP Agreement if CSP: performs below acceptable standards, abandons the work; becomes bankrupt or insolvent; is unable to obtain a bond, if required; assigns the CSP Agreement or subcontracts any portion thereof without Company's written consent; or otherwise breaches or fails to comply with the CSP Agreement; provided, however, that prior to such termination, Company must have notified CSP in writing of its intent to terminate the CSP Agreement and the reasons therefore, and CSP must have failed to cure such non-compliance within ten (10) days after receipt of such notice. If Company so terminates the CSP Agreement, Company may complete or contract with a third party to complete all or part of the Work, and CSP shall be liable to Company for the excess costs to complete all or such part of the Work and any other damage resulting from CSP's non-compliance or breach. Company may suspend all payments to CSP in order to protect ratepayer funds pursuant to Commission order.

Company may, at any time, also terminate by written notice all or part of the CSP Agreement due to modification of its Energy Efficiency/Conservation plan. Upon receipt of such notice, CSP shall bring the work to a prompt conclusion. Company shall pay CSP a proportionate amount of the price due to CSP for the portion of the Work completed up to the effective date of the termination plus costs necessarily incurred directly as a result of the termination, subject to Company's right to audit CSP's books and records. Such payment by Company, however, shall not exceed the total price for the Work set forth in the CSP Agreement.

In all cases, Company may require CSP to transfer title and deliver to Company any contracts, rights, goods, equipment or Work Product produced, received or acquired by CSP for the performance of the CSP Agreement.

11. INDEMNIFICATION

CSP shall defend, indemnify and hold harmless Company, its directors, officers, employees, agents, successors and assigns and customers and users of the goods, equipment and services, from and against, and shall pay, all losses, damages (including consequential, indirect and punitive), costs, liabilities, suits, claims and actions, and all related expenses (including attorneys' fees and expenses and the actual costs of litigation) by reason of injury or death to any person or damage to any property or any accident or event arising or relating to the performance of the CSP Agreement or arising from or relating to the goods, equipment or services or from any other cause to the extent not attributable to the negligence or willful misconduct of Company.

12. INTELLECTUAL PROPERTY INDEMNIFICATION

CSP represents and warrants that all goods, equipment and services shall not and do not infringe upon any United States or foreign patent, trademark, copyright or other intellectual property right of any third party. CSP shall defend, indemnify and hold harmless Company and its directors, officers, employees, agents, successors and assigns from and against, and shall pay, all losses, damages (including consequential, indirect and punitive), costs, liabilities, suits, claims and actions, and all related expenses (including attorneys' fees and expenses and the actual costs of litigation) based on or arising from an allegation or claim that any goods, equipment or services or parts thereof furnished by CSP infringe or misappropriate the rights of others; and/or if their use by Company is enjoined, CSP shall at Company's option and CSP's expense either: (a) procure for Company the right to continue using the goods, equipment and services or parts thereof; (b) replace the same with substantially equivalent goods, equipment or services or parts thereof that do not infringe or misappropriate the rights of others; (c) modify the same so they no longer infringe or misappropriate the rights of others; or (iv) refund the price and the transportation and installation costs to Company.

CSP shall obtain from all Subcontractors similar indemnity protection for Company.

13. LIMITATION OF LIABILITY

Company shall not be liable to CSP for any indirect, incidental, special, liquidated, punitive or consequential damages or damages for delay in performance and/or failure to perform, irrespective of whether claims or actions for such damages are based upon contract, tort, negligence, strict liability, warranty or otherwise. CSP's liability for performance shall be limited as set forth in the compensation section except for acts of negligence, misconduct, or intentional acts.

14. CHANGES

Company may, at any time by a written change order, make changes to the scope of the CSP Agreement ("Change Order"). If any change results in an increase or decrease in the quantity or cost of the goods, equipment or services or otherwise materially affects the CSP Agreement, the Change Order will include an equitable adjustment in the price, the schedule and/or any other affected provisions. Any objection by CSP to the equitable adjustment set forth in a Change Order must be asserted within seven (7) business days after receipt of the Change Order by CSP. Notwithstanding such objection, if directed by Company, CSP shall proceed with the change and performance of the Work.

15. SUSPENSION OR INTERRUPTION OF WORK

Company may direct CSP, in writing, to suspend or interrupt all or any part of the Work for such period of time as Company may determine to be appropriate. CSP shall mitigate the costs of such suspension or interruption. Company agrees to reimburse CSP for those expenses necessarily and directly incurred as a result of such suspension or interruption, subject to Company's right to audit CSP's books and records.

16. CONFLICTS, ERRORS AND OMISSIONS

In the event CSP becomes aware of any conflict, error or omission in the documents comprising the CSP Agreement, CSP shall promptly bring the discrepancy to the attention of Company. Such discrepancy shall be resolved by Company in its sole discretion.

17. INSPECTIONS, MONITORING PERFORMANCE QUALITY AND RATE OF PROGRESS

Company may inspect, at all reasonable times, the progress of the Work, including work performed at CSP's or Subcontractor's facilities. Also, if the CSP Agreement, laws, ordinances, rules, regulations or orders of any governmental authority require any portion of the Work to be inspected, tested or approved, CSP shall give Company reasonable notice to permit Company to observe such inspection, testing or approval. CSP shall provide Company with periodic status reports during the course of the Work.

18. COST ACCOUNTS, INFORMATION AND AUDITS

CSP shall maintain detailed separate cost data for each CSP Agreement in accordance with Generally Accepted Accounting Principles. CSP's records pertaining to the cost of the Work (other than fixed prices agreed to prior to performance of the Work) and CSP's tax records shall be open

at all reasonable times for inspection or audit by Company or its representative(s). Company or its representative(s) shall, at all reasonable times, have access to the premises, materials, instructions, working papers, plans, drawings, specifications, memoranda and other information of CSP pertaining to the Work. All CSP's purchase orders or contracts with Subcontractors shall provide that Company or its representative(s) shall have the right to audit Subcontractors' charges to CSP. Company's rights under this Article shall terminate five (5) years after expiration of the warranty periods.

The CSP agrees to make data available to Duquesne Light's Independent EM&V CSP (CSP) and the Pennsylvania Act 129 Statewide Evaluator (SWE) regarding audits and interactions between these parties in regard to program data upon request by the SWE or CSP.

19. INSURANCE

Prior to commencing any portion of the Work, CSP shall properly maintain the following coverage: Statutory Workers' Compensation Insurance in full compliance with the Workers' Compensation and Occupational Disease Acts of each and every state in which Work is to be performed and U.S. Longshoremen's and Harbor Workers' Compensation Acts, if applicable; Employer's Liability Insurance with a limit of not less than \$500,000; Comprehensive General Liability Insurance including Premises-Operation Independent Contractor's Protective, Products, Completed Operation, and Blanket Contractual Liability coverages with a combined single limit of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate; Excess Umbrella Liability Insurance with a single limit of not less than \$2,000,000; and Automobile Liability Insurance covering all owned, hired and non-owned vehicles with a combined single limit of not less than \$1,000,000 per occurrence. CSP shall provide Company with a certificate of insurance specifically evidencing the coverages required above, naming the Company as an additional insured, except under the Workers' Compensation Policy, and stating the policy numbers and the inception and expiration dates of all policies. The certificate of insurance shall also provide for thirty (30) days' prior written notice to Company in the event of cancellation or any material alteration of any policy. The certificate of insurance shall be furnished to Company prior to commencement of any portion of the Work. The Property Damage Liability Insurance shall include the Broad Form Comprehensive General Liability coverage.

20. TAXES

The price set forth in the CSP Agreement shall include, unless otherwise expressly set forth in the CSP Agreement, all federal state and local sales and use taxes applicable to the manufacture and/or sale of the goods and equipment and/or the performance of the services.

Company will provide to CSP, upon CSP 's request, a tax exemption certificate for taxes for the Work that are exempt under Pennsylvania's Sales and Use Tax laws.

Upon Company's request, CSP shall provide evidence satisfactory to Company of the payment of any taxes which CSP is required to pay. CSP shall also provide to Company such additional information as Company may request to facilitate the determination of taxes for which Company is responsible, if any.

21. CONFIDENTIAL/PROPRIETARY INFORMATION

CSP agrees to treat as confidential and proprietary any of Company and customer's information which is not generally known to the public and to exercise the same care to prevent the disclosure of such information as CSP exercises to prevent disclosure of its own proprietary and confidential information; however, CSP may disclose such information as required by law or court order upon written notice to the Company. Furthermore, Company's information shall be utilized by CSP only in connection with performance of CSP's obligations under the CSP Agreement.

22. PUBLICITY

CSP shall not use Company's name nor issue any publicity releases, including but not limited to, news releases and advertising, relating to the CSP Agreement and Services without the prior written consent of Company.

23. FORCE MAJEURE

Neither party shall be liable for any failure or delay in performing its obligations under the CSP Agreement, or for any loss or damage resulting therefrom, due to causes beyond its reasonable control, including but not limited to, acts of God, public enemy or government, riots, fires, natural catastrophe, strikes or epidemics. In the event of such failure or delay, the date of delivery or performance shall be extended for a period not to exceed the time lost by reason of the failure or delay; provided that Company may terminate the CSP Agreement if the period of failure or delay exceeds fifteen (15) days. Company shall have no obligation to make any payments to CSP during the period of failure or delay. Each party shall notify the other promptly of any failure or delay in, and the effect on, its performance.

24. ASSIGNMENT

CSP shall not assign the CSP Agreement, in whole or in part, nor contract with any Subcontractor for the performance of the same or any of its parts, without first obtaining Company's written consent. Company's consent shall not be construed as discharging or releasing, nor shall it discharge or release, CSP in any way from the performance of the Work or the fulfillment of any obligation under the CSP Agreement.

25. NOTICES

Any notice required under the CSP Agreement shall be in writing and sent to the CSP and Company at their respective addresses identified below:

If to DLC: Dave Defide

 Duquesne Light Company

 411 Seventh Avenue, Mail Drop 15-3,

 Pittsburgh, PA 15219.

 Via e-mail: ddefide@duqlight.com

If to CSP:

26. INDEPENDENT CONTRACTOR

CSP shall operate as an independent contractor in the performance of the CSP Agreement and not as an agent or employee of Company. CSP shall ensure that neither it nor its agents or employees shall act or hold themselves out as agents or employees of Company. CSP shall have complete control of its agents and employees engaged in the performance of the Work.

27. PRIORITY OF DOCUMENTS

In the event of conflict among the various documents comprising the CSP Agreement, the conflict shall be resolved according to the priority given to the documents in the Purchase Order. If no priority is indicated in the Purchase Order, the conflict shall be resolved according to Article 16, Conflicts, Errors and Omissions.

28. SEVERABILITY

If any provision(s) of the CSP Agreement is prohibited by law or held to be invalid, illegal or unenforceable, the remaining provisions thereof shall not be affected, and the CSP Agreement shall continue in full force and effect as if such prohibited, illegal or invalid provisions had never constituted a part thereof, with the remaining provisions of the CSP Agreement being enforced to the fullest extent possible.

29. SURVIVAL

The obligations and rights of the parties pursuant to the Warranties, Liens, Indemnification, Intellectual Property Indemnification, Limitation of Liability, Cost Accountants and Information/Audits and Confidential/Proprietary Information shall survive the expiration or early termination of the CSP Agreement.

30. MBE/WBE

It is the policy of Company to stimulate the growth of Certified Minority, Women and Disabled Business Enterprises (MBEs, WBEs and DBEs) by encouraging their participation in Company's procurement activities and by affording them an equal opportunity to compete for Company's procurements. CSP agrees to carry out this policy to the fullest extent consistent with the requirements of the CSP Agreement (a) through the award of subcontracts to MBEs, WBEs and DBEs or (b) if CSP is a MBE, WBE or DBE, through the use of its own forces. CSP shall include this policy as a provision in all subcontracts.

31. LAWS, CODES, RULES, REGULATIONS

CSP and its Subcontractors, at their own expense, shall obtain all necessary licenses and permits and shall comply with all applicable federal, state and local laws, statutes, ordinances, codes, rules and regulations relating to performance of the Work and the CSP Agreement, including but not limited to, safety, products liability, environment, labor standards and workers' compensation laws.

All CSP subcontractors with an annual contract cost that equals or exceeds ten percent of the CSP's total annual contract cost to perform services pursuant to an electric distribution company energy efficiency and conservation plan must also be registered as CSPs. This is pursuant to Implementation of Act 129 of 2008 Phase II – Registry of Conservation Service Providers Order at Docket No. M-2008-2074154 (entered July 16, 2013).

CSP and its Subcontractors shall also comply with Company's policies, rules and procedures.

32. HAZARDOUS AND DANGEROUS GOODS

For any goods or equipment provided by CSP pursuant to the CSP Agreement which are defined as hazardous or dangerous under any applicable law, rule or regulation, CSP shall provide Company with hazardous warning and safety handling information, including Material Safety Data Sheets, and appropriate labeling for all such goods and equipment.

33. ELECTRONIC COMMERCE

At Company's request, Company and CSP may facilitate business transactions for the CSP Agreement by electronically transmitting data. Any data digitally signed pursuant to this Article and electronically transmitted shall be as legally sufficient as a written and signed paper document exchanged between the parties, notwithstanding any legal requirement that the document be in writing or signed.

34. GOVERNING LAW/JURISDICTION

The CSP Agreement shall be governed by and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, excluding the choice of law and conflicts of law provisions. Any litigation arising from or relating to the CSP Agreement shall only be filed in state or federal court in and for Allegheny County, Pennsylvania and CSP hereby consents and submits to the exclusive jurisdiction of such courts.

35. ENTIRE AGREEMENT

The CSP Agreement contains the entire understanding and agreement of Company and CSP with respect to the subject matter hereof and supersedes and replaces all prior agreements and commitments with respect thereto. There are no oral understandings, terms or conditions and neither Company nor CSP has relied upon any representation, express or implied, not contained in the CSP Agreement.

36. AMENDMENT

Except as expressly set forth herein, no provision of the CSP Agreement may be changed, modified, waived, terminated or amended except by written instrument executed as appropriate by Company and/or CSP.

37. WAIVER

Any failure of Company to enforce any of the provisions of the CSP Agreement or to require compliance with any of its terms at any time during the term of the CSP Agreement shall in no way affect the validity of the CSP Agreement, or any part thereof, and shall not be deemed a waiver of the right of Company thereafter to enforce any and each such provision.

38. CAPTIONS

The captions contained in the CSP Agreement are for convenience and reference only and in no way define, describe, extend or limit the scope or intent of the CSP Agreement or the intent of any provision contained therein.

39. RECORD RETENTION

The CSP shall retain all electronic and hard copy project file documentation that it creates pursuant to the CSP agreement for a period not less than five (5) years.

IN WITNESS WHEREOF, the parties have executed this Agreement on the respective dates entered below.

DUQUESNE LIGHT COMPANY

CSP

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Appendix B: Calculation Methods and Assumptions.

Calculation methods and assumptions. Describe methods used for estimating all program costs, including administrative, marketing, and incentives costs; include key assumptions. Describe assumptions and present all calculations, data and results in a consistent format.

Administrative Costs: Administrative Costs are provided in detail for each of the 17 program delivery channels at Table 10: Program Budget. Table 10 Non-Incentive costs are disaggregated into the seven types of cost shown in the table below. Duquesne Light Portfolio Admin costs include EM&V and exclude CSP direct-implementation administrative costs. Portfolio admin includes administrative costs that can be tied to specific programs being implemented. Common costs are only those costs applicable to multiple customer sectors or are common across all sectors. Table 10 non-incentive admin cost components have Common Costs embedded in the budget values. Common costs are addressed at Table 11: Allocation of Common Costs. For visibility, the table below summarizes Portfolio and Common Costs.

Phase V EE&C Plan Administrative Costs

Admin Cost Component (\$000)	Portfolio	Common	CSP	Total
Program Design	324			\$324
Administrative	\$3,680	\$1,003		\$4,683
EDC Delivery Costs	\$1,446			\$1,446
CSP Delivery Fees			\$34,814	\$34,814
Marketing	\$425	\$850		\$1,275
EM&V	\$2,238			\$2,238
Tracking System O&M		\$972		\$972
Implementation Services	\$252	\$1,583		\$1,835
Total	8,365	\$4,407	\$34,814	\$47,587

The Admin Cost components are defined below:

1. Program Design: Technical support to develop and the Phase V EE&C Plan, mid-course corrections and any required refileing.
2. Administrative: Duquesne Light Act 129 dedicated staff labor costs.
3. EDC Delivery Costs: Portfolio-level technical support, tracking system training and support, cost-effectiveness reporting and portfolio Q&A.
4. CSP Delivery Fees: Non-Incentive budget amounts paid to the implementing CSP.
5. Marketing: Portfolio Act 129 Marketing.
6. EM&V: Independent program evaluation and reporting.
7. Implementation Services: Project level support, transition tasks, DLC staff support on complex project engineering review and approvals.

Common Costs (addressed at Table 11) include the following items:

1. Utility staff labor cost to support all programs.
2. Portfolio-wide marketing costs.
3. Portfolio-level Delivery costs (tracking system training and support, technical support, cost-effectiveness reporting and QA/QC).
4. Tracking system hosting and maintenance.

Incentives:

Energy Efficiency programs: Incentive amounts are intended to offset the incrementally higher cost of highly efficient appliances and equipment. The amount paid to participating customers for per unit of measure (lamp, insulation square foot, motor HP, air conditioner ton, etc.) is addressed as a percentage of that incrementally higher cost. The Phase V Implementation Order⁴⁹ and TRC Order⁵⁰ defines directly-installed equipment costs, as well as the labor cost to install the equipment, as incentives.

In previous Act 129 phases Duquesne Light's program incentives were established using national benchmarking and payback probability acceptance curves.⁵¹ In Phase III Portfolio Incentives amounted to 42% of the Portfolio Budget, on average offsetting 39 percent of projected incremental measures costs. The Phase V Implementation Order require at least 50% of EE&C Plan spending be on incentives. Accordingly, EE&C Plan incentive amounts were increased to 56 percent of the Portfolio Budget offsetting, on average, 41 percent of measure incremental costs. Incremental measure costs are documented, referenced to the SWE incremental costs database,⁵² California Public Utilities Commission Database of Energy Efficient Resources (DEER), invoice data from Phase IV program operations, specific measure cost research, and vendor proposals.

Plan Development Methodology: As with the previous four Act 129 Phases, Duquesne Light's Phase V EE&C Plan began at the measure level with forecast projections for more than 300 measures applied to prototypical applications in Duquesne Light specific building stock; measures savings are linked to 2024 TRM algorithms as well as historic custom measure savings impacts. As stated above, incremental measure costs are taken, primarily, from the SWE Incremental Cost Database v5.1 and vendor proposals. Savings were applied to seasonal and time-of-day measure-level savings profiles.⁵³

Avoided costs were applied taken from the Phase V SWE Avoided Cost Calculator (ACC) with inputs specific to Duquesne Light, as specific in the Phase V TRC Order and described in the avoided costs section of this Plan. The ACC avoided costs (for generation, capacity and T&D benefits) were expanded to include O&M benefits, as well as water and fossil fuel benefits (or penalties).

⁴⁹ Energy Efficiency and Conservation Program Implementation Order, Docket M-2025-3052826

⁵⁰ See Energy Efficiency Potential Study for Pennsylvania, NV5, February 7, 2024.

⁵¹ Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation and Demand Response Plan Docket No. M-2009-2093217, June 30, 2009; Part (3) Energy Efficiency and Demand Side Response Study, MCR Performance Solutions, LLC, June 26, 2009.

⁵² SWE Incremental Cost Database version 5.1, October 3rd, 2024.

⁵³ The Phase V Potential Study

TRC administrative program costs were documented (described above) and combined with measure costs (also described above) to render TRC Cost. The present value of measure level life-cycle avoided costs divided by TRC Costs rendered a TRC Test benefit-cost ratio. The measure mix was optimized, to the extent possible, to achieve projected portfolio performance shown in the following Appendix B.

Appendix B

Residential Programs	Qty	Savings	Savings	Lifetime kWh	Portfolio Admin	Direct Program Costs		Total Program	Total	Measure Cost	TRC Cost	Program Benefits	Demand Reduction Benefits		O&M/Fossil/Water	Energy Benefits	TRC
		kWh	kW			Admin	Incentives	Cost	Admin				Capacity	Trans/Dist			
Appliance Recycling	8,014	6,126,000	1,145	41,892,997	\$284,875	\$1,561,334	\$1,019,277	\$2,865,486	\$1,846,209	\$927,894	\$1,846,209	\$5,399,192	\$683,898	\$1,574,249	\$0	\$3,141,045	2.92
Online Marketplace	26,627	6,500,000	3,015	58,583,470	\$302,267	\$1,910,573	\$1,506,378	\$3,719,218	\$2,212,840	\$3,411,392	\$5,624,232	\$12,457,613	\$2,915,965	\$5,248,581	\$0	\$4,293,067	2.21
Midstream Incentives	19,447	20,000,000	1,086	290,831,233	\$930,051	\$2,449,965	\$4,683,569	\$8,063,586	\$3,380,016	\$37,672,606	\$41,052,671	\$20,535,028	\$1,064,426	\$1,562,801	\$0	\$17,907,802	0.50
Low Income Energy Efficiency	219,256	16,932,000	6,265	148,186,439	\$787,381	\$5,336,196	\$9,073,271	\$15,196,848	\$6,123,577	\$3,466,720	\$9,590,297	\$19,288,148	\$3,300,780	\$5,393,283	-\$260,538	\$10,854,623	2.01
Residential Behavioral Energy Efficiency	1	30,200,000	7,050	60,400,000	\$1,404,377	\$3,604,913	\$0	\$5,009,290	\$5,009,290	\$0	\$5,009,290	\$7,048,565	\$745,000	\$1,017,357	\$0	\$5,286,208	1.41
Low Income Behavioral Efficiency	1	4,200,000	890	8,400,000	\$195,311	\$640,501	\$0	\$835,812	\$835,812	\$0	\$835,812	\$957,650	\$94,050	\$128,432	\$0	\$735,168	1.15
Subtotal Residential Programs	273,346	83,958,000	19,451	608,294,139	\$3,904,262	\$15,503,482	\$16,282,495	\$35,690,239	\$19,407,744	\$45,478,613	\$63,958,510	\$65,686,197	\$8,804,119	\$14,924,704	-\$260,538	\$42,217,913	1.03
Nonresidential Program		21,132,000	20%					\$0	\$0								
Small-Medium Nonresidential Efficiency	166,825	76,000,431	11,748	1,094,724,290	\$3,534,165	\$10,009,073	\$12,623,280	\$26,166,519	\$13,543,239	\$30,496,186	\$39,951,474	\$105,021,066	\$11,953,217	\$29,842,858	-\$3,831,218	\$67,056,209	2.63
Large Commercial Downstream	79,834	50,000,000	8,504	639,101,805	\$2,325,128	\$2,992,650	\$3,858,721	\$9,176,499	\$5,317,778	\$18,130,695	\$23,448,473	\$59,941,147	\$6,156,760	\$15,096,285	-\$1,399,192	\$40,087,295	2.56
Large Industrial Efficiency	33,515,141	40,000,000	5,329	566,987,094	\$1,860,102	\$3,650,418	\$10,096,380	\$15,606,900	\$5,510,520	\$5,657,944	\$11,168,464	\$49,145,961	\$5,215,326	\$10,195,812	-\$164,543	\$33,899,367	4.40
Public Agency Partnership	39,445	24,704,300	3,155	315,771,254	\$1,148,813	\$2,658,827	\$7,281,963	\$11,089,603	\$3,807,640	\$8,916,754	\$12,724,394	\$29,346,560	\$2,923,732	\$7,307,578	-\$691,321	\$19,806,571	2.31
Subtotal Nonresidential Programs	33,801,244	190,704,731	28,736	2,616,584,444	\$8,868,209	\$19,310,968	\$33,860,344	\$62,039,520	\$28,179,177	\$63,201,579	\$87,292,805	\$243,454,734	\$26,249,035	\$62,442,532	-\$6,086,274	\$160,849,442	2.79
Grand Total	34,074,590	274,662,731	48,187	3,224,878,582	\$12,772,470	\$34,814,450	\$50,142,839	\$97,729,759	\$47,586,920	\$108,680,192	\$151,251,316	\$309,140,931	\$35,053,153	\$77,367,236	-\$6,346,813	\$203,067,355	2.04

11. Tables for Pennsylvania EDC Energy Efficiency and Conservation Plan

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Table 14. TRC Benefits Table (Net)

Table 1: Portfolio Summary of Lifetime Costs and Benefits of EE&C Plan

Program	Total Discounted Lifetime Costs (\$000)	Total Discounted Lifetime Benefits (\$000)	Total Discounted Net Lifetime Benefits (\$000)	Total Resource Cost Test Ratio (TRC)
Residential	\$48,523	\$38,392	-\$10,131	0.79
Residential Low-Income	\$9,590	\$19,288	\$9,698	2.01
Residential Behavioral	\$5,009	\$7,049	\$2,039	1.41
Low-Income Behavioral	\$836	\$958	\$122	1.15
Large Commercial (C)	\$36,173	\$89,288	\$53,115	2.47
Large Industrial (I)	\$11,168	\$49,146	\$37,977	4.40
Small C&I	\$39,951	\$105,021	\$65,070	2.63
Total	\$151,251	\$309,141	\$157,890	2.04

Table 2: Summary of Portfolio Energy Savings

MWh Saved for Consumption Reductions (Meter Level)	PY13		PY14		PY15		PY16		PY17		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											14,085,512	
Residential Cumulative Savings	11,809	84,278	24,951	174,514	38,393	266,912	50,947	359,140	62,826	451,708	62,826.000	451,708
Low-Income Cumulative Savings	4,618	31,640	8,671	62,387	12,758	93,423	16,876	124,738	21,132	156,586	21,132.000	156,586
Commercial/Industrial, Large Inc	16,059	210,986	20,452	271,058	25,093	333,054	28,511	377,806	24,589	328,955	114,704.300	1,521,860
EE&C Plan Total Incremental Annual	45,391	513,381	51,872	597,300	58,591	686,072	62,769	753,378	56,039	674,748	274,663	3,224,879
Percent of Plan Total Annual	16.5%		18.9%		21.3%		22.9%		20.4%			
EE&C Plan Total Cumulative	45,391	513,381	97,263	1,110,681	155,854	1,796,753	218,624	2,550,131	274,663	3,224,879	274,663	3,224,879
Percent of Plan Total	16.5%		35.4%		56.7%		79.6%		100.0%			
Estimated Phase IV Carryover Savings												
Total Cumulative Plan + Carryover	45,391	513,381	97,263	1,110,681	155,854	1,796,753	218,624	2,550,131	274,663	3,224,879	274,663	3,224,879
Percent of Plan Total	16.5%		35.4%		56.7%		79.6%		100.0%			
Percent Reduction from Baseline	0.32%		0.69%		1.11%		1.55%		1.95%			
Phase V Target ¹											261,583	
Portfolio Percent of Phase V Target	17.4%		37.2%		59.6%		83.6%		105.0%		105.0%	

¹ Phase V Implementation Order Table 11: Final Consumption Reduction Targets, by EDC, page 48.

Table 3: Summary of Portfolio Demand Savings

MWh Saved for Consumption Reductions (Meter Level)	PY18	PY19	PY20	PY21	PY22	Total
	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW	1st-Year MW
Baseline¹	2,518	2,518	2,518	2,518	2,518	2,518
Market Rate Residential Sector (<i>exclusive of Low-Income</i>) – Projected Incremental Annual Savings	1.92	2.01	2.05	1.96	1.91	9.854
Residential Low-Income Sub-Sector – Projected Incremental Annual Savings	1.40	1.42	1.43	1.44	1.46	7.155
Small C&I Sector – Projected Incremental Annual Savings	1.96	2.18	2.49	2.79	2.33	11.748
Large C&I Sector – Projected Incremental Annual Savings	1.675	2.481	3.176	3.583	3.373	14.288
Coincident Demand Reduction From EE Subtotal	6.961	8.090	9.150	9.777	9.067	43.045
Residential Load Shifting - Projected MW Savings	0.48	0.50	0.51	0.49	0.47	2.442
Small C&I Sector Load Shifting – Projected MW Savings						
Large C&I Sector Load Shifting – Projected MW Savings	0.41	0.47	0.61	0.74	0.47	2.700
Daily Load Shifting Subtotal	0.881	0.971	1.116	1.229	0.945	5.142
Cumulative Projected Compliance Savings²	7.842	9.061	10.266	11.006	10.013	48.187
Cumulative EE&C Plan Total – Percentage of Target to be Met³	16.9%	19.5%	22.1%	23.7%	21.5%	103.6%
Estimated Phase IV Carryover Savings⁵						
Total Cumulative Projected Savings Phase V + Estimated Phase IV Carryover Savings	7.842	9.061	10.266	11.006	10.013	48.187
Cumulative Percent Reduction from Baseline	0.3%	0.4%	0.4%	0.4%	0.4%	1.9%
Commission-Identified Goal¹						46.5

1 As defined in the June 18, 2025 Implementation Order.

2 Cumulative totals reflect one-fifth of the expected MW savings from load shifting programs due to the average performance accounting method. EE program savings are additive across program years, while Load Shifting programs average across the Phase.

3 The June 18, 2025 Implementation Order directed that EDCs achieve at least 15 percent of the target amount in each program year.

4 MW saved are on a gross-verified basis.

5 50% of any excess Phase IV demand reduction can be claimed as carryover.

Table 4: Summary of Seasonal Demand Savings

Component MW Savings (System-Level)	PY18		PY19		PY20		PY21		PY22		Total	
	Summer MW ¹	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summ er MW	Winter MW
Coincident Reduction from EE - Residential	3.4	3.3	3.5	3.4	3.6	3.5	3.5	3.3	3.4	3.2	17.4	16.6
Coincident Reduction from EE - Non-Residential	5.4	2.7	6.3	3.3	7.4	4.0	8.4	4.6	7.1	3.8	34.6	18.4
Daily Load Shifting - Residential ³	2.3	2.6	2.3	2.6	2.3	2.6	2.3	2.6	2.3	2.6	2.3	2.6
Daily Load Shifting - Non- Residential	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Total											56.5	39.9
Phase V Peak Demand Reduction Target											46.5	
Percentage of Goal In Season ²											121%	86%

1 MW saved are on a gross-verified basis, and MW are at the system-level.

2 The June 18, 2025 Implementation Order directed that EDCs achieve at least 15 percent of the target amount in each program year. The cells with the percentage of goal in each season (M12 and N12) will appear green if this condition has been met.

3 Daily load-shifting savings average across the phase, EE sums across the phase.

Note: The chart was not programmed to verify minimum 15% per year, it should be checking minimum 75% reduction in the lesser season.

Table 6: Program Summaries

	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Lifetime Savings MWh	Lifetime Savings MW	Portfolio Savings	
							MWh %	MW %
Residential Portfolio Programs								
	Appliance Recycling	Market Rate Residential	Provides customer incentives to recycle listed inefficient appliances in order to remove them from the electric grid.	5	41,893	1.145	1.3%	2.4%
	Online Marketplace	Market Rate Residential	Energy efficiency rebates to offset costs of more energy efficient consumer products. Customer engagement is mail-in or online form- based rebate applications.	5	58,583	3.015	1.8%	6.3%
	Midstream Incentives	Market Rate Residential	Energy efficiency rebates to offset costs of more energy efficient consumer products. Customer engagement is retail point-of-purchase and online instant rebates.	5	290,831	1.086	9.0%	2.3%
	Residential Behavioral Energy Efficiency	Market Rate Residential	Educates participants on electricity consumption to change household behavior leading to less electricity use.	5	60,400	7.050	1.9%	14.6%
	Low-Income Energy Efficiency	Low-Income Residential	Comprised of energy efficiency audits and the direct-installation of energy efficiency equipment at no cost to program participants.	5	148,186	6.265	4.6%	13.0%
	Low-Income Behavioral Efficiency	Low-Income Residential	Provides educational messaging via electronic and paper mail tailored to the low-income sector. Educates participants on electricity consumption to change household behavior leading to less electricity use.	5	8,400	0.890	0.3%	1.8%
	Subtotal				608,294	19.451	18.9%	40.4%

Table 6: Program Summaries (*continued*)

	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Lifetime Savings MWh	Lifetime Savings MW	Portfolio Savings	
							MWh %	MW %
Commercial/Industrial (C&I) Small Portfolio								
	Small-Medium Nonresidential Energy Efficiency	C&I Customer <300 kW	The program employs midstream incentives, downstream incentives and direct-install engagement channels to serve the small-medium commercial and industrial customers with maximum peak demand less than 300 kW.	5	1,094,724	11.748	33.9%	24.4%
	Subtotal				1,094,724	11.748	33.9%	24.4%
Commercial/Industrial Large Portfolio								
	Large Commercial Efficiency	C&I Customer ≥300 kW	Energy efficiency rebates to offset costs of more energy efficient lighting, refrigeration and mechanical system products. Customer engagement is mail-in or online form- based rebate applications.	5	639,102	8.504	19.8%	17.6%
	Large Industrial Efficiency	C&I Customer ≥300 kW	Energy efficiency rebates to offset costs of more energy efficient lighting, refrigeration and mechanical system products. Customer engagement is mail-in or online form- based rebate applications.	5	566,987	5.329	17.6%	11.1%
	Public Agency Partnership	GNI Customer ≥300 kW	Through the program Duquesne Light enters into memoranda of understanding with local governments to serve its jurisdictional agencies and develop and implement energy efficiency action plans.	5	315,771	3.155	9.8%	6.5%
	Subtotal				1,521,860	16.988	47.2%	35.3%
Plan Total					3,224,879	48.1874	100.0%	100.0%

Table 7: Budget and Parity Analysis Summary

Customer Sector	Phase V EE&C Budget	% of Total EE&C Budget	% EDC Annual Revenue	% EDC MWh Sales
Residential Sector	19,657,579	20.1%	46.1%	23.2%
Low-Income Sector	16,032,660	16.4%	17.7%	8.9%
Residential Subtotal	35,690,239	36.5%	63.8%	32.1%
Commercial/Industrial Small Sector	26,166,519	26.8%	15.6%	25.2%
Commercial/Industrial Large Sector	35,873,001	36.7%	20.5%	42.7%
Nonresidential Subtotal	62,039,520	63.5%	36.2%	67.9%
All Classes	97,729,759	100.0%	100.0%	100.0%
Other Expenditures				
EDC Total	97,729,759			

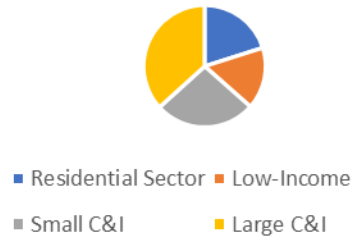
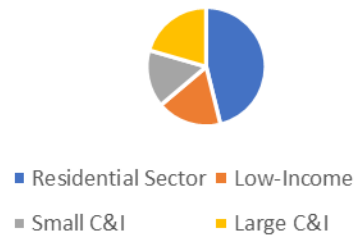
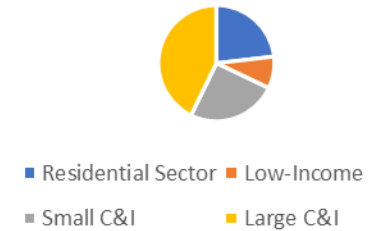
Plan Budget**Revenue****MWh Sales**

Table 8A: Eligible Measures - Residential

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)
LED Parking Garage and Canopy Fixtures and Retrofit Kits	Fixture	Yes	No	Direct Install	\$17.46	15	\$13.97 - \$20.95
LED Replacement Lamps (Tubes)-2' & 4'	Lamp	Yes	No	Direct Install	\$17.46	7	\$13.97 - \$20.95
Lighting - LED A-Line	Lamp	Yes	No	Direct Install	\$10.85	4	\$5.96 - \$20.95
Lighting - LED Globe/Specialty	Lamp	Yes	No	Direct Install	\$10.87	4	\$5.98 - \$20.95
Lighting - LED Other	Lamp	Yes	No	Direct Install	\$17.46	8	\$13.97 - \$20.95
Lighting - LED Reflector	Lamp	Yes	No	Direct Install	\$11.49	4	\$6.81 - \$20.95
Residential Occupancy Sensors	Unit	Yes	No	Direct Install	\$13.92	8	\$11.14 - \$16.70
LED Nightlight	Lamp	Yes	No	Direct Install or Kit	\$7.18	8	\$5.75 - \$8.62
Holiday Lights	Light Strand	Yes	No	Replacing Incandescent	\$9.98	10	\$7.98 - \$11.98
Air Source Heat Pump - SEER 17.5 / SEER2 16.3 HSPF 9.7 / HSPF2 8.2 +	Unit	Yes	Yes	SEER 17.5/SEER2 16.3 HSPF 9.7/HSPF2 8.2 or higher	\$17.46	15	\$13.97 - \$20.95
Central Air Conditioner SEER 17.5 / SEER2 16.3	Unit	Yes	Yes	SEER 17.5 / SEER2 16.3 or higher	\$17.46	15	\$13.97 - \$20.95
Ductless Mini-Split ENERGY STAR Cold Climate rated	Unit	Yes	Yes	SEER/2-16.1/15.2, HSPF/2 10.0/8.5 DI	\$17.46	15	\$13.97 - \$20.95
Duct Sealing & Duct Insulation	Project	Yes	No	Per TRM Section 2.2.10	\$149.67	15	\$119.74 - \$179.60
Air Handler Filter Whistles	Unit	Yes	No	Per TRM Section 2.2.11	\$3.26	5	\$2.61 - \$3.91
Energy Star Certified Smart Thermostat	Unit	Yes	No	Per TRM Section 2.2.12	\$246.81	9	\$60.00 - \$277.15
Furnace Maintenance	Unit	Yes	No	Per TRM Section 2.2.13	\$2.85	3	\$2.28 - \$3.42
Furnace Circulation Fan - High Efficiency (ECM - Variable Speed)	Furnace	Yes	No	Existing PSC fan motor	\$17.46	15	\$13.97 - \$20.95
GSHP Desuperheaters	Unit	Yes	No	Existing electric water heater	\$213.32	15	\$170.66 - \$255.99
Air Conditioner & Heat Pump Maintenance	Unit	Yes	No	Existing central, ductless, or packaged HVAC system	\$225.00	3	\$180.00 - \$270.00
Window Heat Pump	Unit	Yes	Yes	Direct Install	\$836.06	9	\$668.85 - \$1,003.27
Heat Pump Water Heater	Water Heater	Yes	Yes	Per TRM Section 2.3.1	\$404.67	10	\$13.97 - \$720.00
Smart Water Heater Controls	Unit	Yes	Yes	Per TRM Section 2.3.10	\$12.58	11	\$10.07 - \$15.10
Solar Water Heaters	Unit	Yes	Yes	Per TRM Section 2.3.2	\$802.05	15	\$641.64 - \$962.46
Water Heater Tank Wrap	Unit	Yes	No	Per TRM Section 2.3.3	\$39.92	7	\$31.94 - \$47.91
Water Heater Temperature Setback	Water Heater	Yes	No	Per TRM Section 2.3.4	\$25.59	2	\$20.47 - \$30.71
Thermostatic Showerhead	Showerhead	Yes	No	Per TRM Section 2.3.8	\$37.05	15	\$29.64 - \$44.46
Drain Water Heat Recovery Units	Unit	Yes	No	Per TRM Section 2.3.9	\$99.04	15	\$79.23 - \$118.84
ENERGY STAR Ceiling Fans	Unit	Yes	No	ENERGY STAR qualified	\$10.75	10	\$8.60 - \$12.90
Refrigerator / Freezer Recycling with and without Replacement	Freezer	Yes	No	Functioning existing unit	\$17.46	6	\$13.97 - \$20.95
Refrigerator / Freezer Recycling with and without Replacement	Refrigerator	Yes	No	Functioning existing unit	\$17.46	6	\$13.97 - \$20.95
Low-Capacity Refrigerator / Freezer Recycling without Replacement	Unit	Yes	No	Functioning existing unit	\$95.36	5	\$51.93 - \$150.98
ENERGY STAR Coolers	Unit	Yes	Yes	ENERGY STAR qualified	\$15.78	14	\$12.62 - \$18.94
Cooler Recycling with and without Replacement	Unit	Yes	No	Functioning existing unit	\$67.00	7	\$35.13 - \$108.11

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)
Residential Induction Cooktop	Unit	Yes	No	Per TRM Section 2.4.7	\$5.20	15	\$4.16 - \$6.24
Advanced Power Strips	Unit	Yes	No	Tier I or II	\$42.35	5	\$8.00 - \$53.21
Air Sealing	Home	Yes	Yes	Blower door testing	\$17.46	15	\$13.97 - \$20.95
Weather Stripping	Roll	Yes	No	Projects < 400 kWh savings	\$22.03	15	\$4.00 - \$28.25
Insulation, Basement Wall	Home	Yes	Yes	Per TRM Section 2.6.3	\$17.46	15	\$13.97 - \$20.95
Insulation, Exterior Wall	Home	Yes	Yes	Per TRM Section 2.6.3	\$17.46	15	\$13.97 - \$20.95
Insulation, Floor	Home	Yes	Yes	Per TRM Section 2.6.3	\$17.46	15	\$13.97 - \$20.95
Insulation, Ceiling	Home	Yes	Yes	Per TRM Section 2.6.3	\$17.46	15	\$13.97 - \$20.95
Basement or Crawl Space Wall Insulation	Insulation Addition	Yes	Yes	Per TRM Section 2.6.4	\$0.02	15	\$0.02 - \$0.03
ENERGY STAR Windows	Sq Ft	Yes	Yes	ENERGY STAR qualified	\$3.85	15	\$3.08 - \$4.62
Residential New Construction	Home	Yes	Yes	Per TRM Section 2.7.1	\$4,893.00	15	\$3,914.40 - \$5,871.60
ENERGY STAR Manufactured Homes	Home	Yes	Yes	ENERGY STAR qualified	\$1,037.00	15	\$829.60 - \$1,244.40
Home Energy Reports	Population	Yes	No	Per TRM Section 2.7.3	\$0.00	2	\$0.00 - \$0.00
ENERGY STAR Pool Pumps	Unit	Yes	No	ENERGY STAR qualified	\$45.21	10	\$36.17 - \$54.25
Single Speed Pool Pump Replacement	Unit	Yes	No	Replacing single speed pump	\$499.01	3	\$399.21 - \$598.82
Photovoltaic (PV) Solar Generation	Project	Yes	Yes	Per TRM Section 2.8.3	\$7,640.00	15	\$6,112.00 - \$9,168.00
Kit - Electric Hot Water Kit (SF or MF)	Kit	Yes	No	Program provided	\$17.46	15	\$13.97 - \$20.95
Kit - Gas Hot Water Kit (SF or MF)	Kit	Yes	No	Program provided	\$17.46	10	\$13.97 - \$20.95
Energy Star Bathroom Exhaust Fan	Unit	No	No	Per TRM Section 2.2.14	\$300.00	15	\$20.00 - \$30.00
Heat Pump <5.4 Tons	Unit	No	Yes	Per TRM Section 2.2.2	\$2,176.20	15	\$680.00 - \$1,020.00
Air Conditioner <5.4 Tons	Unit	No	Yes	Per TRM Section 2.2.2	\$1,632.15	15	\$400.00 - \$600.00
Mini/Multi Split Heat Pump	Unit	No	Yes	ENERGY STAR version 6.1	\$2,176.20	15	\$256.00 - \$384.00
Mini/Multi Split Air Conditioner	Unit	No	Yes	ENERGY STAR version 6.1	\$1,632.15	15	\$192.00 - \$288.00
Room Air Conditioner	Unit	No	Yes	Per TRM Section 2.2.7	\$350.00	9	\$20.00 - \$30.00
Room A/C – Recycling	Unit	No	No	Recycling of existing, working room AC with or without replacement	\$82.53	9	\$13.97 - \$114.47
Water Heater Pipe Insulation	Unit	No	No	Per TRM Section 2.3.5	\$11.92	11	\$1.60 - \$16.03
Low-Flow Faucet Aerator	Unit	No	No	Per TRM Section 2.3.6	\$5.71	10	\$0.80 - \$9.28
Low-Flow Showerhead	Unit	No	No	Per TRM Section 2.3.7	\$28.52	10	\$4.00 - \$32.91
Thermostatic Shower Restriction Valves	Unit	No	No	Per TRM Section 2.3.8	\$30.00	15	\$8.00 - \$12.00
Energy Star Refrigerator	Unit	No	Yes	ENERGY STAR qualified	\$145.00	8	\$40.00 - \$150.47
Energy Star Freezer	Unit	No	Yes	ENERGY STAR qualified	\$204.75	8	\$40.00 - \$114.47
Energy Star Dishwashers	Unit	No	Yes	ENERGY STAR qualified	\$750.00	10	\$40.00 - \$60.00
Energy Star Dehumidifiers	Unit	No	Yes	ENERGY STAR qualified	\$249.00	12	\$40.00 - \$60.00
Dehumidifier – Recycling	Unit	No	No	Functioning existing unit	\$95.39	4	\$76.31 - \$114.47
Energy Star Air Purifiers	Unit	No	No	ENERGY STAR qualified	\$115.00	9	\$20.00 - \$30.00
Energy Star Freezer	Unit	No	Yes	ENERGY STAR qualified	\$204.75	8	\$40.00 - \$114.47
Energy Star Clothes Washer	Unit	No	Yes	ENERGY STAR qualified	\$1,000.00	14	\$20.00 - \$30.00
Energy Star Clothes Dryer	Unit	No	Yes	ENERGY STAR qualified	\$1,000.00	14	\$20.00 - \$30.00
Caulking	Unit	No	No	Projects < 400 kWh savings	\$20.00	15	\$4.00 - \$6.00
Outlet Gaskets	Unit	No	No	Projects < 400 kWh savings	\$2.00	15	\$0.20 - \$0.30
Direct Load Control & Behavior-Based Demand Response Programs	kW	No	No	Per TRM Section 2.9.1	\$250.00	11	\$320.00 - \$480.00

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)
Smart Energy Service Panel	kW	No	No	Per TRM Section 2.9.1	\$250.00	11	\$320.00 - \$480.00
Optimize Energy Star Thermostats	kW	No	No	Per TRM Section 2.9.1	\$0.10	11	\$0.00 - \$0.00
Managed EV Charging, 3 - 9 PM	kW	No	No	Per TRM Section 2.9.1	\$50.00	11	\$320.00 - \$480.00
Energy Star Level 2 EV Charger, Networked	Unit	No	No	ENERGY STAR qualified	\$47.00	15	\$320.00 - \$480.00
Customer Front-of-the-Meter	Project	No	No	System benefit provided	\$1,987.66	15	\$224.71 - \$337.06

Table 8B: Eligible Measures - Nonresidential

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, Custom	Fixture	N/A	N/A	Design Lights Consortium Listed	\$3.59	11	\$6.40 - \$9.60
LED Downlight with Integrated Occupancy Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$99.22	15	\$20.00 - \$30.00
LED Downlight with Integrated Occupancy and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$109.22	15	\$24.00 - \$36.00
High Output Linear LED T5/T8 Fixture	lamp	N/A	N/A	Design Lights Consortium Listed	\$125.05	15	\$20.00 - \$60.00
LED 2' Linear Replacement Lamp	lamp	N/A	N/A	Design Lights Consortium Listed	\$13.03	15	\$2.00 - \$3.00
LED 3' Linear Replacement Lamp	lamp	N/A	N/A	Design Lights Consortium Listed	\$13.23	15	\$2.40 - \$3.60
LED 4' Interior Linear Strip Fixture or Retrofit Kit	Fixture	N/A	N/A	Design Lights Consortium Listed	\$245.78	15	\$20.00 - \$150.17
LED 4' Linear Replacement Lamp	lamp	N/A	N/A	Design Lights Consortium Listed	\$13.94	15	\$4.59 - \$7.20
LED 8' Interior Linear Strip Fixture or Retrofit Kit	Fixture	N/A	N/A	Design Lights Consortium Listed	\$425.82	15	\$32.00 - \$222.41
LED 8' Linear Replacement Lamp	lamp	N/A	N/A	Design Lights Consortium Listed	\$35.85	15	\$5.60 - \$119.05
LED Exterior Area Lighting Fixture	Fixture	N/A	N/A	Design Lights Consortium Listed	\$403.75	15	\$36.00 - \$598.68
LED Interior 1' X 2'	Fixture	N/A	N/A	Design Lights Consortium Listed	\$91.66	15	\$12.00 - \$18.00
LED Interior 1' X 4'	Fixture	N/A	N/A	Design Lights Consortium Listed	\$126.77	15	\$16.00 - \$169.12
LED Interior High-Bay Fixture	Fixture	N/A	N/A	Design Lights Consortium Listed	\$335.75	15	\$44.00 - \$371.28
LED Interior 2' X 2'	Fixture	N/A	N/A	Design Lights Consortium Listed	\$106.46	15	\$14.74 - \$169.18
LED Interior 2' X 4'	Fixture	N/A	N/A	Design Lights Consortium Listed	\$140.83	15	\$16.82 - \$189.02
LED 4' Interior Linear Strip Fixture or Retrofit Kit	lamp	N/A	N/A	Design Lights Consortium Listed	\$245.78	15	\$20.00 - \$150.17
LED 8' Interior Linear Strip Fixture or Retrofit Kit	lamp	N/A	N/A	Design Lights Consortium Listed	\$425.82	15	\$32.00 - \$222.41
New Construction Lighting	kWh	N/A	N/A	Per TRM Section 3.1.2	\$2.21	15	\$0.33 - \$0.50
Lighting Controls	Unit	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$52.67	8	\$20.00 - \$30.00
LED Downlight with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$115.22	15	\$32.00 - \$48.00
LED Troffer and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$134.32	15	\$40.00 - \$126.00

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)
LED Surface and Suspended Linear Luminaire and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$151.06	15	\$36.00 - \$72.00
LED Low-Bay Luminaire and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$98.88	15	\$40.00 - \$60.00
LED High-Bay Luminaire and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$142.63	15	\$52.00 - \$156.00
LED Exterior Luminaire and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$252.83	15	\$32.00 - \$138.00
LED Parking Garage Lighting with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$199.60	15	\$44.00 - \$138.00
LED Canopy Luminaire and Retrofit Kit with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$244.03	15	\$48.00 - \$144.00
LED Stairwell and Passageway Luminaire with NLC/LLLC	Fixture	N/A	N/A	Per TRM Section 3.1.1/3.1.3	\$212.51	15	\$36.00 - \$54.00
Occupancy sensor, ceiling or wall mounted	Sensor	N/A	N/A	Per TRM Section 3.1.3	\$62.50	8	\$16.00 - \$24.00
Occupancy sensor, high bay fixture-integrated	Sensor	N/A	N/A	Per TRM Section 3.1.3	\$40.39	8	\$16.00 - \$24.00
Occupancy sensor, networked lighting controls	Sensor	N/A	N/A	Per TRM Section 3.1.3	\$75.00	8	\$36.00 - \$54.00
LED Exit Sign	Unit	N/A	N/A	Per TRM Section 3.1.4	\$66.16	15	\$16.00 - \$27.94
LED Refrigeration Display Case Lighting	Door	N/A	N/A	Per TRM Section 3.1.5	\$150.00	8	\$14.96 - \$22.44
LED Troffer and Retrofit Kit with Integrated Occupancy Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$118.31	15	\$28.00 - \$48.00
LED Troffer and Retrofit Kit with Integrated Occupancy and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$128.32	15	\$32.00 - \$54.00
LED Surface and Suspended Linear Luminaire and Retrofit Kit with Integrated Occupancy Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$134.82	15	\$24.00 - \$54.00
LED Surface and Suspended Linear Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$145.00	15	\$28.00 - \$60.00
LED Low-Bay Luminaire and Retrofit Kit with Integrated Occupancy Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$82.88	15	\$28.00 - \$42.00
LED Low-Bay Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$92.88	15	\$32.00 - \$48.00
LED High-Bay Luminaire and Retrofit Kit with Integrated Occupancy Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$126.67	15	\$40.00 - \$138.00
LED High-Bay Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$136.67	15	\$44.00 - \$144.00
LED Exterior Luminaire and Retrofit Kit with Integrated Motion Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$237.22	15	\$28.00 - \$132.00
LED Parking Garage Lighting with Integrated Motion Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$181.38	15	\$32.00 - \$120.00
LED Parking Garage Lighting with Integrated Motion and Daylight Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$191.28	15	\$36.00 - \$126.00
LED Canopy Luminaire and Retrofit Kit with Integrated Motion Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$222.64	15	\$44.00 - \$138.00
LED Stairwell and Passageway Luminaire with Integrated Motion Sensor	Unit	N/A	N/A	Design Lights Consortium Listed	\$194.51	15	\$32.00 - \$48.00

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)
Indoor Horticultural Lighting	Fixture	N/A	N/A	Design Lights Consortium Listed	\$582.00	7	\$286.35 - \$429.52
Cycling Refrigerated Thermal Mass Dryer	Unit	N/A	N/A	Existing non-cycling dryer	\$500.00	10	\$240.00 - \$360.00
Air-Entraining Air Nozzle	Unit	N/A	N/A	Existing non-air entraining nozzle	\$209.01	15	\$31.36 - \$47.04
No-loss Condensate Drain	Unit	N/A	N/A	Existing timed drain	\$244.00	10	\$40.00 - \$60.00
Air Receiver Tanks for Load, No Load Compressors	Unit	N/A	N/A	Per TRM Section 2.10.4	\$1,246.59	15	\$640.00 - \$1,800.00
Variable-Speed Drive Air Compressor	Unit	N/A	N/A	<= 40 HP compressor	\$5,368.04	13	\$200.00 - \$2,640.00
Compressed Air Controller	Compressed Air System	N/A	N/A	Per TRM Section 2.10.6	\$1,286.34	13	\$16.00 - \$1,800.00
Low Pressure Drop Filter for Compressed Air Systems	Unit	N/A	N/A	Existing standard coalescing filter	\$1,000.00	10	\$160.00 - \$240.00
Compressed Air Mist Eliminators	HP	N/A	N/A	Per TRM Section 2.10.8	\$37.89	5	\$1.91 - \$2.86
High Efficiency Transformer	Unit	N/A	N/A	Greater than federal minimum efficiency	\$380.83	15	\$57.15 - \$85.72
Engine Block Heater Timer	Unit	N/A	N/A	Existing heater without timer	\$16.64	15	\$47.21 - \$70.82
High Frequency Battery Chargers	Unit	N/A	N/A	Existing SCR or ferroresonant charger	\$402.48	15	\$53.44 - \$80.17
Uninterruptible Power Supply (UPS)	Unit	N/A	N/A	ENERGY STAR qualified	\$46.80	7	\$1.11 - \$1.67
Building Operator Certification	Certified Employee	N/A	N/A	Facilities > 20,000 sq. ft.	\$1,895.00	13	\$1,516.00 - \$2,274.00
Photovoltaic (PV) Solar Generation	project	N/A	N/A	Per TRM Section 3.11.6	\$387,835.16	15	\$3,428.94 - \$157,544.40
Load Curtailment for Commercial and Industrial Programs	kW	N/A	N/A	Per TRM Section 3.12.1	\$99.13	1	\$320.00 - \$480.00
Packaged Terminal AC or PTHP 12.0 EER	Tons	N/A	N/A	12.0 EER	\$639.54	15	\$52.00 - \$78.00
Unitary HVAC 135-240k AC unit, Min 11.5 EER 13 IEER	Tons	N/A	N/A	11.5 EER 13.2 IEER	\$879.90	15	\$60.00 - \$90.00
Unitary HVAC 65-135k AC unit, Min 11.5 EER 13.2 IEER	Tons	N/A	N/A	11.5 EER 13.2 IEER	\$852.00	15	\$60.00 - \$90.00
Controls: Guest Room Occupancy Sensor	Unit	N/A	N/A	Per TRM Section 3.2.10	\$227.54	11	\$34.14 - \$51.22
Controls: Economizer	Unit	N/A	N/A	Per TRM Section 3.2.11	\$174.94	3	\$268.10 - \$402.15
Computer Room Air Conditioner	Tons	N/A	N/A	Per TRM Section 3.2.12	\$48.63	15	\$7.30 - \$10.95
Computer Room Air Conditioner/Handler Electronically Commutated Plug Fans	HP	N/A	N/A	Per TRM Section 3.2.13	\$788.19	15	\$118.27 - \$177.41
Computer Room Air Conditioner/Handler VSD on AC Fan Motors	HP	N/A	N/A	Per TRM Section 3.2.14	\$966.89	15	\$145.09 - \$217.63

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)
Circulation Fan: High-Volume Low-Speed	Unit	N/A	N/A	Per TRM Section 3.2.15	\$2,647.96	15	\$397.34 - \$596.01
Demand Controlled Ventilation	HVAC Unit	N/A	N/A	Per TRM Section 3.2.16	\$1,612.91	15	\$242.03 - \$363.04
Advanced Rooftop Controls	HVAC Unit	N/A	N/A	Per TRM Section 3.2.17	\$116.86	10	\$17.54 - \$26.30
C&I Energy Star Certified Connected Thermostats	Unit	N/A	N/A	Per TRM Section 3.2.18	\$230.96	11	\$28.80 - \$43.19
Adjustment of Programmable Thermostats	Unit	N/A	N/A	Per TRM Section 3.2.19	\$100.00	11	\$0.00 - \$0.00
HP <5.4 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$1,093.00	15	\$48.00 - \$72.00
Air Conditioner <5.4 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$819.00	15	\$48.00 - \$72.00
Unitary Heat Pump 5.4 to 11.3 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$163.00	15	\$48.00 - \$72.00
Unitary Heat Pump 11.3 to 20 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$116.00	15	\$80.00 - \$120.00
Unitary Air Conditioner 20 to 63.3 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$96.00	15	\$80.00 - \$120.00
Unitary Air Conditioner >63.3 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$95.00	15	\$48.00 - \$72.00
Packaged Terminal Air Conditioner	Tons	N/A	N/A	Greater than federal minimum efficiency	\$787.00	15	\$52.00 - \$78.00
Packaged Terminal Heat Pump	Tons	N/A	N/A	Greater than federal minimum efficiency	\$787.00	15	\$52.00 - \$78.00
Variable Refrigerant Flow (VRF)	Tons	N/A	N/A	Per TRM Section 3.2.2	\$300.00	15	\$160.00 - \$240.00
Duct Sealing and Insulation	HVAC Unit	N/A	N/A	Per TRM Section 3.2.20	\$844.32	15	\$126.70 - \$190.04
Chilled Water Pipe Insulation	Ln Ft	N/A	N/A	Per TRM Section 3.2.21	\$18.25	15	\$8.00 - \$12.00
Air Cooled Chiller	Tons	N/A	N/A	Greater than federal minimum efficiency	\$351.00	15	\$72.00 - \$108.00
Water Cooled Chiller	Tons	N/A	N/A	Greater than federal minimum efficiency	\$259.00	15	\$40.00 - \$60.00
Water Source Heat Pump	Tons	N/A	N/A	Greater than federal minimum efficiency	\$327.00	15	\$92.00 - \$138.00
Ductless Mini-Split Heat Pumps – Commercial < 5.4 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$3,789.14	15	\$244.03 - \$366.05
Mini/Multi Split Heat Pump <5.4 Tons	Tons	N/A	N/A	Greater than federal minimum efficiency	\$1,093.00	15	\$64.00 - \$96.00
Small C&I HVAC Refrigerant Charge Correction	Tons	N/A	N/A	HVAC system <= 20 tons	\$46.17	3	\$2.32 - \$5.30
HVAC Tune Up	Tons	N/A	N/A	HVAC system <= 20 tons	\$87.56	3	\$4.80 - \$10.95

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)
Room Air Conditioner	Unit	N/A	N/A	Greater than federal minimum efficiency	\$516.31	9	\$3.00 - \$4.50
Premium Efficiency Motors	Unit	N/A	N/A	Per TRM Section 3.3.1	\$41.16	15	\$6.18 - \$9.26
VFD - HVAC Fan Motor	HP	N/A	N/A	Existing motor without a VFD control	\$1,015.87	15	\$60.00 - \$90.00
VFD - HVAC Pump Motor	HP	N/A	N/A	Existing motor without a VFD control	\$1,015.87	15	\$60.00 - \$90.00
VFD - Process Fan Motor	HP	N/A	N/A	Existing motor without a VFD control	\$1,015.87	15	\$80.00 - \$120.00
VFD Process Pump Motor	HP	N/A	N/A	Existing motor without a VFD control	\$1,015.87	15	\$80.00 - \$120.00
ECM Circulating Fan	Unit	N/A	N/A	Existing SP or PSC motor, <= 1 HP	\$395.48	15	\$160.00 - \$240.00
VSD on Kitchen Exhaust Fan	HP	N/A	N/A	Existing motor without a VSD control	\$1,886.45	15	\$283.07 - \$424.61
ECM Pumps	HP	N/A	N/A	Existing single-speed motor	\$300.00	15	\$80.00 - \$120.00
PEI-Rated Pumps	Unit	N/A	N/A	Per TRM Section 3.3.6	\$1,125.00	13	\$300.00 - \$450.00
Heat Pump Water Heater	Unit	N/A	N/A	Per TRM Section 3.4.1	\$776.00	10	\$400.00 - \$600.00
Low Flow Pre-Rinse Sprayers for Retrofit Programs and Time of Sale Program	Unit	N/A	N/A	Per TRM Section 3.4.2	\$120.41	8	\$120.45 - \$180.67
Domestic Hot Water Pipe Insulation	Ln Ft	N/A	N/A	Per TRM Section 3.4.3	\$6.31	15	\$0.95 - \$1.42
Energy Star Refrigeration/Freezer Cases	Unit	N/A	N/A	ENERGY STAR qualified	\$2,124.00	12	\$124.00 - \$186.00
Auto-Closer for Walk-in Cooler Doors	Door	N/A	N/A	Per TRM section 3.5.10	\$260.00	8	\$40.00 - \$312.00
Special Doors with Low or No Anti-Sweat Heat for Reach-In Freezers and Coolers	Door	N/A	N/A	Per TRM section 3.5.11	\$2,394.00	12	\$60.00 - \$90.00
Suction Pipe Insulation for Walk-In Coolers and Freezers	Ln Ft	N/A	N/A	Per TRM section 3.5.12	\$15.00	11	\$20.00 - \$30.00
Refrigerated Display Cases with Doors Replacing Open Cases	Ln Ft	N/A	N/A	Per TRM section 3.5.13	\$762.80	12	\$160.00 - \$240.00
Adding Doors to Existing Refrigerated Display Cases	Ln Ft	N/A	N/A	Per TRM section 3.5.14	\$605.42	12	\$80.00 - \$120.00
Refrigerated Case Light Occupancy Sensors	Sensor	N/A	N/A	Per TRM section 3.5.15	\$35.00	8	\$20.00 - \$30.00
Food Service Equipment Novelty Cooler Shutoff	Unit	N/A	N/A	Per TRM section 3.5.16	\$503.26	10	\$584.98 - \$877.46
ECM motor for walk in freezer or cooler	Motor	N/A	N/A	Existing SP or PSC motor	\$295.84	15	\$60.00 - \$355.01
ECM motors for reach-in freezer or cooler	Motor	N/A	N/A	Existing SP or PSC motor	\$295.84	15	\$60.00 - \$355.01
Evaporator Fan Motor Controls	Fan Controlled	N/A	N/A	Existing motor without controls	\$317.13	15	\$253.70 - \$380.55
Controls: Evaporator Fan Controllers	Fan Controlled	N/A	N/A	Existing motor without controls	\$317.13	15	\$60.00 - \$90.00

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)
Controls: Floating Head Pressure Controls	Unit	N/A	N/A	Per TRM section 3.5.4	\$531.43	15	\$35.97 - \$53.95
Anti-Sweat Heater Controls	Control	N/A	N/A	Per TRM section 3.5.5	\$1,051.00	12	\$160.00 - \$1,261.20
Controls: Evaporator Coil Defrost Control	Evaporator	N/A	N/A	Existing cooler/freezer without defrost controls	\$317.13	10	\$60.00 - \$380.55
Variable Speed Refrigeration Compressor	Unit	N/A	N/A	Per TRM section 3.5.7	\$2,126.58	15	\$12.00 - \$18.00
Strip Curtains for Walk-In Freezers and Coolers	Door	N/A	N/A	Per TRM section 3.5.8	\$130.00	4	\$48.00 - \$156.00
Night Covers for Display Cases	Unit	N/A	N/A	Per TRM section 3.5.9	\$951.76	5	\$32.55 - \$48.82
Energy Star Clothes Washer	Unit	N/A	N/A	ENERGY STAR qualified	\$676.89	9	\$5.84 - \$12.09
Energy Star Bathroom Ventilation Fan in Commercial Applications	Unit	N/A	N/A	ENERGY STAR qualified	\$25.16	12	\$3.78 - \$5.66
Energy Star Ice Machines	Unit	N/A	N/A	ENERGY STAR qualified	\$231.41	10	\$42.60 - \$63.90
Commercial Induction Cooktops	Unit	N/A	N/A	Minimum 80% cooking energy efficiency	\$19.51	10	\$2.93 - \$4.39
Controls: Beverage And Snack Machine Controls	Unit	N/A	N/A	Per TRM Section 3.7.2	\$234.30	5	\$25.02 - \$37.53
Energy Star Electric Steam Cooker	Unit	N/A	N/A	ENERGY STAR qualified	\$3,588.53	12	\$538.48 - \$807.72
Energy Star Combination Oven	Unit	N/A	N/A	ENERGY STAR qualified	\$15.75	12	\$2.36 - \$3.55
Energy Star Commercial Convection Oven	Unit	N/A	N/A	ENERGY STAR qualified	\$1,122.57	12	\$168.45 - \$252.67
Energy Star Commercial Fryer	Unit	N/A	N/A	ENERGY STAR qualified	\$96.49	12	\$14.48 - \$21.72
Energy Star Commercial Hot Food Holding Cabinet	Unit	N/A	N/A	ENERGY STAR qualified	\$232.58	12	\$34.90 - \$52.35
Energy Star Commercial Dishwasher	Unit	N/A	N/A	ENERGY STAR qualified	\$1,242.84	10	\$806.04 - \$1,209.06
Energy Star Commercial Griddle	Unit	N/A	N/A	ENERGY STAR qualified	\$1,106.79	12	\$166.08 - \$249.12
Wall And Ceiling Insulation	Sq Ft	N/A	N/A	Per TRM Section 3.8.1	\$2,725.40	15	\$408.96 - \$613.44
Advanced Power Strips	Unit	N/A	N/A	Tier I or II	\$40.91	5	\$4.99 - \$7.49
Energy Star Servers	Unit	N/A	N/A	ENERGY STAR qualified	\$419.74	4	\$46.27 - \$69.41
Server Virtualization	Unit	N/A	N/A	Per TRM Section 3.9.3	\$68.06	4	\$21.29 - \$31.94
Custom, Compressed Air	kWh	N/A	N/A	Custom per project	\$0.22	15	\$0.06 - \$0.14
Combined Heat and Power	kWh	N/A	N/A	Custom per project	\$0.16	15	\$0.10 - \$0.14
Custom, HVAC	kWh	N/A	N/A	Custom per project	\$0.16	15	\$0.06 - \$0.14
Custom, Lighting	kWh	N/A	N/A	Custom per project	\$0.16	15	\$0.06 - \$0.14
Custom, Other	kWh	N/A	N/A	Custom per project	\$0.35	13	\$0.06 - \$0.14
Custom, Process	kWh	N/A	N/A	Custom per project	\$0.16	15	\$0.06 - \$0.14
Custom, Refrigeration	kWh	N/A	N/A	Custom per project	\$0.16	14	\$0.06 - \$0.14
Retrocommissioning	Project	N/A	N/A	>= 10% facility savings	\$55,000.00	15	\$32,000.00 - \$48,000.00

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)
Strategic Energy Management	Project	N/A	N/A	>= 10% facility savings	\$71,366.06	15	\$16,000.00 - \$24,000.00
Virtual Commissioning	Project	N/A	N/A	>= 10% facility savings	\$15,000.00	7	\$8,160.00 - \$12,240.00
Virtual SEM	Project	N/A	N/A	>= 10% facility savings	\$27,200.00	7	\$16,000.00 - \$24,000.00
Custom, Cooling	project	N/A	N/A	Custom per project	\$0.20	12	\$0.06 - \$0.14
Customer Front-of-the-Meter	Project	N/A	N/A	System benefit provided	\$198,766.44	15	\$18,913.00 - \$28,369.50

Table 9: Estimated Savings and Participation

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
LED Parking Garage and Canopy Fixtures and Retrofit Kits	2.1.1	Energy Savings (MWh)	32.82	32.82	32.82	32.82	32.82	164.10
		Summer Demand Reduction (MW)	0.0015	0.0015	0.0015	0.0015	0.0015	0.0073
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	60	60	60	60	60	301
LED Replacement Lamps (Tubes)-2' & 4'	2.1.1	Energy Savings (MWh)	507.33	507.33	507.33	507.33	507.33	2,536.66
		Summer Demand Reduction (MW)	0.0693	0.0693	0.0693	0.0693	0.0693	0.3464
		Winter Demand Reduction (MW)	0.0668	0.0668	0.0668	0.0668	0.0668	0.3341
		Projected Participation	6,356	6,356	6,356	6,356	6,356	31,782
Lighting - LED A-Line	2.1.1	Energy Savings (MWh)	384.90	384.90	384.90	384.90	384.90	1,924.50
		Summer Demand Reduction (MW)	0.3620	0.3620	0.3620	0.3620	0.3620	1.8099
		Winter Demand Reduction (MW)	0.4336	0.4336	0.4336	0.4336	0.4336	2.1682
		Projected Participation	16,731	16,731	16,731	16,731	16,731	83,654
Lighting - LED Globe/Specialty	2.1.1	Energy Savings (MWh)	171.30	171.30	171.30	171.30	171.30	856.49
		Summer Demand Reduction (MW)	0.1609	0.1609	0.1609	0.1609	0.1609	0.8046
		Winter Demand Reduction (MW)	0.1928	0.1928	0.1928	0.1928	0.1928	0.9639
		Projected Participation	4,958	4,958	4,958	4,958	4,958	24,788
Lighting - LED Other	2.1.1	Energy Savings (MWh)	484.76	484.76	484.76	484.76	484.76	2,423.78
		Summer Demand Reduction (MW)	0.4018	0.4018	0.4018	0.4018	0.4018	2.0088
		Winter Demand Reduction (MW)	0.2975	0.2975	0.2975	0.2975	0.2975	1.4873
		Projected Participation	3,427	3,427	3,427	3,427	3,427	17,137
Lighting - LED Reflector	2.1.1	Energy Savings (MWh)	98.94	98.94	98.94	98.94	98.94	494.70
		Summer Demand Reduction (MW)	0.0935	0.0935	0.0935	0.0935	0.0935	0.4677

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.1121	0.1121	0.1121	0.1121	0.1121	0.5604
		Projected Participation	4,338	4,338	4,338	4,338	4,338	21,688
Residential Occupancy Sensors	2.1.2	Energy Savings (MWh)	0.04	-	-	-	-	0.04
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
LED Nightlight	2.1.3	Energy Savings (MWh)	42.58	42.58	42.58	42.58	42.58	212.88
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	2,065	2,065	2,065	2,065	2,065	10,326
Holiday Lights	2.1.4	Energy Savings (MWh)	0.00	-	-	-	-	0.00
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Air Source Heat Pump - SEER 17.5 / SEER2 16.3 HSPF 9.7 / HSPF2 8.2 +	2.2.1	Energy Savings (MWh)	65.73	65.73	65.73	65.73	65.73	328.66
		Summer Demand Reduction (MW)	0.0101	0.0101	0.0101	0.0101	0.0101	0.0506
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	115	115	115	115	115	575
Central Air Conditioner SEER 17.5 / SEER2 16.3	2.2.1	Energy Savings (MWh)	20.86	20.86	20.86	20.86	20.86	104.28
		Summer Demand Reduction (MW)	0.0145	0.0145	0.0145	0.0145	0.0145	0.0724
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	90	90	90	90	90	448
Ductless Mini-Split ENERGY STAR Cold Climate rated	2.2.1	Energy Savings (MWh)	203.58	203.58	203.58	203.58	203.58	1,017.88

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0145	0.0145	0.0145	0.0145	0.0145	0.0725
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	85	85	85	85	85	424
Duct Sealing & Duct Insulation	2.2.10	Energy Savings (MWh)	1.11	-	-	-	-	1.11
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Projected Participation	1	-	-	-	-	1
Air Handler Filter Whistles	2.2.11	Energy Savings (MWh)	0.01	-	-	-	-	0.01
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Connected Thermostat	2.2.12	Energy Savings (MWh)	177.38	177.38	177.38	177.38	177.38	886.90
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	310	310	310	310	310	1,551
Energy Star Certified Smart Thermostat	2.2.12	Energy Savings (MWh)	1,018.24	1,018.24	1,018.24	1,018.24	1,018.24	5,091.20
		Summer Demand Reduction (MW)	0.1186	0.1186	0.1186	0.1186	0.1186	0.5931
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1,540	1,540	1,540	1,540	1,540	7,702
Furnace Maintenance	2.2.13	Energy Savings (MWh)	0.01	-	-	-	-	0.01
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Energy Star Bathroom Exhaust Fan	2.2.14	Energy Savings (MWh)	0.38	0.38	0.38	0.38	0.38	1.88
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	16	16	16	16	16	79
Air Conditioner <5.4 Tons	2.2.2	Energy Savings (MWh)	105.77	105.77	105.77	105.77	105.77	528.84
		Summer Demand Reduction (MW)	0.0218	0.0218	0.0218	0.0218	0.0218	0.1092
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	275	275	275	275	275	1,377
Heat Pump <5.4 Tons	2.2.2	Energy Savings (MWh)	433.54	433.54	433.54	433.54	433.54	2,167.71
		Summer Demand Reduction (MW)	0.0104	0.0104	0.0104	0.0104	0.0104	0.0518
		Winter Demand Reduction (MW)	0.0238	0.0238	0.0238	0.0238	0.0238	0.1190
		Projected Participation	551	551	551	551	551	2,754
Mini/Multi Split Air Conditioner	2.2.3	Energy Savings (MWh)	382.91	382.91	382.91	382.91	382.91	1,914.54
		Summer Demand Reduction (MW)	0.0792	0.0792	0.0792	0.0792	0.0792	0.3959
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	960	960	960	960	960	4,798
Mini/Multi Split Heat Pump	2.2.3	Energy Savings (MWh)	2,710.32	2,710.32	2,710.32	2,710.32	2,710.32	13,551.59
		Summer Demand Reduction (MW)	0.0240	0.0240	0.0240	0.0240	0.0240	0.1200
		Winter Demand Reduction (MW)	0.1716	0.1716	0.1716	0.1716	0.1716	0.8580
		Projected Participation	1,919	1,919	1,919	1,919	1,919	9,597
Furnace Circulation Fan - High Efficiency (ECM - Variable Speed)	2.2.4	Energy Savings (MWh)	4.48	4.48	4.48	4.48	4.48	22.38
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	-	-	-	-	-	-

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	24	24	24	24	24	120
GSHP Desuperheaters	2.2.5	Energy Savings (MWh)	0.50	-	-	-	-	0.50
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Air Conditioner & Heat Pump Maintenance	2.2.6	Energy Savings (MWh)	0.49	-	-	-	-	0.49
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	2	-	-	-	-	2
Room Air Conditioner	2.2.7	Energy Savings (MWh)	0.99	0.99	0.99	0.99	0.99	4.97
		Summer Demand Reduction (MW)	0.0024	0.0024	0.0024	0.0024	0.0024	0.0118
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	16	16	16	16	16	79
Room A/C – Recycling	2.2.8	Energy Savings (MWh)	107.53	107.53	107.53	107.53	107.53	537.64
		Summer Demand Reduction (MW)	0.1318	0.1318	0.1318	0.1318	0.1318	0.6591
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	187	187	187	187	187	934
Room AC Replacement	2.2.8	Energy Savings (MWh)	0.81	0.81	0.81	0.81	0.81	4.03
		Summer Demand Reduction (MW)	0.0022	0.0022	0.0022	0.0022	0.0022	0.0109
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	37	37	37	37	37	185
Window Heat Pump	2.2.9	Energy Savings (MWh)	1.96	-	-	-	-	1.96
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0006	-	-	-	-	0.0006
		Projected Participation	1	-	-	-	-	1
Heat Pump Water Heater	2.3.1	Energy Savings (MWh)	679.18	679.18	679.18	679.18	679.18	3,395.92
		Summer Demand Reduction (MW)	0.0669	0.0669	0.0669	0.0669	0.0669	0.3347
		Winter Demand Reduction (MW)	0.1166	0.1166	0.1166	0.1166	0.1166	0.5830
		Projected Participation	359	359	359	359	359	1,796
Smart Water Heater Controls	2.3.10	Energy Savings (MWh)	0.03	-	-	-	-	0.03
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Solar Water Heaters	2.3.2	Energy Savings (MWh)	1.88	-	-	-	-	1.88
		Summer Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Winter Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Projected Participation	1	-	-	-	-	1
Water Heater Tank Wrap	2.3.3	Energy Savings (MWh)	0.09	-	-	-	-	0.09
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Water Heater Temperature Setback	2.3.4	Energy Savings (MWh)	0.06	-	-	-	-	0.06
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Pipe Insulation	2.3.5	Energy Savings (MWh)	17.57	17.57	17.57	17.57	17.57	87.86

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	207	207	207	207	207	1,034
Water Heater Pipe Insulation	2.3.5	Energy Savings (MWh)	11.70	11.70	11.70	11.70	11.70	58.49
		Summer Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0048
		Winter Demand Reduction (MW)	0.0018	0.0018	0.0018	0.0018	0.0018	0.0089
		Projected Participation	154	154	154	154	154	771
Low-Flow Faucet Aerator	2.3.6	Energy Savings (MWh)	105.59	105.59	105.59	105.59	105.59	527.96
		Summer Demand Reduction (MW)	0.0144	0.0144	0.0144	0.0144	0.0144	0.0722
		Winter Demand Reduction (MW)	0.0267	0.0267	0.0267	0.0267	0.0267	0.1333
		Projected Participation	721	721	721	721	721	3,607
Low-Flow Showerhead	2.3.7	Energy Savings (MWh)	57.22	57.22	57.22	57.22	57.22	286.10
		Summer Demand Reduction (MW)	0.0046	0.0046	0.0046	0.0046	0.0046	0.0230
		Winter Demand Reduction (MW)	0.0085	0.0085	0.0085	0.0085	0.0085	0.0424
		Projected Participation	361	361	361	361	361	1,805
Thermostatic Shower Restriction Valves	2.3.8	Energy Savings (MWh)	2.25	2.25	2.25	2.25	2.25	11.26
		Summer Demand Reduction (MW)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0012
		Winter Demand Reduction (MW)	0.0004	0.0004	0.0004	0.0004	0.0004	0.0021
		Projected Participation	77	77	77	77	77	387
Thermostatic Showerhead	2.3.8	Energy Savings (MWh)	2.99	2.99	2.99	2.99	2.99	14.94
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	104	104	104	104	104	519

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Drain Water Heat Recovery Units	2.3.9	Energy Savings (MWh)	0.23	-	-	-	-	0.23
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Freezer	2.4.1	Energy Savings (MWh)	95.24	95.24	95.24	95.24	95.24	476.19
		Summer Demand Reduction (MW)	0.0132	0.0132	0.0132	0.0132	0.0132	0.0660
		Winter Demand Reduction (MW)	0.0117	0.0117	0.0117	0.0117	0.0117	0.0583
		Projected Participation	187	187	187	187	187	934
Energy Star Refrigerator	2.4.1	Energy Savings (MWh)	923.72	923.72	923.72	923.72	923.72	4,618.60
		Summer Demand Reduction (MW)	0.1250	0.1250	0.1250	0.1250	0.1250	0.6252
		Winter Demand Reduction (MW)	0.1104	0.1104	0.1104	0.1104	0.1104	0.5521
		Projected Participation	1,105	1,105	1,105	1,105	1,105	5,525
Energy Star Dishwashers	2.4.10	Energy Savings (MWh)	0.47	0.47	0.47	0.47	0.47	2.33
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
		Projected Participation	16	16	16	16	16	79
Energy Star Dehumidifiers	2.4.11	Energy Savings (MWh)	21.75	21.75	21.75	21.75	21.75	108.73
		Summer Demand Reduction (MW)	0.0041	0.0041	0.0041	0.0041	0.0041	0.0204
		Winter Demand Reduction (MW)	0.0036	0.0036	0.0036	0.0036	0.0036	0.0180
		Projected Participation	154	154	154	154	154	771
Dehumidifier – Recycling	2.4.12	Energy Savings (MWh)	99.32	99.32	99.32	99.32	99.32	496.58
		Summer Demand Reduction (MW)	0.0350	0.0350	0.0350	0.0350	0.0350	0.1750
		Winter Demand Reduction (MW)	0.0309	0.0309	0.0309	0.0309	0.0309	0.1545

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	140	140	140	140	140	700
ENERGY STAR Ceiling Fans	2.4.13	Energy Savings (MWh)	0.03	-	-	-	-	0.03
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Air Purifiers	2.4.14	Energy Savings (MWh)	27.16	27.16	27.16	27.16	27.16	135.80
		Summer Demand Reduction (MW)	0.0026	0.0026	0.0026	0.0026	0.0026	0.0128
		Winter Demand Reduction (MW)	0.0023	0.0023	0.0023	0.0023	0.0023	0.0113
		Projected Participation	154	154	154	154	154	771
Energy Star Freezer	2.4.2	Energy Savings (MWh)	0.22	0.22	0.22	0.22	0.22	1.10
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
		Projected Participation	16	16	16	16	16	79
Refrigerator / Freezer Recycling with and without Replacement	2.4.3	Energy Savings (MWh)	121.55	121.55	121.55	121.55	121.55	607.76
		Summer Demand Reduction (MW)	0.0202	0.0202	0.0202	0.0202	0.0202	0.1011
		Winter Demand Reduction (MW)	0.0179	0.0179	0.0179	0.0179	0.0179	0.0893
		Projected Participation	285	285	285	285	285	1,423
Low-Capacity Refrigerator / Freezer Recycling without Replacement	2.4.4	Energy Savings (MWh)	0.45	-	-	-	-	0.45
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	2	-	-	-	-	2
ENERGY STAR Coolers	2.4.5	Energy Savings (MWh)	0.04	-	-	-	-	0.04
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Cooler Recycling with and without Replacement	2.4.6	Energy Savings (MWh)	0.31	-	-	-	-	0.31
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	2	-	-	-	-	2
Residential Induction Cooktop	2.4.7	Energy Savings (MWh)	0.01	-	-	-	-	0.01
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Clothes Washer	2.4.8	Energy Savings (MWh)	0.09	0.09	0.09	0.09	0.09	0.44
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
		Projected Participation	16	16	16	16	16	79
Energy Star Clothes Dryer	2.4.9	Energy Savings (MWh)	0.32	0.32	0.32	0.32	0.32	1.60
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Projected Participation	16	16	16	16	16	79
Advanced Power Strips	2.5.1	Energy Savings (MWh)	287.86	287.86	287.86	287.86	287.86	1,439.32
		Summer Demand Reduction (MW)	0.0384	0.0384	0.0384	0.0384	0.0384	0.1918
		Winter Demand Reduction (MW)	0.0494	0.0494	0.0494	0.0494	0.0494	0.2470
		Projected Participation	2,784	2,784	2,784	2,784	2,784	13,918
Air Sealing	2.6.1	Energy Savings (MWh)	36.94	36.94	36.94	36.94	36.94	184.70

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	35	35	35	35	35	174
Caulking	2.6.2	Energy Savings (MWh)	0.44	0.44	0.44	0.44	0.44	2.22
		Summer Demand Reduction (MW)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0012
		Winter Demand Reduction (MW)	0.0003	0.0003	0.0003	0.0003	0.0003	0.0014
		Projected Participation	77	77	77	77	77	387
Outlet Gaskets	2.6.2	Energy Savings (MWh)	1.05	1.05	1.05	1.05	1.05	5.26
		Summer Demand Reduction (MW)	0.0006	0.0006	0.0006	0.0006	0.0006	0.0028
		Winter Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0033
		Projected Participation	308	308	308	308	308	1,540
Weather Stripping	2.6.2	Energy Savings (MWh)	17.70	17.70	17.70	17.70	17.70	88.49
		Summer Demand Reduction (MW)	0.0003	0.0003	0.0003	0.0003	0.0003	0.0014
		Winter Demand Reduction (MW)	0.0003	0.0003	0.0003	0.0003	0.0003	0.0017
		Projected Participation	361	361	361	361	361	1,805
Insulation, Basement Wall	2.6.3	Energy Savings (MWh)	54.61	54.61	54.61	54.61	54.61	273.05
		Summer Demand Reduction (MW)	0.0015	0.0015	0.0015	0.0015	0.0015	0.0073
		Winter Demand Reduction (MW)	0.0017	0.0017	0.0017	0.0017	0.0017	0.0087
		Projected Participation	40	40	40	40	40	200
Insulation, Ceiling	2.6.3	Energy Savings (MWh)	165.51	165.51	165.51	165.51	165.51	827.55
		Summer Demand Reduction (MW)	0.0072	0.0072	0.0072	0.0072	0.0072	0.0361
		Winter Demand Reduction (MW)	0.0086	0.0086	0.0086	0.0086	0.0086	0.0432
		Projected Participation	168	168	168	168	168	840

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Insulation, Exterior Wall	2.6.3	Energy Savings (MWh)	24.71	24.71	24.71	24.71	24.71	123.57
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0045
		Projected Participation	16	16	16	16	16	79
Insulation, Floor	2.6.3	Energy Savings (MWh)	12.51	12.51	12.51	12.51	12.51	62.56
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0044
		Projected Participation	8	8	8	8	8	40
Basement or Crawl Space Wall Insulation	2.6.4	Energy Savings (MWh)	0.00	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	20	20	20	20	20	100
ENERGY STAR Windows	2.6.5	Energy Savings (MWh)	0.00	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0051
		Winter Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0052
		Projected Participation	1	1	1	1	1	6
Residential New Construction	2.7.1	Energy Savings (MWh)	4.47	-	-	-	-	4.47
		Summer Demand Reduction (MW)	0.0006	-	-	-	-	0.0006
		Winter Demand Reduction (MW)	0.0009	-	-	-	-	0.0009
		Projected Participation	1	-	-	-	-	1
ENERGY STAR Manufactured Homes	2.7.2	Energy Savings (MWh)	18.86	-	-	-	-	18.86
		Summer Demand Reduction (MW)	0.0026	-	-	-	-	0.0026
		Winter Demand Reduction (MW)	0.0037	-	-	-	-	0.0037

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1	-	-	-	-	1
Home Energy Reports	2.7.3	Energy Savings (MWh)	34,400.00	-	-	-	-	34,400.00
		Summer Demand Reduction (MW)	7.9400	-	-	-	-	7.9400
		Winter Demand Reduction (MW)	7.9400	-	-	-	-	7.9400
		Projected Participation	2	-	-	-	-	2
ENERGY STAR Pool Pumps	2.8.1	Energy Savings (MWh)	0.11	-	-	-	-	0.11
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Single Speed Pool Pump Replacement	2.8.2	Energy Savings (MWh)	1.17	-	-	-	-	1.17
		Summer Demand Reduction (MW)	0.0005	-	-	-	-	0.0005
		Winter Demand Reduction (MW)	0.0006	-	-	-	-	0.0006
		Projected Participation	1	-	-	-	-	1
Photovoltaic (PV) Solar Generation	2.8.3	Energy Savings (MWh)	7.33	-	-	-	-	7.33
		Summer Demand Reduction (MW)	0.0023	-	-	-	-	0.0023
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1
Direct Load Control & Behavior-Based Demand Response Programs	2.9.1	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0555	0.0555	0.0555	0.0555	0.0555	0.2776
		Winter Demand Reduction (MW)	0.0694	0.0694	0.0694	0.0694	0.0694	0.3470
		Projected Participation	154	154	154	154	154	771
Managed EV Charging, 3 - 9 PM	2.9.1	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.3373	0.3373	0.3373	0.3373	0.3373	1.6863

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.2480	0.2480	0.2480	0.2480	0.2480	1.2399
		Projected Participation	992	992	992	992	992	4,960
Optimize Energy Star Thermostats	2.9.1	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0679	0.0679	0.0679	0.0679	0.0679	0.3393
		Winter Demand Reduction (MW)	0.2221	0.2221	0.2221	0.2221	0.2221	1.1105
		Projected Participation	62	62	62	62	62	308
Smart Energy Service Panel	2.9.1	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Winter Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Projected Participation	1	-	-	-	-	1
High Output Linear LED T5/T8 Fixture	3.1.1	Energy Savings (MWh)	32.50	32.50	32.50	32.50	32.50	162.49
		Summer Demand Reduction (MW)	0.0090	0.0090	0.0090	0.0090	0.0090	0.0448
		Winter Demand Reduction (MW)	0.0060	0.0060	0.0060	0.0060	0.0060	0.0301
		Projected Participation	78	78	78	78	78	388
LED 2' Linear Replacement Lamp	3.1.1	Energy Savings (MWh)	74.76	74.76	74.76	74.76	74.76	373.80
		Summer Demand Reduction (MW)	0.0147	0.0147	0.0147	0.0147	0.0147	0.0736
		Winter Demand Reduction (MW)	0.0099	0.0099	0.0099	0.0099	0.0099	0.0495
		Projected Participation	1,297	1,297	1,297	1,297	1,297	6,483
LED 3' Linear Replacement Lamp	3.1.1	Energy Savings (MWh)	48.98	48.98	48.98	48.98	48.98	244.88
		Summer Demand Reduction (MW)	0.0107	0.0107	0.0107	0.0107	0.0107	0.0536
		Winter Demand Reduction (MW)	0.0072	0.0072	0.0072	0.0072	0.0072	0.0361
		Projected Participation	923	923	923	923	923	4,614
LED 4' Interior Linear Strip Fixture or Retrofit Kit	3.1.1	Energy Savings (MWh)	460.05	460.05	460.05	460.05	460.05	2,300.26

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0979	0.0979	0.0979	0.0979	0.0979	0.4895
		Winter Demand Reduction (MW)	0.0658	0.0658	0.0658	0.0658	0.0658	0.3291
		Projected Participation	3,308	3,308	3,308	3,308	3,308	16,542
LED 4' Linear Replacement Lamp	3.1.1	Energy Savings (MWh)	2,114.10	2,114.10	2,114.10	2,114.10	2,114.10	10,570.49
		Summer Demand Reduction (MW)	0.5166	0.5166	0.5166	0.5166	0.5166	2.5828
		Winter Demand Reduction (MW)	0.3473	0.3473	0.3473	0.3473	0.3473	1.7367
		Projected Participation	15,843	15,843	15,843	15,843	15,843	79,217
LED 8' Interior Linear Strip Fixture or Retrofit Kit	3.1.1	Energy Savings (MWh)	417.81	417.81	417.81	417.81	417.81	2,089.06
		Summer Demand Reduction (MW)	0.0962	0.0962	0.0962	0.0962	0.0962	0.4809
		Winter Demand Reduction (MW)	0.0647	0.0647	0.0647	0.0647	0.0647	0.3234
		Projected Participation	1,169	1,169	1,169	1,169	1,169	5,846
LED 8' Linear Replacement Lamp	3.1.1	Energy Savings (MWh)	112.51	112.51	112.51	112.51	112.51	562.54
		Summer Demand Reduction (MW)	0.0275	0.0275	0.0275	0.0275	0.0275	0.1374
		Winter Demand Reduction (MW)	0.0185	0.0185	0.0185	0.0185	0.0185	0.0924
		Projected Participation	711	711	711	711	711	3,555
LED Downlight with Integrated Occupancy Sensor	3.1.1	Energy Savings (MWh)	0.40	0.40	0.40	0.40	0.40	1.98
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Projected Participation	11	11	11	11	11	53
LED Downlight with Integrated Occupancy and Daylight Sensor	3.1.1	Energy Savings (MWh)	0.93	0.93	0.93	0.93	0.93	4.66
		Summer Demand Reduction (MW)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0009
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006
		Projected Participation	22	22	22	22	22	108

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
LED Exterior Area Lighting Fixture	3.1.1	Energy Savings (MWh)	1,813.81	1,813.81	1,813.81	1,813.81	1,813.81	9,069.04
		Summer Demand Reduction (MW)	0.0842	0.0842	0.0842	0.0842	0.0842	0.4210
		Winter Demand Reduction (MW)	0.0566	0.0566	0.0566	0.0566	0.0566	0.2831
		Projected Participation	1,505	1,505	1,505	1,505	1,505	7,526
LED Interior 1' X 2'	3.1.1	Energy Savings (MWh)	3.14	3.14	3.14	3.14	3.14	15.71
		Summer Demand Reduction (MW)	0.0005	0.0005	0.0005	0.0005	0.0005	0.0024
		Winter Demand Reduction (MW)	0.0003	0.0003	0.0003	0.0003	0.0003	0.0016
		Projected Participation	17	17	17	17	17	85
LED Interior 1' X 4'	3.1.1	Energy Savings (MWh)	191.27	191.27	191.27	191.27	191.27	956.34
		Summer Demand Reduction (MW)	0.0339	0.0339	0.0339	0.0339	0.0339	0.1695
		Winter Demand Reduction (MW)	0.0228	0.0228	0.0228	0.0228	0.0228	0.1139
		Projected Participation	681	681	681	681	681	3,403
LED Interior 2' X 2'	3.1.1	Energy Savings (MWh)	735.94	735.94	735.94	735.94	735.94	3,679.71
		Summer Demand Reduction (MW)	0.1545	0.1545	0.1545	0.1545	0.1545	0.7726
		Winter Demand Reduction (MW)	0.1039	0.1039	0.1039	0.1039	0.1039	0.5195
		Projected Participation	3,767	3,767	3,767	3,767	3,767	18,835
LED Interior 2' X 4'	3.1.1	Energy Savings (MWh)	1,834.33	1,834.33	1,834.33	1,834.33	1,834.33	9,171.63
		Summer Demand Reduction (MW)	0.4035	0.4035	0.4035	0.4035	0.4035	2.0173
		Winter Demand Reduction (MW)	0.2713	0.2713	0.2713	0.2713	0.2713	1.3565
		Projected Participation	6,984	6,984	6,984	6,984	6,984	34,920
LED Interior High-Bay Fixture	3.1.1	Energy Savings (MWh)	1,504.18	1,504.18	1,504.18	1,504.18	1,504.18	7,520.91
		Summer Demand Reduction (MW)	0.3573	0.3573	0.3573	0.3573	0.3573	1.7866
		Winter Demand Reduction (MW)	0.2701	0.2701	0.2701	0.2701	0.2701	1.3503

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1,639	1,639	1,639	1,639	1,639	8,195
Lighting Retrofits, Custom	3.1.1	Energy Savings (MWh)	798.00	798.00	798.00	798.00	798.00	3,989.98
		Summer Demand Reduction (MW)	0.1359	0.1359	0.1359	0.1359	0.1359	0.6795
		Winter Demand Reduction (MW)	0.1052	0.1052	0.1052	0.1052	0.1052	0.5261
		Projected Participation	968	968	968	968	968	4,838
New Construction Lighting	3.1.2	Energy Savings (MWh)	0.00	-	-	-	-	0.00
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
LED Canopy Luminaire and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	2.36	2.36	2.36	2.36	2.36	11.78
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Projected Participation	4	4	4	4	4	20
LED Downlight with NLC/LLLC	3.1.3	Energy Savings (MWh)	0.51	0.51	0.51	0.51	0.51	2.54
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
		Projected Participation	11	11	11	11	11	53
LED Exterior Luminaire and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	47.70	47.70	47.70	47.70	47.70	238.52
		Summer Demand Reduction (MW)	0.0013	0.0013	0.0013	0.0013	0.0013	0.0067
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0045
		Projected Participation	53	53	53	53	53	267
LED High-Bay Luminaire and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	1,000.13	1,000.13	1,000.13	1,000.13	1,000.13	5,000.67
		Summer Demand Reduction (MW)	0.1922	0.1922	0.1922	0.1922	0.1922	0.9608

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.1292	0.1292	0.1292	0.1292	0.1292	0.6461
		Projected Participation	599	599	599	599	599	2,994
LED Low-Bay Luminaire and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	127.30	127.30	127.30	127.30	127.30	636.49
		Summer Demand Reduction (MW)	0.0250	0.0250	0.0250	0.0250	0.0250	0.1252
		Winter Demand Reduction (MW)	0.0168	0.0168	0.0168	0.0168	0.0168	0.0842
		Projected Participation	556	556	556	556	556	2,782
LED Parking Garage Lighting with NLC/LLLC	3.1.3	Energy Savings (MWh)	14.93	14.93	14.93	14.93	14.93	74.64
		Summer Demand Reduction (MW)	0.0017	0.0017	0.0017	0.0017	0.0017	0.0084
		Winter Demand Reduction (MW)	0.0011	0.0011	0.0011	0.0011	0.0011	0.0057
		Projected Participation	7	7	7	7	7	33
LED Stairwell and Passageway Luminaire with NLC/LLLC	3.1.3	Energy Savings (MWh)	1.50	1.50	1.50	1.50	1.50	7.48
		Summer Demand Reduction (MW)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0009
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006
		Projected Participation	3	3	3	3	3	14
LED Surface and Suspended Linear Luminaire and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	131.27	131.27	131.27	131.27	131.27	656.33
		Summer Demand Reduction (MW)	0.0267	0.0267	0.0267	0.0267	0.0267	0.1337
		Winter Demand Reduction (MW)	0.0180	0.0180	0.0180	0.0180	0.0180	0.0899
		Projected Participation	947	947	947	947	947	4,736
LED Troffer and Retrofit Kit with NLC/LLLC	3.1.3	Energy Savings (MWh)	126.82	126.82	126.82	126.82	126.82	634.11
		Summer Demand Reduction (MW)	0.0256	0.0256	0.0256	0.0256	0.0256	0.1281
		Winter Demand Reduction (MW)	0.0172	0.0172	0.0172	0.0172	0.0172	0.0861
		Projected Participation	1,085	1,085	1,085	1,085	1,085	5,424
Lighting Controls	3.1.3	Energy Savings (MWh)	485.68	485.68	485.68	485.68	485.68	2,428.40

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0828	0.0828	0.0828	0.0828	0.0828	0.4138
		Winter Demand Reduction (MW)	0.0641	0.0641	0.0641	0.0641	0.0641	0.3204
		Projected Participation	779	779	779	779	779	3,897
Occupancy sensor, ceiling or wall mounted	3.1.3	Energy Savings (MWh)	34.39	34.39	34.39	34.39	34.39	171.97
		Summer Demand Reduction (MW)	0.0090	0.0090	0.0090	0.0090	0.0090	0.0452
		Winter Demand Reduction (MW)	0.0061	0.0061	0.0061	0.0061	0.0061	0.0304
		Projected Participation	372	372	372	372	372	1,859
Occupancy sensor, high bay fixture-integrated	3.1.3	Energy Savings (MWh)	99.12	99.12	99.12	99.12	99.12	495.62
		Summer Demand Reduction (MW)	0.0225	0.0225	0.0225	0.0225	0.0225	0.1127
		Winter Demand Reduction (MW)	0.0152	0.0152	0.0152	0.0152	0.0152	0.0758
		Projected Participation	573	573	573	573	573	2,864
Occupancy sensor, networked lighting controls	3.1.3	Energy Savings (MWh)	15.81	15.81	15.81	15.81	15.81	79.05
		Summer Demand Reduction (MW)	0.0045	0.0045	0.0045	0.0045	0.0045	0.0226
		Winter Demand Reduction (MW)	0.0030	0.0030	0.0030	0.0030	0.0030	0.0152
		Projected Participation	90	90	90	90	90	452
LED Exit Sign	3.1.4	Energy Savings (MWh)	0.79	-	-	-	-	0.79
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	4	-	-	-	-	4
LED Refrigeration Display Case Lighting	3.1.5	Energy Savings (MWh)	0.15	-	-	-	-	0.15
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
LED Canopy Luminaire and Retrofit Kit with Integrated Motion Sensor	3.1.6	Energy Savings (MWh)	7.05	7.05	7.05	7.05	7.05	35.25
		Summer Demand Reduction (MW)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0009
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006
		Projected Participation	15	15	15	15	15	75
LED Exterior Luminaire and Retrofit Kit with Integrated Motion Sensor	3.1.6	Energy Savings (MWh)	392.83	392.83	392.83	392.83	392.83	1,964.16
		Summer Demand Reduction (MW)	0.0109	0.0109	0.0109	0.0109	0.0109	0.0547
		Winter Demand Reduction (MW)	0.0073	0.0073	0.0073	0.0073	0.0073	0.0367
		Projected Participation	480	480	480	480	480	2,401
LED High-Bay Luminaire and Retrofit Kit with Integrated Occupancy Sensor	3.1.6	Energy Savings (MWh)	1,817.78	1,817.78	1,817.78	1,817.78	1,817.78	9,088.89
		Summer Demand Reduction (MW)	0.3496	0.3496	0.3496	0.3496	0.3496	1.7481
		Winter Demand Reduction (MW)	0.2351	0.2351	0.2351	0.2351	0.2351	1.1754
		Projected Participation	1,197	1,197	1,197	1,197	1,197	5,987
LED High-Bay Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	3.1.6	Energy Savings (MWh)	1,920.25	1,920.25	1,920.25	1,920.25	1,920.25	9,601.24
		Summer Demand Reduction (MW)	0.3691	0.3691	0.3691	0.3691	0.3691	1.8455
		Winter Demand Reduction (MW)	0.2482	0.2482	0.2482	0.2482	0.2482	1.2410
		Projected Participation	1,197	1,197	1,197	1,197	1,197	5,987
LED Low-Bay Luminaire and Retrofit Kit with Integrated Occupancy Sensor	3.1.6	Energy Savings (MWh)	209.67	209.67	209.67	209.67	209.67	1,048.33
		Summer Demand Reduction (MW)	0.0415	0.0415	0.0415	0.0415	0.0415	0.2077
		Winter Demand Reduction (MW)	0.0279	0.0279	0.0279	0.0279	0.0279	0.1397
		Projected Participation	1,113	1,113	1,113	1,113	1,113	5,564
LED Low-Bay Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	3.1.6	Energy Savings (MWh)	234.85	234.85	234.85	234.85	234.85	1,174.25
		Summer Demand Reduction (MW)	0.0463	0.0463	0.0463	0.0463	0.0463	0.2317
		Winter Demand Reduction (MW)	0.0312	0.0312	0.0312	0.0312	0.0312	0.1558

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1,113	1,113	1,113	1,113	1,113	5,564
LED Parking Garage Lighting with Integrated Motion Sensor	3.1.6	Energy Savings (MWh)	102.98	102.98	102.98	102.98	102.98	514.92
		Summer Demand Reduction (MW)	0.0116	0.0116	0.0116	0.0116	0.0116	0.0581
		Winter Demand Reduction (MW)	0.0078	0.0078	0.0078	0.0078	0.0078	0.0391
		Projected Participation	51	51	51	51	51	253
LED Parking Garage Lighting with Integrated Motion and Daylight Sensor	3.1.6	Energy Savings (MWh)	57.25	57.25	57.25	57.25	57.25	286.27
		Summer Demand Reduction (MW)	0.0065	0.0065	0.0065	0.0065	0.0065	0.0323
		Winter Demand Reduction (MW)	0.0043	0.0043	0.0043	0.0043	0.0043	0.0217
		Projected Participation	27	27	27	27	27	135
LED Stairwell and Passageway Luminaire with Integrated Motion Sensor	3.1.6	Energy Savings (MWh)	12.04	12.04	12.04	12.04	12.04	60.18
		Summer Demand Reduction (MW)	0.0014	0.0014	0.0014	0.0014	0.0014	0.0069
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0046
		Projected Participation	27	27	27	27	27	136
LED Surface and Suspended Linear Luminaire and Retrofit Kit with Integrated Occupancy Sensor	3.1.6	Energy Savings (MWh)	25.95	25.95	25.95	25.95	25.95	129.75
		Summer Demand Reduction (MW)	0.0052	0.0052	0.0052	0.0052	0.0052	0.0262
		Winter Demand Reduction (MW)	0.0035	0.0035	0.0035	0.0035	0.0035	0.0176
		Projected Participation	238	238	238	238	238	1,189
LED Surface and Suspended Linear Luminaire and Retrofit Kit with Integrated Occupancy and Daylight Sensor	3.1.6	Energy Savings (MWh)	148.91	148.91	148.91	148.91	148.91	744.53
		Summer Demand Reduction (MW)	0.0302	0.0302	0.0302	0.0302	0.0302	0.1511
		Winter Demand Reduction (MW)	0.0203	0.0203	0.0203	0.0203	0.0203	0.1016
		Projected Participation	1,185	1,185	1,185	1,185	1,185	5,924
LED Troffer and Retrofit Kit with Integrated Occupancy Sensor	3.1.6	Energy Savings (MWh)	24.49	24.49	24.49	24.49	24.49	122.45
		Summer Demand Reduction (MW)	0.0049	0.0049	0.0049	0.0049	0.0049	0.0244

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0033	0.0033	0.0033	0.0033	0.0033	0.0164
		Projected Participation	271	271	271	271	271	1,356
LED Troffer and Retrofit Kit with Integrated Occupancy and Daylight Sensor	3.1.6	Energy Savings (MWh)	142.66	142.66	142.66	142.66	142.66	713.32
		Summer Demand Reduction (MW)	0.0287	0.0287	0.0287	0.0287	0.0287	0.1435
		Winter Demand Reduction (MW)	0.0193	0.0193	0.0193	0.0193	0.0193	0.0965
		Projected Participation	1,356	1,356	1,356	1,356	1,356	6,781
Indoor Horticultural Lighting	3.1.7	Energy Savings (MWh)	2.84	-	-	-	-	2.84
		Summer Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Winter Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Projected Participation	1	-	-	-	-	1
Cycling Refrigerated Thermal Mass Dryer	3.10.1	Energy Savings (MWh)	24.00	24.00	24.00	24.00	24.00	120.02
		Summer Demand Reduction (MW)	0.0057	0.0057	0.0057	0.0057	0.0057	0.0287
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	12	12	12	12	12	60
Air-Entraining Air Nozzle	3.10.2	Energy Savings (MWh)	0.31	-	-	-	-	0.31
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1
No-loss Condensate Drain	3.10.3	Energy Savings (MWh)	10.15	10.15	10.15	10.15	10.15	50.74
		Summer Demand Reduction (MW)	0.0025	0.0025	0.0025	0.0025	0.0025	0.0123
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	154	154	154	154	154	769
Air Receiver Tanks for Load, No Load Compressors	3.10.4	Energy Savings (MWh)	1,300.20	1,300.20	1,300.20	1,300.20	1,300.20	6,500.99

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.2689	0.2689	0.2689	0.2689	0.2689	1.3443
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	70	70	70	70	70	348
Variable-Speed Drive Air Compressor	3.10.5	Energy Savings (MWh)	572.71	572.71	572.71	572.71	572.71	2,863.53
		Summer Demand Reduction (MW)	0.0697	0.0697	0.0697	0.0697	0.0697	0.3487
		Winter Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0041
		Projected Participation	58	58	58	58	58	290
Compressed Air Controller	3.10.6	Energy Savings (MWh)	44.93	44.93	44.93	44.93	44.93	224.64
		Summer Demand Reduction (MW)	0.0109	0.0109	0.0109	0.0109	0.0109	0.0543
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004
		Projected Participation	8	8	8	8	8	41
Low Pressure Drop Filter for Compressed Air Systems	3.10.7	Energy Savings (MWh)	57.28	57.28	57.28	57.28	57.28	286.38
		Summer Demand Reduction (MW)	0.0069	0.0069	0.0069	0.0069	0.0069	0.0346
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	154	154	154	154	154	769
Compressed Air Mist Eliminators	3.10.8	Energy Savings (MWh)	0.02	-	-	-	-	0.02
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
High Efficiency Transformer	3.11.1	Energy Savings (MWh)	0.57	-	-	-	-	0.57
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Engine Block Heater Timer	3.11.2	Energy Savings (MWh)	0.47	-	-	-	-	0.47
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
High Frequency Battery Chargers	3.11.3	Energy Savings (MWh)	0.53	-	-	-	-	0.53
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Uninterruptible Power Supply (UPS)	3.11.4	Energy Savings (MWh)	0.01	-	-	-	-	0.01
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Building Operator Certification	3.11.5	Energy Savings (MWh)	146.04	146.04	146.04	146.04	146.04	730.21
		Summer Demand Reduction (MW)	0.0381	0.0381	0.0381	0.0381	0.0381	0.1904
		Winter Demand Reduction (MW)	0.0275	0.0275	0.0275	0.0275	0.0275	0.1375
		Projected Participation	29	29	29	29	29	146
Photovoltaic (PV) Solar Generation	3.11.6	Energy Savings (MWh)	3,803.63	3,803.63	3,803.63	3,803.63	3,803.63	19,018.13
		Summer Demand Reduction (MW)	0.9079	0.9079	0.9079	0.9079	0.9079	4.5397
		Winter Demand Reduction (MW)	0.0502	0.0502	0.0502	0.0502	0.0502	0.2508
		Projected Participation	5	5	5	5	5	27
Load Curtailment for Commercial and Industrial Programs	3.12.1	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	2.1191	-	-	-	-	2.1191
		Winter Demand Reduction (MW)	2.1191	-	-	-	-	2.1191

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1	-	-	-	-	1
Packaged Terminal AC or PTHP 12.0 EER	3.2.1	Energy Savings (MWh)	2.38	2.38	2.38	2.38	2.38	11.89
		Summer Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0043
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	14	14	14	14	14	68
Unitary HVAC 135-240k AC unit, Min 11.5 EER 13 IEER	3.2.1	Energy Savings (MWh)	4.69	4.69	4.69	4.69	4.69	23.43
		Summer Demand Reduction (MW)	0.0047	0.0047	0.0047	0.0047	0.0047	0.0235
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	19	19	19	19	19	95
Unitary HVAC 65-135k AC unit, Min 11.5 EER 13.2 IEER	3.2.1	Energy Savings (MWh)	1.45	1.45	1.45	1.45	1.45	7.26
		Summer Demand Reduction (MW)	0.0013	0.0013	0.0013	0.0013	0.0013	0.0067
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	9	9	9	9	9	44
Controls: Guest Room Occupancy Sensor	3.2.10	Energy Savings (MWh)	0.34	-	-	-	-	0.34
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Controls: Economizer	3.2.11	Energy Savings (MWh)	2.66	-	-	-	-	2.66
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Computer Room Air Conditioner	3.2.12	Energy Savings (MWh)	0.07	-	-	-	-	0.07
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Computer Room Air Conditioner/Handler Electronically Commutated Plug Fans	3.2.13	Energy Savings (MWh)	1.17	-	-	-	-	1.17
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1
Computer Room Air Conditioner/Handler VSD on AC Fan Motors	3.2.14	Energy Savings (MWh)	1.44	-	-	-	-	1.44
		Summer Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Winter Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Projected Participation	1	-	-	-	-	1
Circulation Fan: High-Volume Low-Speed	3.2.15	Energy Savings (MWh)	3.94	-	-	-	-	3.94
		Summer Demand Reduction (MW)	0.0025	-	-	-	-	0.0025
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Demand Controlled Ventilation	3.2.16	Energy Savings (MWh)	2.40	-	-	-	-	2.40
		Summer Demand Reduction (MW)	0.0011	-	-	-	-	0.0011
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Advanced Rooftop Controls	3.2.17	Energy Savings (MWh)	0.17	-	-	-	-	0.17
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
C&I Energy Star Certified Connected Thermostats	3.2.18	Energy Savings (MWh)	0.29	-	-	-	-	0.29

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Adjustment of Programmable Thermostats	3.2.19	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Air Conditioner <5.4 Tons	3.2.2	Energy Savings (MWh)	12.28	12.28	12.28	12.28	12.28	61.39
		Summer Demand Reduction (MW)	0.0060	0.0060	0.0060	0.0060	0.0060	0.0299
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	80	80	80	80	80	401
HP <5.4 Tons	3.2.2	Energy Savings (MWh)	66.12	66.12	66.12	66.12	66.12	330.62
		Summer Demand Reduction (MW)	0.0321	0.0321	0.0321	0.0321	0.0321	0.1607
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	160	160	160	160	160	802
Packaged Terminal Air Conditioner	3.2.2	Energy Savings (MWh)	0.98	0.98	0.98	0.98	0.98	4.92
		Summer Demand Reduction (MW)	0.0005	0.0005	0.0005	0.0005	0.0005	0.0024
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	4	4	4	4	4	21
Packaged Terminal Heat Pump	3.2.2	Energy Savings (MWh)	8.80	8.80	8.80	8.80	8.80	44.00
		Summer Demand Reduction (MW)	0.0043	0.0043	0.0043	0.0043	0.0043	0.0214
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	21	21	21	21	21	105

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Unitary Air Conditioner 20 to 63.3 Tons	3.2.2	Energy Savings (MWh)	81.60	81.60	81.60	81.60	81.60	408.01
		Summer Demand Reduction (MW)	0.0398	0.0398	0.0398	0.0398	0.0398	0.1988
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	692	692	692	692	692	3,458
Unitary Air Conditioner >63.3 Tons	3.2.2	Energy Savings (MWh)	119.02	119.02	119.02	119.02	119.02	595.09
		Summer Demand Reduction (MW)	0.0579	0.0579	0.0579	0.0579	0.0579	0.2894
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	482	482	482	482	482	2,409
Unitary Heat Pump 11.3 to 20 Tons	3.2.2	Energy Savings (MWh)	45.41	45.41	45.41	45.41	45.41	227.06
		Summer Demand Reduction (MW)	0.0221	0.0221	0.0221	0.0221	0.0221	0.1104
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	388	388	388	388	388	1,941
Unitary Heat Pump 5.4 to 11.3 Tons	3.2.2	Energy Savings (MWh)	35.76	35.76	35.76	35.76	35.76	178.80
		Summer Demand Reduction (MW)	0.0175	0.0175	0.0175	0.0175	0.0175	0.0873
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	293	293	293	293	293	1,466
Variable Refrigerant Flow (VRF)	3.2.2	Energy Savings (MWh)	455.35	455.35	455.35	455.35	455.35	2,276.77
		Summer Demand Reduction (MW)	0.2217	0.2217	0.2217	0.2217	0.2217	1.1087
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1,320	1,320	1,320	1,320	1,320	6,599
Duct Sealing and Insulation	3.2.20	Energy Savings (MWh)	1.26	-	-	-	-	1.26
		Summer Demand Reduction (MW)	0.0006	-	-	-	-	0.0006
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1	-	-	-	-	1
Chilled Water Pipe Insulation	3.2.21	Energy Savings (MWh)	5.50	5.50	5.50	5.50	5.50	27.51
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	161	161	161	161	161	806
Air Cooled Chiller	3.2.3	Energy Savings (MWh)	106.74	106.74	106.74	106.74	106.74	533.69
		Summer Demand Reduction (MW)	0.0517	0.0517	0.0517	0.0517	0.0517	0.2585
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	834	834	834	834	834	4,169
Water Cooled Chiller	3.2.3	Energy Savings (MWh)	73.38	73.38	73.38	73.38	73.38	366.91
		Summer Demand Reduction (MW)	0.0357	0.0357	0.0357	0.0357	0.0357	0.1785
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	834	834	834	834	834	4,169
Water Source Heat Pump	3.2.4	Energy Savings (MWh)	4.07	4.07	4.07	4.07	4.07	20.37
		Summer Demand Reduction (MW)	0.0020	0.0020	0.0020	0.0020	0.0020	0.0099
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	10	10	10	10	10	52
Ductless Mini-Split Heat Pumps – Commercial < 5.4 Tons	3.2.5	Energy Savings (MWh)	2.42	-	-	-	-	2.42
		Summer Demand Reduction (MW)	0.0011	-	-	-	-	0.0011
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Mini/Multi Split Heat Pump <5.4 Tons	3.2.6	Energy Savings (MWh)	264.24	264.24	264.24	264.24	264.24	1,321.21
		Summer Demand Reduction (MW)	0.1285	0.1285	0.1285	0.1285	0.1285	0.6425

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	489	489	489	489	489	2,447
Small C&I HVAC Refrigerant Charge Correction	3.2.7	Energy Savings (MWh)	0.06	-	-	-	-	0.06
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
HVAC Tune Up	3.2.8	Energy Savings (MWh)	0.12	-	-	-	-	0.12
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Room Air Conditioner	3.2.9	Energy Savings (MWh)	0.03	-	-	-	-	0.03
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Premium Efficiency Motors	3.3.1	Energy Savings (MWh)	0.06	-	-	-	-	0.06
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
VFD - HVAC Fan Motor	3.3.2	Energy Savings (MWh)	24.92	24.92	24.92	24.92	24.92	124.59
		Summer Demand Reduction (MW)	0.0028	0.0028	0.0028	0.0028	0.0028	0.0138
		Winter Demand Reduction (MW)	0.0017	0.0017	0.0017	0.0017	0.0017	0.0086
		Projected Participation	14	14	14	14	14	69
VFD - HVAC Pump Motor	3.3.2	Energy Savings (MWh)	10.33	10.33	10.33	10.33	10.33	51.63

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0011	0.0011	0.0011	0.0011	0.0011	0.0054
		Winter Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0034
		Projected Participation	5	5	5	5	5	27
VFD - Process Fan Motor	3.3.2	Energy Savings (MWh)	23.38	23.38	23.38	23.38	23.38	116.90
		Summer Demand Reduction (MW)	0.0027	0.0027	0.0027	0.0027	0.0027	0.0136
		Winter Demand Reduction (MW)	0.0021	0.0021	0.0021	0.0021	0.0021	0.0105
		Projected Participation	9	9	9	9	9	45
VFD Process Pump Motor	3.3.2	Energy Savings (MWh)	23.50	23.50	23.50	23.50	23.50	117.48
		Summer Demand Reduction (MW)	0.0028	0.0028	0.0028	0.0028	0.0028	0.0140
		Winter Demand Reduction (MW)	0.0022	0.0022	0.0022	0.0022	0.0022	0.0109
		Projected Participation	9	9	9	9	9	45
ECM Circulating Fan	3.3.3	Energy Savings (MWh)	4.33	4.33	4.33	4.33	4.33	21.65
		Summer Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0039
		Winter Demand Reduction (MW)	0.0004	0.0004	0.0004	0.0004	0.0004	0.0019
		Projected Participation	20	20	20	20	20	101
VSD on Kitchen Exhaust Fan	3.3.4	Energy Savings (MWh)	2.80	-	-	-	-	2.80
		Summer Demand Reduction (MW)	0.0004	-	-	-	-	0.0004
		Winter Demand Reduction (MW)	0.0004	-	-	-	-	0.0004
		Projected Participation	1	-	-	-	-	1
ECM Pumps	3.3.5	Energy Savings (MWh)	8.01	8.01	8.01	8.01	8.01	40.06
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	276	276	276	276	276	1,381

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
PEI-Rated Pumps	3.3.6	Energy Savings (MWh)	144.12	144.12	144.12	144.12	144.12	720.61
		Summer Demand Reduction (MW)	0.0240	0.0240	0.0240	0.0240	0.0240	0.1200
		Winter Demand Reduction (MW)	0.0151	0.0151	0.0151	0.0151	0.0151	0.0754
		Projected Participation	28	28	28	28	28	139
Heat Pump Water Heater	3.4.1	Energy Savings (MWh)	19.71	19.71	19.71	19.71	19.71	98.53
		Summer Demand Reduction (MW)	0.0050	0.0050	0.0050	0.0050	0.0050	0.0251
		Winter Demand Reduction (MW)	0.0032	0.0032	0.0032	0.0032	0.0032	0.0160
		Projected Participation	18	18	18	18	18	92
Low-Flow Pre-Rinse Sprayers for Retrofit Programs and Time of Sale Program	3.4.2	Energy Savings (MWh)	1.19	-	-	-	-	1.19
		Summer Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Winter Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Projected Participation	1	-	-	-	-	1
Domestic Hot Water Pipe Insulation	3.4.3	Energy Savings (MWh)	0.01	-	-	-	-	0.01
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Refrigeration/Freezer Cases	3.5.1	Energy Savings (MWh)	0.22	-	-	-	-	0.22
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Auto-Closer for Walk-In Cooler Doors	3.5.10	Energy Savings (MWh)	1.20	1.20	1.20	1.20	1.20	6.02
		Summer Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0041
		Winter Demand Reduction (MW)	-	-	-	-	-	-

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	2	2	2	2	2	9
Auto-Closer for Walk-in Cooler Doors	3.5.10	Energy Savings (MWh)	1.22	1.22	1.22	1.22	1.22	6.12
		Summer Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0042
		Winter Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0042
		Projected Participation	2	2	2	2	2	9
Special Doors with Low or No Anti-Sweat Heat for Reach-In Freezers and Coolers	3.5.11	Energy Savings (MWh)	5.11	5.11	5.11	5.11	5.11	25.55
		Summer Demand Reduction (MW)	0.0006	0.0006	0.0006	0.0006	0.0006	0.0029
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	13	13	13	13	13	67
Suction Pipe Insulation for Walk-In Coolers and Freezers	3.5.12	Energy Savings (MWh)	1.18	1.18	1.18	1.18	1.18	5.88
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	13	13	13	13	13	63
Refrigerated Display Cases with Doors Replacing Open Cases	3.5.13	Energy Savings (MWh)	3.82	3.82	3.82	3.82	3.82	19.12
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	14	14	14	14	14	70
Adding Doors to Existing Refrigerated Display Cases	3.5.14	Energy Savings (MWh)	2.24	2.24	2.24	2.24	2.24	11.18
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	10	10	10	10	10	48
Refrigerated Case Light Occupancy Sensors	3.5.15	Energy Savings (MWh)	0.86	0.86	0.86	0.86	0.86	4.28
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	8	8	8	8	8	38
Food Service Equipment Novelty Cooler Shutoff	3.5.16	Energy Savings (MWh)	5.80	-	-	-	-	5.80
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
ECM motor for walk in freezer or cooler	3.5.2	Energy Savings (MWh)	26.91	26.91	26.91	26.91	26.91	134.53
		Summer Demand Reduction (MW)	0.0035	0.0035	0.0035	0.0035	0.0035	0.0175
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	30	30	30	30	30	150
ECM motors for reach-in freezer or cooler	3.5.2	Energy Savings (MWh)	7.59	7.59	7.59	7.59	7.59	37.94
		Summer Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0050
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	9	9	9	9	9	44
Controls: Evaporator Fan Controllers	3.5.3	Energy Savings (MWh)	4.88	4.88	4.88	4.88	4.88	24.42
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	4	4	4	4	4	22
Evaporator Fan Motor Controls	3.5.3	Energy Savings (MWh)	4.97	4.97	4.97	4.97	4.97	24.84
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	5	5	5	5	5	23
Controls: Floating Head Pressure Controls	3.5.4	Energy Savings (MWh)	0.36	-	-	-	-	0.36

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Anti-Sweat Heater Controls	3.5.5	Energy Savings (MWh)	3.66	3.66	3.66	3.66	3.66	18.28
		Summer Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	1	1	1	1	5
Controls: Evaporator Coil Defrost Control	3.5.6	Energy Savings (MWh)	9.85	9.85	9.85	9.85	9.85	49.26
		Summer Demand Reduction (MW)	0.0003	0.0003	0.0003	0.0003	0.0003	0.0013
		Winter Demand Reduction (MW)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007
		Projected Participation	9	9	9	9	9	45
Variable Speed Refrigeration Compressor	3.5.7	Energy Savings (MWh)	0.35	-	-	-	-	0.35
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Strip Curtains for Walk-In Freezers and Coolers	3.5.8	Energy Savings (MWh)	7.70	7.70	7.70	7.70	7.70	38.52
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0038
		Projected Participation	4	4	4	4	4	19
Night Covers for Display Cases	3.5.9	Energy Savings (MWh)	0.32	-	-	-	-	0.32
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Energy Star Clothes Washer	3.6.1	Energy Savings (MWh)	0.14	-	-	-	-	0.14
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Bathroom Ventilation Fan in Commercial Applications	3.6.2	Energy Savings (MWh)	0.04	-	-	-	-	0.04
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Ice Machines	3.7.1	Energy Savings (MWh)	0.42	-	-	-	-	0.42
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1
Commercial Induction Cooktops	3.7.10	Energy Savings (MWh)	0.03	-	-	-	-	0.03
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Controls: Beverage And Snack Machine Controls	3.7.2	Energy Savings (MWh)	0.25	-	-	-	-	0.25
		Summer Demand Reduction (MW)	-	-	-	-	-	-
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	-	-	-	-	1
Energy Star Electric Steam Cooker	3.7.3	Energy Savings (MWh)	5.34	-	-	-	-	5.34
		Summer Demand Reduction (MW)	0.0010	-	-	-	-	0.0010
		Winter Demand Reduction (MW)	0.0006	-	-	-	-	0.0006

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Projected Participation	1	-	-	-	-	1
Energy Star Combination Oven	3.7.4	Energy Savings (MWh)	0.02	-	-	-	-	0.02
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Commercial Convection Oven	3.7.5	Energy Savings (MWh)	1.67	-	-	-	-	1.67
		Summer Demand Reduction (MW)	0.0003	-	-	-	-	0.0003
		Winter Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Projected Participation	1	-	-	-	-	1
Energy Star Commercial Fryer	3.7.6	Energy Savings (MWh)	0.14	-	-	-	-	0.14
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Commercial Hot Food Holding Cabinet	3.7.7	Energy Savings (MWh)	0.35	-	-	-	-	0.35
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Commercial Dishwasher	3.7.8	Energy Savings (MWh)	7.99	-	-	-	-	7.99
		Summer Demand Reduction (MW)	0.0015	-	-	-	-	0.0015
		Winter Demand Reduction (MW)	0.0010	-	-	-	-	0.0010
		Projected Participation	1	-	-	-	-	1
Energy Star Commercial Griddle	3.7.9	Energy Savings (MWh)	1.65	-	-	-	-	1.65
		Summer Demand Reduction (MW)	0.0003	-	-	-	-	0.0003

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0002	-	-	-	-	0.0002
		Projected Participation	1	-	-	-	-	1
Wall And Ceiling Insulation	3.8.1	Energy Savings (MWh)	4.05	-	-	-	-	4.05
		Summer Demand Reduction (MW)	0.0018	-	-	-	-	0.0018
		Winter Demand Reduction (MW)	0.0014	-	-	-	-	0.0014
		Projected Participation	1	-	-	-	-	1
Advanced Power Strips	3.9.1	Energy Savings (MWh)	0.05	-	-	-	-	0.05
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Energy Star Servers	3.9.2	Energy Savings (MWh)	0.46	-	-	-	-	0.46
		Summer Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Winter Demand Reduction (MW)	0.0001	-	-	-	-	0.0001
		Projected Participation	1	-	-	-	-	1
Server Virtualization	3.9.3	Energy Savings (MWh)	0.21	-	-	-	-	0.21
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Custom, Compressed Air	Custom	Energy Savings (MWh)	91.53	91.53	91.53	91.53	91.53	457.66
		Summer Demand Reduction (MW)	0.0119	0.0119	0.0119	0.0119	0.0119	0.0595
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	1	1	1	1	1	6
Combined Heat and Power	Custom	Energy Savings (MWh)	224.76	224.76	224.76	224.76	224.76	1,123.79

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Summer Demand Reduction (MW)	0.0247	0.0247	0.0247	0.0247	0.0247	0.1236
		Winter Demand Reduction (MW)	0.0247	0.0247	0.0247	0.0247	0.0247	0.1236
		Projected Participation	224,757	224,757	224,757	224,757	224,757	1,123,786
Custom, Compressed Air	Custom	Energy Savings (MWh)	1,074.45	1,074.45	1,074.45	1,074.45	1,074.45	5,372.27
		Summer Demand Reduction (MW)	0.1612	0.1612	0.1612	0.1612	0.1612	0.8058
		Winter Demand Reduction (MW)	0.1397	0.1397	0.1397	0.1397	0.1397	0.6984
		Projected Participation	1,074,454	1,074,454	1,074,454	1,074,454	1,074,454	5,372,268
Custom, Cooling	Custom	Energy Savings (MWh)	307.80	307.80	307.80	307.80	307.80	1,538.98
		Summer Demand Reduction (MW)	0.0113	0.0113	0.0113	0.0113	0.0113	0.0565
		Winter Demand Reduction (MW)	-	-	-	-	-	-
		Projected Participation	6	6	6	6	6	32
Custom, HVAC	Custom	Energy Savings (MWh)	368.38	368.38	368.38	368.38	368.38	1,841.91
		Summer Demand Reduction (MW)	0.0516	0.0516	0.0516	0.0516	0.0516	0.2579
		Winter Demand Reduction (MW)	0.0516	0.0516	0.0516	0.0516	0.0516	0.2579
		Projected Participation	368,381	368,381	368,381	368,381	368,381	1,841,907
Custom, Lighting	Custom	Energy Savings (MWh)	376.31	376.31	376.31	376.31	376.31	1,881.53
		Summer Demand Reduction (MW)	0.0677	0.0677	0.0677	0.0677	0.0677	0.3387
		Winter Demand Reduction (MW)	0.0452	0.0452	0.0452	0.0452	0.0452	0.2258
		Projected Participation	376,306	376,306	376,306	376,306	376,306	1,881,529
Custom, Other	Custom	Energy Savings (MWh)	933.72	933.72	933.72	933.72	933.72	4,668.62
		Summer Demand Reduction (MW)	0.1369	0.1369	0.1369	0.1369	0.1369	0.6843
		Winter Demand Reduction (MW)	0.1234	0.1234	0.1234	0.1234	0.1234	0.6171
		Projected Participation	552,902	552,902	552,902	552,902	552,902	2,764,508

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Custom, Process	Custom	Energy Savings (MWh)	1,268.45	1,268.45	1,268.45	1,268.45	1,268.45	6,342.24
		Summer Demand Reduction (MW)	0.2319	0.2319	0.2319	0.2319	0.2319	1.1593
		Winter Demand Reduction (MW)	0.1652	0.1652	0.1652	0.1652	0.1652	0.8260
		Projected Participation	1,268,449	1,268,449	1,268,449	1,268,449	1,268,449	6,342,245
Custom, Refrigeration	Custom	Energy Savings (MWh)	2,857.76	2,857.76	2,857.76	2,857.76	2,857.76	14,288.82
		Summer Demand Reduction (MW)	0.2844	0.2844	0.2844	0.2844	0.2844	1.4220
		Winter Demand Reduction (MW)	0.2836	0.2836	0.2836	0.2836	0.2836	1.4179
		Projected Participation	2,835,870	2,835,870	2,835,870	2,835,870	2,835,870	14,179,348
Customer Front-of-the-Meter	Custom	Energy Savings (MWh)	299.03	-	-	-	-	299.03
		Summer Demand Reduction (MW)	0.0642	-	-	-	-	0.0642
		Winter Demand Reduction (MW)	0.0542	-	-	-	-	0.0542
		Projected Participation	1	-	-	-	-	1
Energy Star Level 2 EV Charger, Networked	Custom	Energy Savings (MWh)	0.05	-	-	-	-	0.05
		Summer Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Winter Demand Reduction (MW)	0.0000	-	-	-	-	0.0000
		Projected Participation	1	-	-	-	-	1
Load Curtailment for Commercial and Industrial Programs	Custom	Energy Savings (MWh)	-	-	-	-	-	-
		Summer Demand Reduction (MW)	0.0179	0.0179	0.0179	0.0179	0.0179	0.0896
		Winter Demand Reduction (MW)	0.0154	0.0154	0.0154	0.0154	0.0154	0.0772
		Projected Participation	18	18	18	18	18	90
Retrocommissioning	Custom	Energy Savings (MWh)	1,055.39	1,055.39	1,055.39	1,055.39	1,055.39	5,276.95
		Summer Demand Reduction (MW)	0.0469	0.0469	0.0469	0.0469	0.0469	0.2345

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
		Winter Demand Reduction (MW)	0.0339	0.0339	0.0339	0.0339	0.0339	0.1694
		Projected Participation	2	2	2	2	2	12
Strategic Energy Management	Custom	Energy Savings (MWh)	293.16	-	-	-	-	293.16
		Summer Demand Reduction (MW)	0.0106	-	-	-	-	0.0106
		Winter Demand Reduction (MW)	0.0076	-	-	-	-	0.0076
		Projected Participation	1	-	-	-	-	1
Virtual Commissioning	Custom	Energy Savings (MWh)	2,820.90	2,820.90	2,820.90	2,820.90	2,820.90	14,104.48
		Summer Demand Reduction (MW)	0.4340	0.4340	0.4340	0.4340	0.4340	2.1699
		Winter Demand Reduction (MW)	0.3134	0.3134	0.3134	0.3134	0.3134	1.5669
		Projected Participation	14	14	14	14	14	71
Virtual SEM	Custom	Energy Savings (MWh)	1,719.46	1,719.46	1,719.46	1,719.46	1,719.46	8,597.32
		Summer Demand Reduction (MW)	0.2194	0.2194	0.2194	0.2194	0.2194	1.0971
		Winter Demand Reduction (MW)	0.1585	0.1585	0.1585	0.1585	0.1585	0.7923
		Projected Participation	7	7	7	7	7	36
Kit - Electric Hot Water Kit (SF or MF)	Custom	Energy Savings (MWh)	96.77	96.77	96.77	96.77	96.77	483.86
		Summer Demand Reduction (MW)	0.0101	0.0101	0.0101	0.0101	0.0101	0.0504
		Winter Demand Reduction (MW)	0.0186	0.0186	0.0186	0.0186	0.0186	0.0931
		Projected Participation	598	598	598	598	598	2,992
Kit - Gas Hot Water Kit (SF or MF)	Custom	Energy Savings (MWh)	83.48	83.48	83.48	83.48	83.48	417.40
		Summer Demand Reduction (MW)	0.0079	0.0079	0.0079	0.0079	0.0079	0.0396
		Winter Demand Reduction (MW)	0.0146	0.0146	0.0146	0.0146	0.0146	0.0731
		Projected Participation	908	908	908	908	908	4,540

Table 10: Program Budget**Residential Energy Efficiency Program (REEP) Appliance Recycling**

Cost Element Total Budget (\$000)	Metric	PY18	PY19	PY20	PY21	PY22	Phase V Total
Incentives	Rebates	\$167	\$184	\$202	\$222	\$244	\$1,019
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$167	\$184	\$202	\$222	\$244	\$1,019
Non-Incentives	Program Design	\$1	\$1	\$1	\$2	\$2	\$7
	Administrative	\$17	\$19	\$21	\$23	\$25	\$104
	EDC Delivery Costs	\$9	\$10	\$11	\$12	\$13	\$54
	CSP Delivery Fees	\$256	\$281	\$310	\$340	\$374	\$1,561
	Marketing	\$5	\$5	\$6	\$6	\$7	\$28
	EM&V	\$8	\$9	\$10	\$11	\$12	\$50
	Implementation Services	\$7	\$7	\$8	\$9	\$10	\$41
	Non-Incentive Total	\$302	\$333	\$366	\$402	\$443	\$1,846
Percent Incentives		44.0%	44.0%	44.0%	44.0%	44.0%	44.0%

Table 10: Program Budget (continued)**Residential Online Marketplace**

Cost Element Total Budget (\$000)	Metric	PY18	PY19	PY20	PY21	PY22	Phase V Total
Incentives	Rebates	\$292	\$297	\$301	\$306	\$310	\$1,506
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$292	\$297	\$301	\$306	\$310	\$1,506
Non-Incentives	Program Design	\$1	\$1	\$2	\$2	\$2	\$8
	Administrative	\$22	\$22	\$22	\$22	\$23	\$111
	EDC Delivery Costs	\$11	\$11	\$11	\$12	\$12	\$57
	CSP Delivery Fees	\$371	\$376	\$382	\$388	\$393	\$1,911
	Marketing	\$6	\$6	\$6	\$6	\$6	\$30
	EM&V	\$10	\$10	\$11	\$11	\$11	\$53
	Implementation Services	\$8	\$9	\$9	\$9	\$9	\$43
	Non-Incentive Total	\$430	\$436	\$443	\$449	\$456	\$2,213
Percent Incentives		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%

Table 10: Program Budget (*continued*)**Residential Midstream Incentives**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates						
	Upstream/Midstream Buydown	\$877	\$927	\$943	\$960	\$977	\$4,684
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$877	\$927	\$943	\$960	\$977	\$4,684
Non-Incentives	Program Design	\$4	\$4	\$5	\$5	\$6	\$24
	Administrative	\$64	\$67	\$69	\$70	\$71	\$341
	EDC Delivery Costs	\$33	\$35	\$35	\$36	\$37	\$176
	CSP Delivery Fees	\$459	\$485	\$493	\$502	\$511	\$2,450
	Marketing	\$17	\$18	\$19	\$19	\$19	\$93
	EM&V	\$31	\$32	\$33	\$33	\$34	\$163
	Implementation Services	\$25	\$26	\$27	\$27	\$28	\$134
	Non-Incentive Total	\$633	\$669	\$681	\$693	\$705	\$3,380
Percent Incentives		58.1%	58.1%	58.1%	58.1%	58.1%	58.1%

Table 10: Program Budget (*continued*)**Low-Income Energy Efficiency Program**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates						
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor	\$1,778	\$1,797	\$1,815	\$1,832	\$1,852	\$9,073
	Incentive Total	\$1,778	\$1,797	\$1,815	\$1,832	\$1,852	\$9,073
Non-Incentives	Program Design	\$3	\$4	\$4	\$4	\$5	\$20
	Administrative	\$57	\$57	\$58	\$58	\$59	\$289
	EDC Delivery Costs	\$29	\$30	\$30	\$30	\$30	\$149
	CSP Delivery Fees	\$1,046	\$1,057	\$1,067	\$1,077	\$1,089	\$5,336
	Marketing	\$15	\$16	\$16	\$16	\$16	\$79
	EM&V	\$27	\$27	\$28	\$28	\$28	\$138
	Implementation Services	\$22	\$22	\$23	\$23	\$23	\$113
	Non-Incentive Total	\$1,199	\$1,212	\$1,225	\$1,237	\$1,251	\$6,124
Percent Incentives		63.4%	63.4%	63.4%	63.4%	63.4%	63.4%

Table 10: Program Budget (*continued*)**Residential Behavioral Energy Efficiency**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates						
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives	Program Design	\$6	\$6	\$7	\$8	\$9	\$36
	Administrative	\$99	\$116	\$118	\$99	\$84	\$515
	EDC Delivery Costs	\$51	\$60	\$61	\$51	\$43	\$266
	CSP Delivery Fees	\$692	\$812	\$824	\$692	\$585	\$3,605
	Marketing	\$27	\$32	\$32	\$27	\$23	\$140
	EM&V	\$47	\$55	\$56	\$47	\$40	\$246
	Implementation Services	\$39	\$45	\$46	\$39	\$33	\$202
	Non-Incentive Total	\$962	\$1,128	\$1,145	\$962	\$813	\$5,009
Percent Incentives		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 10: Program Budget (continued)**Low-Income Behavioral Energy Efficiency**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates						
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$0	\$0	\$0	\$0	\$0	\$0
Non-Incentives	Program Design	\$1	\$1	\$1	\$1	\$1	\$5
	Administrative	\$22	\$12	\$12	\$12	\$14	\$72
	EDC Delivery Costs	\$11	\$6	\$6	\$6	\$7	\$37
	CSP Delivery Fees	\$198	\$107	\$107	\$107	\$122	\$641
	Marketing	\$6	\$3	\$3	\$3	\$4	\$19
	EM&V	\$11	\$6	\$6	\$6	\$7	\$34
	Implementation Services	\$9	\$5	\$5	\$5	\$5	\$28
	Non-Incentive Total	\$259	\$139	\$139	\$139	\$159	\$836
Percent Incentives		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 10: Program Budget (continued)**Small-Medium Nonresidential**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates	\$1,651	\$1,832	\$2,095	\$2,343	\$1,955	\$9,876
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct-Install Materials and Labor	\$412	\$481	\$618	\$756	\$481	\$2,748
	Incentive Total	\$2,063	\$2,313	\$2,713	\$3,098	\$2,436	\$12,623
Non-Incentives	Program Design	\$15	\$16	\$18	\$20	\$21	\$90
	Administrative	\$217	\$240	\$275	\$307	\$257	\$1,296
	EDC Delivery Costs	\$112	\$124	\$142	\$159	\$132	\$669
	CSP Delivery Fees	\$1,709	\$1,879	\$2,096	\$2,296	\$2,029	\$10,009
	Marketing	\$59	\$65	\$75	\$84	\$70	\$353
	EM&V	\$105	\$116	\$130	\$143	\$125	\$619
	Implementation Services	\$85	\$94	\$108	\$120	\$101	\$508
	Non-Incentive Total	\$2,301	\$2,535	\$2,843	\$3,129	\$2,735	\$13,543
Percent Incentives		77.1%	75.4%	74.1%	77.9%	76.3%	83.4%

Table 10: Program Budget (continued)**Large Commercial Downstream Incentives**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates	\$579	\$675	\$868	\$1,061	\$675	\$3,859
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$579	\$675	\$868	\$1,061	\$675	\$3,859
Non-Incentives	Program Design	\$10	\$11	\$12	\$13	\$14	\$59
	Administrative	\$128	\$149	\$192	\$234	\$149	\$852
	EDC Delivery Costs	\$66	\$77	\$99	\$121	\$77	\$440
	CSP Delivery Fees	\$449	\$524	\$673	\$823	\$524	\$2,993
	Marketing	\$35	\$41	\$52	\$64	\$41	\$232
	EM&V	\$61	\$71	\$92	\$112	\$71	\$407
	Implementation Services	\$50	\$58	\$75	\$92	\$58	\$334
	Non-Incentive Total	\$798	\$931	\$1,195	\$1,459	\$934	\$5,318
Percent Incentives		42.1%	42.0%	42.0%	42.1%	42.1%	42.0%

Table 10: Program Budget (continued)**Public Agency Partnership**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates	\$1,311	\$1,602	\$1,675	\$1,602	\$1,092	\$7,282
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$1,311	\$1,602	\$1,675	\$1,602	\$1,092	\$7,282
Non-Incentives	Program Design	\$5	\$5	\$5	\$5	\$5	\$26
	Administrative	\$76	\$93	\$97	\$93	\$63	\$421
	EDC Delivery Costs	\$39	\$48	\$50	\$48	\$33	\$217
	CSP Delivery Fees	\$479	\$585	\$612	\$585	\$399	\$2,659
	Marketing	\$21	\$25	\$26	\$25	\$17	\$115
	EM&V	\$36	\$44	\$46	\$44	\$30	\$201
	Implementation Services	\$33	\$36	\$38	\$36	\$25	\$168
	Non-Incentive Total	\$688	\$837	\$874	\$837	\$572	\$3,807.641
Percent Incentives		65.6%	65.7%	65.7%	65.7%	65.6%	65.7%

Table 10: Program Budget (continued)**Large Industrial Downstream Incentives**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates	\$1,037	\$1,747	\$2,232	\$2,424	\$2,656	\$10,096
	Upstream/Midstream Buydown						
	Kits						
	Direct-Install Materials and Labor						
	Incentive Total	\$1,037	\$1,747	\$2,232	\$2,424	\$2,656	\$10,096
Non-Incentives	Program Design	\$8	\$8	\$9	\$10	\$11	\$47
	Administrative	\$70	\$118	\$151	\$164	\$179	\$682
	EDC Delivery Costs	\$36	\$61	\$78	\$85	\$93	\$352
	CSP Delivery Fees	\$375	\$632	\$807	\$877	\$960	\$3,650
	Marketing	\$19	\$32	\$41	\$45	\$49	\$186
	EM&V	\$33	\$56	\$72	\$78	\$86	\$326
	Implementation Services	\$27	\$46	\$59	\$64	\$70	\$267
	Non-Incentive Total	\$566	\$954	\$1,218	\$1,323	\$1,449	\$5,511
Percent Incentives		64.7%	64.7%	64.7%	64.7%	64.7%	64.7%

Table 10: Program Budget (continued)**All Programs**

Cost Element Total Budget (\$000)	Metric	PY13	PY14	PY15	PY16	PY17	Phase V Total
Incentives	Rebates	\$5,914	\$7,264	\$8,317	\$8,918	\$7,910	\$38,322
	Upstream/Midstream Buydown	\$0	\$0	\$0	\$0	\$0	\$0
	Kits	\$0	\$0	\$0	\$0	\$0	\$0
	Direct-Install Materials and Labor	\$2,190	\$2,278	\$2,433	\$2,587	\$2,333	\$11,821
	Incentive Total	\$8,104	\$9,542	\$10,749	\$11,505	\$10,243	\$50,143
Non-Incentives	Program Design	\$54	\$58	\$64	\$69	\$76	\$321
	Administrative	\$770	\$893	\$1,013	\$1,082	\$923	\$4,683
	EDC Delivery Costs	\$398	\$461	\$523	\$559	\$477	\$2,418
	CSP Delivery Fees	\$6,033	\$6,737	\$7,371	\$7,687	\$6,987	\$34,814
	Marketing	\$210	\$243	\$276	\$295	\$251	\$1,275
	EM&V	\$370	\$428	\$483	\$514	\$443	\$2,238
	Implementation Services	\$305	\$350	\$397	\$424	\$362	\$1,838
	Non-Incentive Total	\$8,139	\$9,172	\$10,126	\$10,630	\$9,520	\$47,587
Percent Incentives		49.9%	51.0%	51.5%	52.0%	51.8%	51.3%

Table 11: Sector-Specific Summary of EE&C Costs

Residential Portfolio													
Cost Elements (\$)									Levelized Cost (per TRC Order)	Total Cost	Acquisition Cost (\$/MWh)	Levelized Cost (\$/MWh)	Acquisition Cost (\$/MW)
EE&C Program	Incentives	Program Design	Adminis- trative	EDC Delivery Costs	CSP Delivery Fees	Marketing	EM&V	Other					
Residential - Appliance Recycling	\$1,019,277.00	\$7,223.10	\$104,441.13	\$53,932.50	\$1,561,334.00	\$28,431.31	\$49,915.72	\$40,930.91	\$2,766,879.31	\$2,865,486	\$467.76	\$88.99	\$1,878,897
Residential - Online Marketplace	\$1,506,378.00	\$7,664.08	\$110,817.40	\$57,225.14	\$1,910,573.00	\$30,167.07	\$52,963.13	\$43,429.79	\$3,413,597.13	\$3,719,218	\$572.19	\$73.89	\$1,208,737
Residential - Midstream Incentives	\$4,683,569.23	\$23,581.79	\$340,976.60	\$176,077.37	\$2,449,965.26	\$92,821.76	\$162,963.48	\$133,630.14	\$37,675,962.82	\$8,063,586	\$403.18	\$190.31	\$9,250,584
Residential - Low-Income EE	\$9,073,271.25	\$19,964.34	\$288,670.79	\$149,067.10	\$5,336,195.69	\$78,582.90	\$137,964.89	\$113,131.27	\$3,472,824.05	\$15,196,848	\$897.52	\$31.73	\$2,445,874
Residential - Behavioral Efficiency	\$0.00	\$35,608.50	\$514,874.67	\$265,876.82	\$3,604,913.00	\$140,160.86	\$246,074.86	\$201,781.51	\$4,973.68	\$5,009,290	\$165.87	\$0.17	\$710,538
Low-Income Behavioral Efficiency	\$0.00	\$4,952.18	\$71,605.09	\$36,976.25	\$640,501.00	\$19,492.57	\$34,222.33	\$28,062.33	\$830.86	\$835,812	\$199.00	\$0.21	\$939,114
Nonresidential Portfolio													
Small Medium Nonresidential Efficiency	\$12,623,280.46	\$89,609.80	\$1,295,696.65	\$669,086.54	\$10,009,073.32	\$352,718.76	\$619,264.75	\$507,788.87	\$3,477,404.20	\$26,166,519	\$344.29	\$4.62	\$2,227,313
Large Commercial - Downstream	\$3,858,721.02	\$58,954.47	\$852,441.5	\$440,193.4	\$2,992,649.7	\$232,054.4	\$407,408.7	\$334,075.3	\$18,135,954.06	\$9,176,499	\$183.53	\$40.92	\$850,105
Public Agency Partnership	\$7,281,962.73	\$26,215.72	\$421,179.4	\$217,493.4	\$2,658,827.0	\$114,654.8	\$201,294.9	\$167,975.4	\$8,920,535.53	\$11,089,603	\$448.89	\$40.74	\$2,587,160
Large Industrial - Downstream	\$10,096,379.52	\$47,163.58	\$681,953.2	\$352,154.7	\$3,650,418.0	\$185,643.5	\$325,927.0	\$267,260.3	\$5,663,407.54	\$15,606,900	\$390.17	\$14.30	\$2,720,466
Portfolio Total	\$50,142,839.21	\$320,937.56	\$4,682,656.44	\$2,418,083.27	\$34,814,449.87	\$1,274,727.98	\$2,237,999.79	\$1,838,065.88	\$83,532,369.20	\$97,729,760	\$355.8173	\$37.49	\$1,872,476

Table 12: Allocation of Common Costs to Applicable Customer Sector

Common Cost Element	Total Cost	Basis for Cost Allocation	Sector Cost Allocation (\$)		
			Residential (Including Low-Income)	Commercial/ Industrial Small	Commercial/ Industrial Large
Common Utility Staff	\$1,002,682	% Plan Savings	\$306,496	\$277,447	\$418,739
Marketing	\$850,000	% Plan Savings	\$259,825	\$235,199	\$354,976
Implementation Services	\$1,583,105	% Plan Savings	\$483,918	\$438,052	\$661,134
Tracking System Upgrade and Maintenance	\$971,641	% Plan Savings	\$297,008	\$268,857	\$405,775
Total	\$4,407,427		\$1,347,248	\$1,219,555	\$1,840,624

Table 13: Summary of Portfolio EE&C Costs

Portfolio	Total Sector Portfolio- Specific Costs¹	Total Common Costs²	Total of all Costs²
Residential (Including Low-Income)	\$34,342,991	\$1,347,248	\$35,690,239
Commercial/Industrial Small	\$24,946,964	\$1,219,555	\$26,166,519
Commercial/Industrial Large	\$34,032,377	\$1,840,624	\$35,873,001
Totals	\$93,322,332	\$4,407,427	\$97,729,759

1-Cost figures are carried over from Table 10, Total Cost Column.

2-Cost figures are to be carried over from the bottom row of Table 11

Common or indirect cost will be allocated based on savings contributions from each sector program.

Table 14: TRC Benefits Tables (Gross)

Gross TRC Benefits

Portfolio	NTGR & TRC			TRC Costs by Program Year (\$000)				TRC Benefits By Program Per Year (\$000)				
Program	Program Year	NTGR	TRC	Incremental Measure Cost		Program Admin Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel / Water Benefits	O&M Benefits	Total TRC Benefits
Residential Appliance Recycling	PY13		2.92	167	\$152	\$302	\$302.35	\$370	\$514	\$0	\$0	\$884
	PY14		2.92	184	\$167	\$333	\$332.53	\$407	\$566	\$0	\$0	\$972
	PY15		2.92	202	\$184	\$366	\$366.00	\$448	\$623	\$0	\$0	\$1,070
	PY16		2.92	222	\$202	\$402	\$402.49	\$492	\$685	\$0	\$0	\$1,177
	PY17		2.92	244	\$223	\$443	\$442.83	\$542	\$753	\$0	\$0	\$1,295
Program Total		1	2.92	1,019	\$928	\$1,846	\$1,846.21	\$2,258	\$3,141	\$0	\$0	\$5,399
Residential On-Line Marketplace	PY13		2.21	292	\$662	\$430	\$1,091.79	\$1,585	\$833	\$0	\$0	\$2,418
	PY14		2.21	297	\$672	\$436	\$1,108.32	\$1,609	\$846	\$0	\$0	\$2,455
	PY15		2.21	301	\$682	\$443	\$1,124.85	\$1,633	\$859	\$0	\$0	\$2,492
	PY16		2.21	306	\$692	\$449	\$1,141.37	\$1,657	\$871	\$0	\$0	\$2,528
	PY17		2.21	310	\$702	\$456	\$1,157.90	\$1,681	\$884	\$0	\$0	\$2,565
Program Total		1	2.21	1,506	\$3,411	\$2,213	\$5,624.23	\$8,165	\$4,293	\$0	\$0	\$12,458
Residential Midstream Incentives	PY13		0.00	877	\$7,052	\$633	\$7,685.18	\$492	\$3,352	\$0	\$0	\$3,844
	PY14		0.50	927	\$7,454	\$669	\$8,122.97	\$520	\$3,543	\$0	\$0	\$4,063
	PY15		0.50	943	\$7,588	\$681	\$8,268.38	\$529	\$3,607	\$0	\$0	\$4,136
	PY16		0.50	960	\$7,721	\$693	\$8,413.79	\$538	\$3,670	\$0	\$0	\$4,209
	PY17		0.50	977	\$7,857	\$705	\$8,562.30	\$548	\$3,735	\$0	\$0	\$4,283
Program Total		1	0.50	4,684	\$37,673	\$3,380	\$41,052.62	\$2,627	\$17,908	\$0	\$0	\$20,535.03
Low Income Energy Efficiency	PY13		2.01	1,778	\$679	\$1,200	\$1,879.43	\$1,704	\$2,127	-\$51	\$0	\$3,780
	PY14		2.01	1,797	\$687	\$1,213	\$1,899.25	\$1,722	\$2,150	-\$52	\$0	\$3,820
	PY15		2.01	1,815	\$693	\$1,225	\$1,917.95	\$1,739	\$2,171	-\$52	\$0	\$3,857
	PY16		2.01	1,832	\$700	\$1,236	\$1,936.07	\$1,755	\$2,191	-\$53	\$0	\$3,894
	PY17		2.01	1,852	\$708	\$1,250	\$1,957.60	\$1,775	\$2,216	-\$53	\$0	\$3,937
Program Total		1	2.01	9,073	\$3,467	\$6,124	\$9,590.30	\$8,694	\$10,855	-\$261	\$0	\$19,288
Residential Behavioral Efficiency	PY13		1.41	0	\$0	\$962	\$962.05	\$338	\$1,015	\$0	\$0	\$1,354
	PY14		1.41	0	\$0	\$1,128	\$1,127.92	\$397	\$1,190	\$0	\$0	\$1,587
	PY15		1.41	0	\$0	\$1,145	\$1,144.51	\$403	\$1,208	\$0	\$0	\$1,610
	PY16		1.41	0	\$0	\$962	\$962.05	\$338	\$1,015	\$0	\$0	\$1,354
	PY17		1.41	0	\$0	\$813	\$812.77	\$286	\$858	\$0	\$0	\$1,144
Program Total		1	1.41	0	\$0	\$5,009	\$5,009.29	\$1,762	\$5,286	\$0	\$0	\$7,049
Low Income Behavioral Efficiency	PY13		1.15	0	\$0	\$259	\$258.70	\$69	\$228	\$0	\$0	\$296
	PY14		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY15		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY16		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY17		1.15	0	\$0	\$159	\$159.20	\$42	\$140	\$0	\$0	\$182
Program Total		1	1.15	0	\$0	\$836	\$835.81	\$222	\$735	\$0	\$0	\$957.650

Portfolio	NTGR & TRC			TRC Costs by Program Year (\$000)				TRC Benefits By Program Per Year (\$000)				
	Program			Incremental Measure Cost		Program	Total TRC	Capacity	Energy	Fossil Fuel / Water	O&M	Total TRC
Program	Year	NTGR	TRC	Paid by EDC	Paid by Participants	Admin Cost	Costs	Benefits	Benefits	Benefits	Benefits	Benefits
Small-Medium Nonresidential Efficiency	PY13		2.63	2,110	\$5,098	\$2,264	\$6,678	\$6,987	\$11,209	-\$640	\$0	\$17,556
	PY14		2.63	2,342	\$5,658	\$2,513	\$7,413	\$7,755	\$12,442	-\$711	\$0	\$19,486
	PY15		2.63	2,677	\$6,468	\$2,873	\$8,474	\$8,865	\$14,223	-\$813	\$0	\$22,276
	PY16		2.63	2,994	\$7,234	\$3,213	\$9,477	\$9,915	\$15,907	-\$909	\$0	\$24,913
	PY17		2.63	2,499	\$6,037	\$2,681	\$7,909	\$8,274	\$13,275	-\$758	\$0	\$20,791
Program Total		1	2.63	12,623	30,496	\$13,543	\$39,951	\$41,796	\$67,056	-\$3,831	\$0	\$105,021
Large Commercial Downstream Incentives	PY13		2.56	579	\$2,720	\$798	\$3,517.27	\$3,188	\$6,013	-\$210	\$0	\$8,991
	PY14		2.56	675	\$3,173	\$931	\$4,103.48	\$3,719	\$7,015	-\$245	\$0	\$10,490
	PY15		2.56	868	\$4,079	\$1,196	\$5,275.91	\$4,782	\$9,020	-\$315	\$0	\$13,487
	PY16		2.56	1,061	\$4,986	\$1,462	\$6,448.33	\$5,845	\$11,024	-\$385	\$0	\$16,484
	PY17		2.56	675	\$3,173	\$931	\$4,103.48	\$3,719	\$7,015	-\$245	\$0	\$10,490
Program Total		1	2.56	3,859	18,131	\$5,318	\$23,448.47	\$21,253	\$40,087	-\$1,399	\$0	\$59,941.15
Public Agency Partnership	PY13		2.31	1,311	\$1,605	\$685	\$2,290.39	\$1,842	\$3,565	-\$124	\$0	\$5,282
	PY14		2.31	1,602	\$1,962	\$838	\$2,799.37	\$2,251	\$4,357	-\$152	\$0	\$6,456
	PY15		2.31	1,675	\$2,051	\$876	\$2,926.61	\$2,353	\$4,556	-\$159	\$0	\$6,750
	PY16		2.31	1,602	\$1,962	\$838	\$2,799.37	\$2,251	\$4,357	-\$152	\$0	\$6,456
	PY17		2.31	1,092	\$1,338	\$571	\$1,908.66	\$1,535	\$2,971	-\$104	\$0	\$4,402
Program Total		1	2.31	7,282	8,917	\$3,808	\$12,724.39	\$10,231	\$19,807	-\$691	\$0	\$29,347
Large Industrial Downstream Incentives	PY13		4.40	1,037	\$581	\$566	\$1,147.38	\$1,583	\$3,483	-\$17	\$0	\$5,049
	PY14		4.40	1,747	\$979	\$954	\$1,932.65	\$2,667	\$5,866	-\$28	\$0	\$8,504
	PY15		4.40	2,232	\$1,251	\$1,218	\$2,469.12	\$3,407	\$7,494	-\$36	\$0	\$10,865
	PY16		4.40	2,424	\$1,359	\$1,323	\$2,681.76	\$3,701	\$8,140	-\$40	\$0	\$11,801
	PY17		4.40	2,656	\$1,488	\$1,449	\$2,937.56	\$4,053	\$8,916	-\$43	\$0	\$12,926
Program Total		1	4.40	10,096	5,658	\$5,511	\$11,168.46	\$15,411	\$33,899	-\$165	\$0	\$49,146
All Programs	PY13	1	1.92	8,151	18,550	8,099	25,813	18,157	32,340	-1,043	0	49,455
	PY14	1	2.00	9,571	20,752	9,152	28,979	21,083	38,098	-1,188	0	57,994
	PY15	1	2.08	10,714	22,997	10,161	32,107	24,196	43,882	-1,375	0	66,702
	PY16	1	2.12	11,401	24,856	10,718	34,402	26,529	47,983	-1,538	0	72,975
	PY17	1	2.07	10,306	21,526	9,458	29,951	22,455	40,763	-1,203	0	62,015
Portfolio Total			2.04	50,143	108,680	47,587	151,251	112,420	203,067	-6,347	0	309,140.931

Table 14: TRC Benefits Tables (Net)

Net TRC Benefits

Portfolio	NTGR & TRC			TRC Costs by Program Year (\$000)				TRC Benefits By Program Per Year (\$000)				
	Program			Measure Cost								
Program	Year	NTGR	TRC	Paid by EDC	Paid by Participants	Program Admin Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel / Water Benefits	O&M Benefits	Total TRC Benefits
Residential Appliance Recycling	PY13		2.10	167	\$109	\$302	\$302.35	\$265	\$369	\$0	\$0	\$634
	PY14		2.10	184	\$120	\$333	\$332.53	\$291	\$405	\$0	\$0	\$697
	PY15		2.10	202	\$132	\$366	\$366.00	\$321	\$446	\$0	\$0	\$767
	PY16		2.10	222	\$145	\$402	\$402.49	\$353	\$491	\$0	\$0	\$844
	PY17		2.10	244	\$159	\$443	\$442.83	\$388	\$540	\$0	\$0	\$928
Program Total		0.717	2.10	1,019	\$665	\$1,846	\$1,846.21	\$1,618	\$2,251	\$0	\$0	\$3,869
Residential On-Line Marketplace	PY13		2.21	292	\$662	\$430	\$1,091.79	\$1,585	\$833	\$0	\$0	\$2,418
	PY14		2.21	297	\$672	\$436	\$1,108.32	\$1,609	\$846	\$0	\$0	\$2,455
	PY15		2.21	301	\$682	\$443	\$1,124.85	\$1,633	\$859	\$0	\$0	\$2,492
	PY16		2.21	306	\$692	\$449	\$1,141.37	\$1,657	\$871	\$0	\$0	\$2,528
	PY17		2.21	310	\$702	\$456	\$1,157.90	\$1,681	\$884	\$0	\$0	\$2,565
Program Total		1	2.21	1,506	\$3,411	\$2,213	\$5,624.23	\$8,165	\$4,293	\$0	\$0	\$12,458
Residential Midstream Incentives	PY13		0.00	877	\$7,052	\$633	\$7,685.18	\$492	\$3,352	\$0	\$0	\$3,844
	PY14		0.50	927	\$7,454	\$669	\$8,122.97	\$520	\$3,543	\$0	\$0	\$4,063
	PY15		0.50	943	\$7,588	\$681	\$8,268.38	\$529	\$3,607	\$0	\$0	\$4,136
	PY16		0.50	960	\$7,721	\$693	\$8,413.79	\$538	\$3,670	\$0	\$0	\$4,209
	PY17		0.50	977	\$7,857	\$705	\$8,562.30	\$548	\$3,735	\$0	\$0	\$4,283
Program Total		1	0.50	4,684	\$7,673	\$3,380	\$41,052.62	\$2,627	\$17,908	\$0	\$0	\$20,535.03
Low Income Energy Efficiency	PY13		2.01	1,778	\$679	\$1,200	\$1,879.43	\$1,704	\$2,127	-\$51	\$0	\$3,780
	PY14		2.01	1,797	\$687	\$1,213	\$1,899.25	\$1,722	\$2,150	-\$52	\$0	\$3,820
	PY15		2.01	1,815	\$693	\$1,225	\$1,917.95	\$1,739	\$2,171	-\$52	\$0	\$3,857
	PY16		2.01	1,832	\$700	\$1,236	\$1,936.07	\$1,755	\$2,191	-\$53	\$0	\$3,894
	PY17		2.01	1,852	\$708	\$1,250	\$1,957.60	\$1,775	\$2,216	-\$53	\$0	\$3,937
Program Total		1	2.01	9,073	\$3,467	\$6,124	\$9,590.30	\$8,694	\$10,855	-\$261	\$0	\$19,288
Residential Behavioral Efficiency	PY13		1.41	0	\$0	\$962	\$962.05	\$338	\$1,015	\$0	\$0	\$1,354
	PY14		1.41	0	\$0	\$1,128	\$1,127.92	\$397	\$1,190	\$0	\$0	\$1,587
	PY15		1.41	0	\$0	\$1,145	\$1,144.51	\$403	\$1,208	\$0	\$0	\$1,610
	PY16		1.41	0	\$0	\$962	\$962.05	\$338	\$1,015	\$0	\$0	\$1,354
	PY17		1.41	0	\$0	\$813	\$812.77	\$286	\$858	\$0	\$0	\$1,144
Program Total		1	1.41	0	0	\$5,009	\$5,009.29	\$1,762	\$5,286	\$0	\$0	\$7,049
Low Income Behavioral Efficiency	PY13		1.15	0	\$0	\$259	\$258.70	\$69	\$228	\$0	\$0	\$296
	PY14		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY15		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY16		1.15	0	\$0	\$139	\$139.30	\$37	\$123	\$0	\$0	\$160
	PY17		1.15	0	\$0	\$159	\$159.20	\$42	\$140	\$0	\$0	\$182
Program Total		1	1.15	0	0	\$836	\$835.81	\$222	\$735	\$0	\$0	\$957.650

Portfolio	NTGR & TRC			TRC Costs by Program Year (\$000)				TRC Benefits By Program Per Year (\$000)				
	Program			Measure Cost								
Program	Year	NTGR	TRC	Paid by EDC	Paid by Participants	Program Admin Cost	Total TRC Costs	Capacity Benefits	Energy Benefits	Fossil Fuel / Water Benefits	O&M Benefits	Total TRC Benefits
Small-Medium Nonresidential Efficiency	PY13		2.16	2,110	\$4,196	\$2,264	\$6,678	\$5,751	\$9,227	-\$527	\$0	\$14,451
	PY14		2.16	2,342	\$4,658	\$2,513	\$7,413	\$6,384	\$10,241	-\$585	\$0	\$16,040
	PY15		2.16	2,677	\$5,324	\$2,873	\$8,474	\$7,297	\$11,707	-\$669	\$0	\$18,336
	PY16		2.16	2,994	\$5,955	\$3,213	\$9,477	\$8,161	\$13,093	-\$748	\$0	\$20,506
	PY17		2.16	2,499	\$4,970	\$2,681	\$7,909	\$6,811	\$10,927	-\$624	\$0	\$17,114
Program Total		0.823	2.16	12,623	25,103	\$13,543	\$39,951	34,404	55,196	-3,154	0	\$86,447
Large Commercial Downstream Incentives	PY13		2.49	579	\$2,444	\$798	\$3,241.37	\$2,865	\$5,403	-\$189	\$0	\$8,079
	PY14		2.49	675	\$2,851	\$931	\$3,781.60	\$3,342	\$6,304	-\$220	\$0	\$9,426
	PY15		2.49	868	\$3,666	\$1,196	\$4,862.06	\$4,297	\$8,105	-\$283	\$0	\$12,119
	PY16		2.49	1,061	\$4,480	\$1,462	\$5,942.51	\$5,252	\$9,906	-\$346	\$0	\$14,812
	PY17		2.49	675	\$2,851	\$931	\$3,781.60	\$3,342	\$6,304	-\$220	\$0	\$9,426
Program Total		0.899	2.49	3,859	16,291	\$5,318	\$21,609.14	\$19,097	\$36,020	-\$1,257	\$0	\$53,860.19
Public Agency Partnership	PY13		2.23	1,311	\$1,442	\$685	\$2,127.56	\$1,655	\$3,203	-\$112	\$0	\$4,746
	PY14		2.23	1,602	\$1,763	\$838	\$2,600.36	\$2,023	\$3,915	-\$137	\$0	\$5,801
	PY15		2.23	1,675	\$1,843	\$876	\$2,718.55	\$2,114	\$4,093	-\$143	\$0	\$6,065
	PY16		2.23	1,602	\$1,763	\$838	\$2,600.36	\$2,023	\$3,915	-\$137	\$0	\$5,801
	PY17		2.23	1,092	\$1,202	\$571	\$1,772.97	\$1,379	\$2,670	-\$93	\$0	\$3,955
Program Total		0.899	2.23	7,282	8,012	\$3,808	\$11,819.80	\$9,193	\$17,797	-\$621	\$0	\$26,369
Large Industrial Downstream Incentives	PY13		4.17	1,037	\$522	\$566	\$1,088.41	\$1,423	\$3,129	-\$15	\$0	\$4,537
	PY14		4.17	1,747	\$880	\$954	\$1,833.32	\$2,396	\$5,271	-\$26	\$0	\$7,642
	PY15		4.17	2,232	\$1,124	\$1,218	\$2,342.22	\$3,061	\$6,734	-\$33	\$0	\$9,763
	PY16		4.17	2,424	\$1,221	\$1,323	\$2,543.94	\$3,325	\$7,314	-\$36	\$0	\$10,604
	PY17		4.17	2,656	\$1,337	\$1,449	\$2,786.58	\$3,642	\$8,012	-\$39	\$0	\$11,615
Program Total		0.899	4.17	10,096	5,084	\$5,511	\$10,594.47	\$13,848	\$30,460	-\$148	\$0	\$44,160
All Programs	PY13	1	1.74	8,151	17,107	8,099	25,315	16,146	28,887	-894	0	44,139
	PY14	1	1.82	9,571	19,084	9,152	28,358	18,720	33,989	-1,019	0	51,690
	PY15	1	1.89	10,714	21,052	10,161	31,358	21,431	39,052	-1,179	0	59,304
	PY16	1	1.93	11,401	22,676	10,718	33,559	23,439	42,590	-1,319	0	64,710
	PY17	1	1.88	10,306	19,786	9,458	29,343	19,894	36,284	-1,030	0	55,149
Portfolio Total			1.86	50,143	99,706	47,587	147,933	99,631	180,802	-5,440	0	274,993

12. Sector Programs Schedules & Milestones

Chart 1: Program Schedule Summary – Residential Portfolio Programs

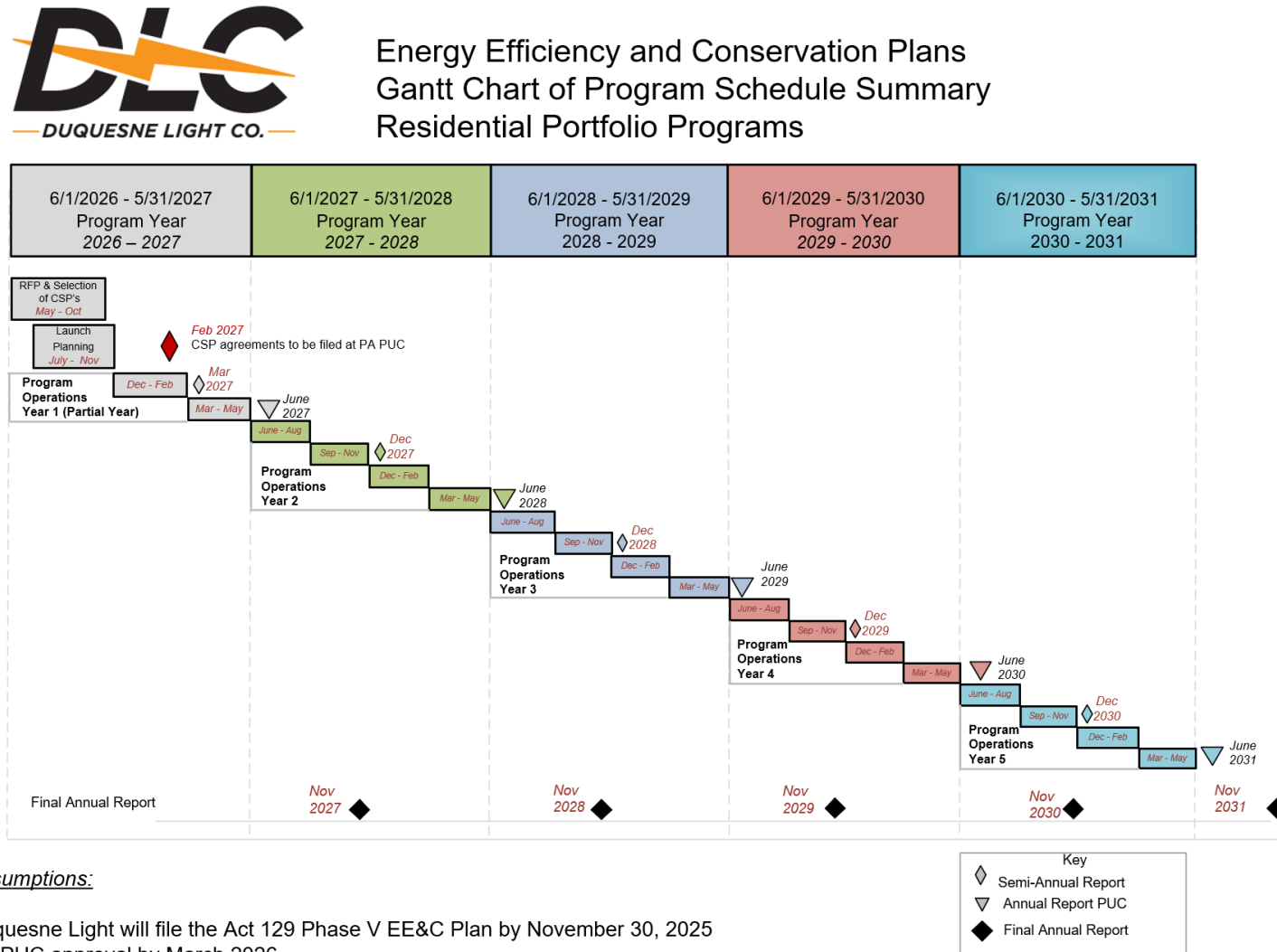
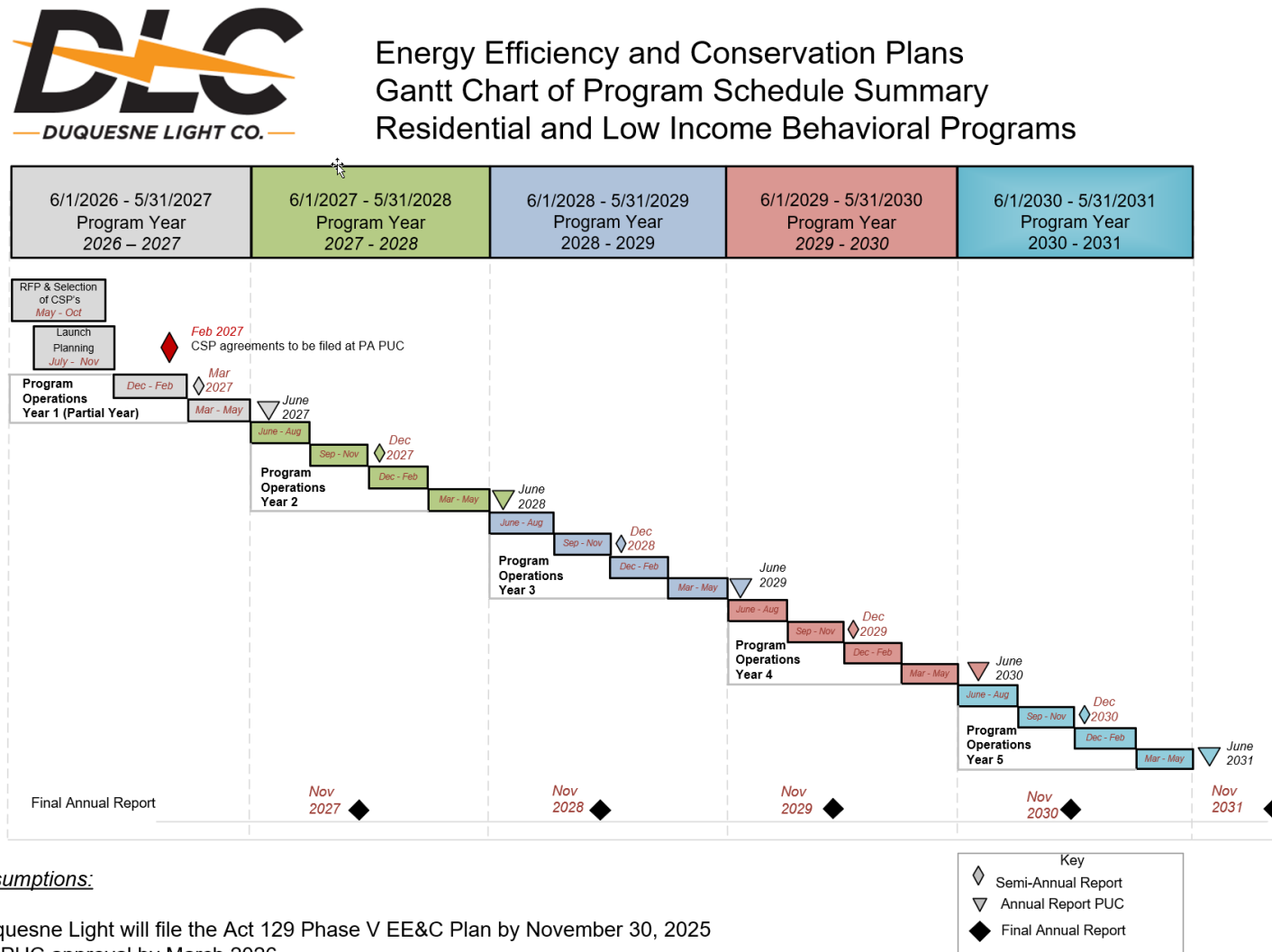


Chart 2: Program Schedule Summary – Residential & Low-Income Behavioral Programs



Note: Program Year Ending May 31

Chart 3: Program Schedule Summary – Small Commercial and Industrial Portfolio Programs

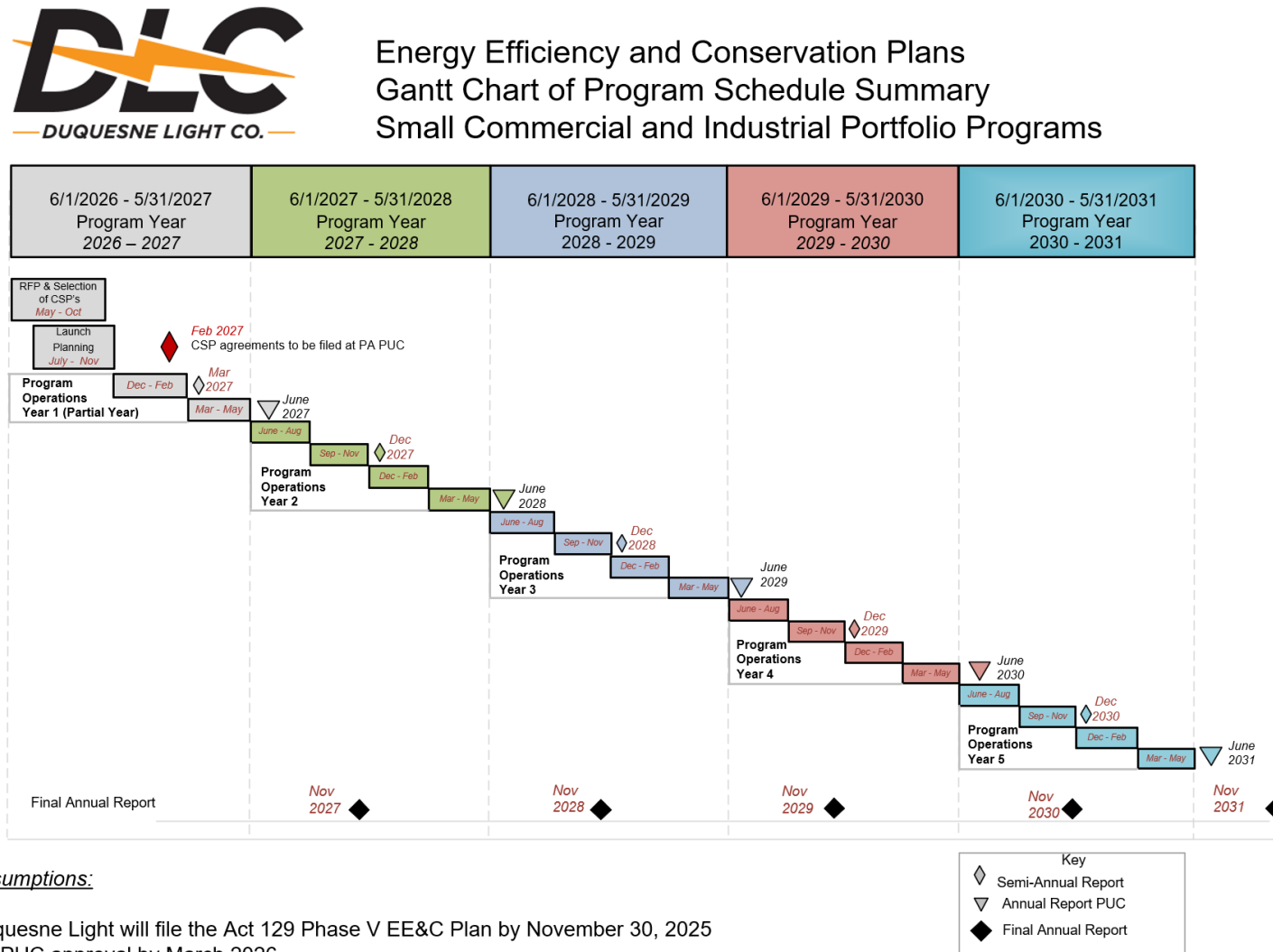
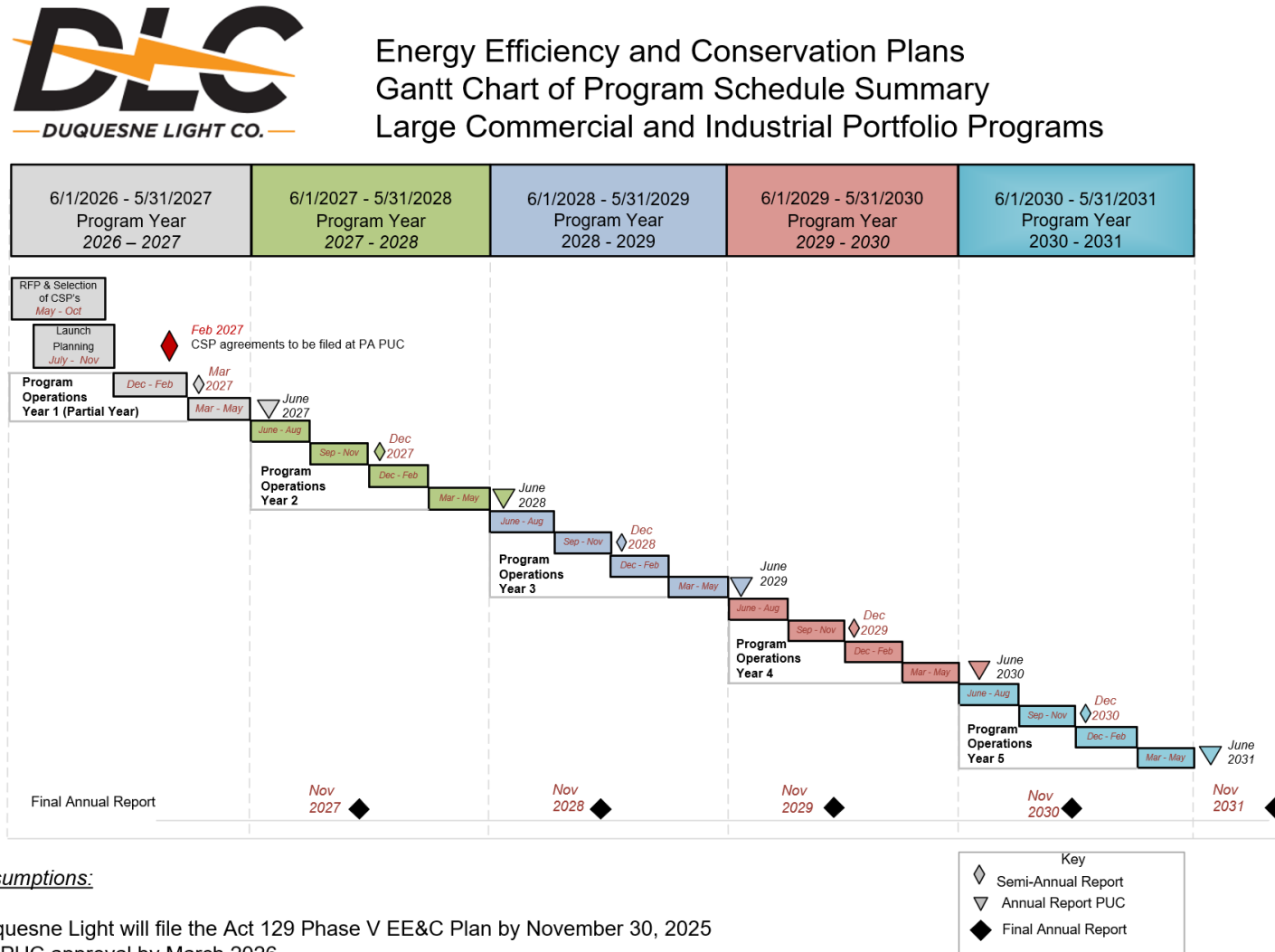


Chart 4: Program Schedule Summary – Large Commercial and Industrial Portfolio Programs

13. CSP Agreement (CONFIDENTIAL)

Guidehouse's Phase V CSP Agreement filed separately due to confidentiality.

14. Avoided Cost Calculator

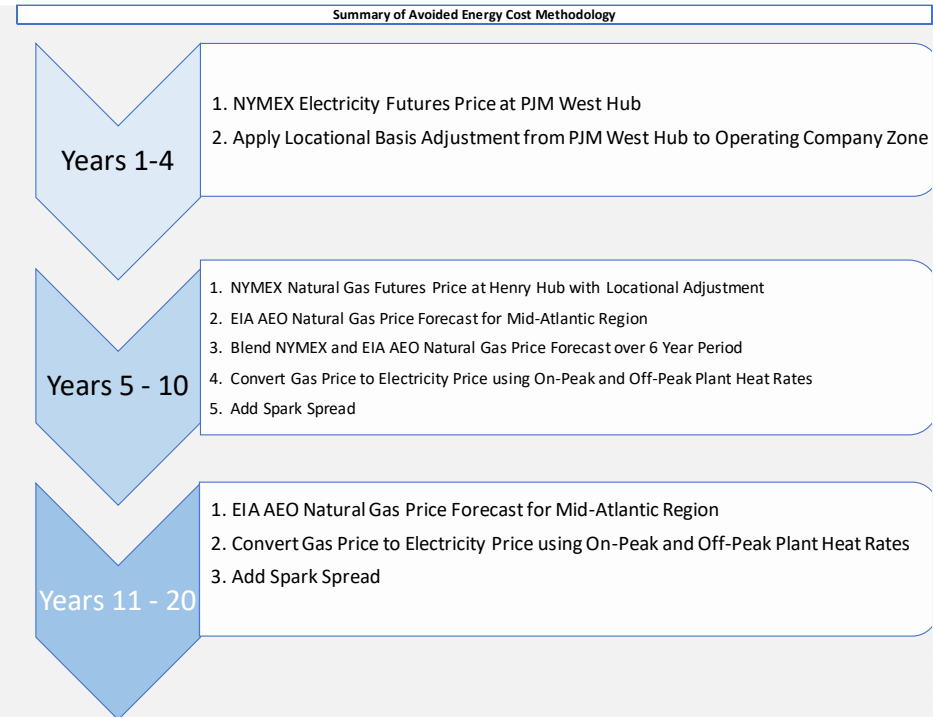
Pennsylvania Act 129 Phase V Avoided Energy and Capacity Cost Calculator	
This calculator is to be utilized with the Pennsylvania (PA) Act 129 Phase V Total Resource Cost (TRC) Test Order. This calculator, developed by the Statewide Evaluator (SWE), executes the methodology outlined within the TRC Test 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			Calendar			
Company Name	DLC		Act 129 PY	PY Start	PY End	Avoided Energy YR
Start Year (Program)	18	2026	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

Output (non-Low-Income)

		DLC Zone Summer (\$/MWh)		DLC Zone Winter (\$/MWh)		DLC DLC Zone Shoulder (\$/MWh)		DLC Generation Capacity (\$/kW/year)		DLC Transmission Capacity (\$/kW/year)		DLC Distribution Capacity (\$/kW/year)		Avoided Natural Gas Fuel Costs (\$/MMBTU)	
PA ACT 129 Program Year	Year	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	2026	\$88.30	\$59.27	\$91.75	\$80.40	\$74.35	\$63.24	\$72.59	\$72.59	\$61.07	\$0.00	\$59.28	\$0.21	\$3.92	Segment 1
19	2027	\$98.32	\$68.77	\$106.29	\$94.75	\$85.26	\$73.51	\$46.05	\$46.05	\$62.54	\$0.00	\$64.43	\$0.12	\$4.01	
20	2028	\$106.23	\$76.51	\$115.43	\$103.05	\$92.17	\$80.32	\$46.97	\$46.97	\$64.06	\$0.00	\$69.93	\$0.18	\$3.88	
21	2029	\$105.44	\$76.48	\$115.23	\$102.83	\$91.14	\$79.49	\$48.05	\$48.05	\$65.61	\$0.00	\$76.21	\$0.18	\$3.79	
22	2030	\$71.85	\$43.16	\$80.10	\$69.01	\$58.32	\$47.58	\$35.61	\$35.61	\$67.20	\$0.00	\$81.30	\$0.29	\$3.63	Segment 2
23	2031	\$71.72	\$43.12	\$78.58	\$68.02	\$57.49	\$47.06	\$36.47	\$36.47	\$68.83	\$0.00	\$83.27	\$0.29	\$3.55	
24	2032	\$71.96	\$43.33	\$80.84	\$69.62	\$58.06	\$47.50	\$37.36	\$37.36	\$70.49	\$0.00	\$85.29	\$0.30	\$3.62	
25	2033	\$74.47	\$45.12	\$84.82	\$72.41	\$60.50	\$49.23	\$38.26	\$38.26	\$72.20	\$0.00	\$87.35	\$0.31	\$3.86	
26	2034	\$77.20	\$47.04	\$89.23	\$75.50	\$63.33	\$51.23	\$39.19	\$39.19	\$73.95	\$0.00	\$89.47	\$0.32	\$4.14	Segment 3
27	2035	\$79.69	\$48.81	\$93.06	\$78.18	\$65.96	\$53.09	\$40.14	\$40.14	\$75.74	\$0.00	\$91.63	\$0.32	\$4.38	
28	2036	\$81.77	\$50.29	\$96.25	\$80.43	\$68.03	\$54.57	\$41.11	\$41.11	\$77.57	\$0.00	\$93.85	\$0.33	\$4.58	
29	2037	\$81.71	\$50.30	\$95.87	\$80.22	\$67.96	\$54.56	\$42.10	\$42.10	\$79.45	\$0.00	\$96.13	\$0.34	\$4.55	
30	2038	\$81.12	\$49.95	\$94.21	\$79.13	\$67.29	\$54.16	\$43.12	\$43.12	\$81.37	\$0.00	\$98.45	\$0.35	\$4.46	
31	2039	\$80.72	\$49.73	\$93.00	\$78.35	\$66.84	\$53.90	\$44.17	\$44.17	\$83.34	\$0.00	\$100.84	\$0.36	\$4.38	
32	2040	\$81.14	\$50.07	\$93.77	\$78.94	\$67.28	\$54.27	\$45.24	\$45.24	\$85.36	\$0.00	\$103.28	\$0.36	\$4.41	
33	2041	\$82.44	\$51.02	\$96.64	\$80.97	\$68.69	\$55.29	\$46.33	\$46.33	\$87.43	\$0.00	\$105.78	\$0.37	\$4.55	
34	2042	\$83.87	\$52.07	\$99.83	\$83.22	\$70.24	\$56.41	\$47.45	\$47.45	\$89.55	\$0.00	\$108.34	\$0.38	\$4.71	
35	2043	\$85.35	\$53.14	\$103.11	\$85.54	\$71.83	\$57.57	\$48.60	\$48.60	\$91.71	\$0.00	\$110.96	\$0.39	\$4.87	
36	2044	\$86.35	\$53.90	\$105.26	\$87.08	\$72.92	\$58.38	\$49.78	\$49.78	\$93.94	\$0.00	\$113.65	\$0.40	\$4.97	
37	2045	\$87.13	\$54.49	\$106.85	\$88.24	\$73.75	\$59.01	\$50.99	\$50.99	\$96.21	\$0.00	\$116.40	\$0.41	\$5.05	

Output – Low-Income

		DLC Zone Summer (\$/MWh)		DLC Zone Winter (\$/MWh)		DLC DLC Zone Shoulder (\$/MWh)		DLC Generation Capacity (\$/kW/year)		DLC Transmission Capacity (\$/kW/year)		DLC Distribution Capacity (\$/kW/year)		Avoided Natural Gas Fuel Costs (\$/MMBTU)	
PA ACT 129 Program Year	Year	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	2026	\$106.97	\$77.94	\$110.42	\$99.07	\$93.02	\$81.91	\$72.59	\$72.59	\$61.07	\$0.00	\$59.28	\$0.21	\$3.92	Segment 1
19	2027	\$117.36	\$87.81	\$125.33	\$113.80	\$104.31	\$92.55	\$46.05	\$46.05	\$62.54	\$0.00	\$64.43	\$0.12	\$4.01	
20	2028	\$125.65	\$95.94	\$134.86	\$122.47	\$111.60	\$99.74	\$46.97	\$46.97	\$64.06	\$0.00	\$69.93	\$0.18	\$3.88	
21	2029	\$125.26	\$96.29	\$135.05	\$122.64	\$110.96	\$99.30	\$48.05	\$48.05	\$65.61	\$0.00	\$76.21	\$0.18	\$3.79	
22	2030	\$92.06	\$63.37	\$100.31	\$89.22	\$78.53	\$67.79	\$35.61	\$35.61	\$67.20	\$0.00	\$81.30	\$0.29	\$3.63	Segment 2
23	2031	\$92.33	\$63.74	\$99.19	\$88.63	\$78.10	\$67.67	\$36.47	\$36.47	\$68.83	\$0.00	\$83.27	\$0.29	\$3.55	
24	2032	\$92.98	\$64.36	\$101.87	\$90.65	\$79.09	\$68.53	\$37.36	\$37.36	\$70.49	\$0.00	\$85.29	\$0.30	\$3.62	
25	2033	\$95.92	\$66.56	\$106.27	\$93.86	\$81.94	\$70.67	\$38.26	\$38.26	\$72.20	\$0.00	\$87.35	\$0.31	\$3.86	
26	2034	\$99.08	\$68.92	\$111.11	\$97.37	\$85.21	\$73.10	\$39.19	\$39.19	\$73.95	\$0.00	\$89.47	\$0.32	\$4.14	Segment 3
27	2035	\$102.00	\$71.12	\$115.37	\$100.49	\$88.28	\$75.40	\$40.14	\$40.14	\$75.74	\$0.00	\$91.63	\$0.32	\$4.38	
28	2036	\$104.53	\$73.05	\$119.01	\$103.19	\$90.79	\$77.33	\$41.11	\$41.11	\$77.57	\$0.00	\$93.85	\$0.33	\$4.58	
29	2037	\$104.93	\$73.52	\$119.09	\$103.44	\$91.17	\$77.78	\$42.10	\$42.10	\$79.45	\$0.00	\$96.13	\$0.34	\$4.55	
30	2038	\$104.80	\$73.63	\$117.89	\$102.81	\$90.97	\$77.84	\$43.12	\$43.12	\$81.37	\$0.00	\$98.45	\$0.35	\$4.46	
31	2039	\$104.87	\$73.88	\$117.15	\$102.50	\$90.99	\$78.05	\$44.17	\$44.17	\$83.34	\$0.00	\$100.84	\$0.36	\$4.38	
32	2040	\$105.78	\$74.71	\$118.40	\$103.57	\$91.92	\$78.90	\$45.24	\$45.24	\$85.36	\$0.00	\$103.28	\$0.36	\$4.41	
33	2041	\$107.57	\$76.15	\$121.77	\$106.10	\$93.82	\$80.42	\$46.33	\$46.33	\$87.43	\$0.00	\$105.78	\$0.37	\$4.55	
34	2042	\$109.50	\$77.70	\$125.46	\$108.85	\$95.87	\$82.04	\$47.45	\$47.45	\$89.55	\$0.00	\$108.34	\$0.38	\$4.71	
35	2043	\$111.49	\$79.28	\$129.25	\$111.68	\$97.97	\$83.71	\$48.60	\$48.60	\$91.71	\$0.00	\$110.96	\$0.39	\$4.87	
36	2044	\$113.02	\$80.56	\$131.93	\$113.75	\$99.58	\$85.04	\$49.78	\$49.78	\$93.94	\$0.00	\$113.65	\$0.40	\$4.97	
37	2045	\$114.33	\$81.69	\$134.05	\$115.44	\$100.95	\$86.21	\$50.99	\$50.99	\$96.21	\$0.00	\$116.40	\$0.41	\$5.05	

Period	NYMEX: PJM Western Hub On-peak (Nominal \$/MWh)	NYMEX: PJM Western Hub Off-peak (Nominal \$/MWh)	DLC Zone Adjusted On- Peak (Nominal \$/MWh)	DLC Zone Adjusted Off- Peak (Nominal \$/MWh)
Sep-25	\$47.49	\$30.75	\$47.57	\$30.80
Oct-25	\$50.95	\$36.35	\$51.03	\$36.41
Nov-25	\$48.50	\$39.35	\$48.58	\$39.41
Dec-25	\$56.65	\$46.65	\$56.74	\$46.72
Jan-26	\$78.55	\$66.20	\$78.67	\$66.30
Feb-26	\$67.85	\$56.50	\$67.96	\$56.59
Mar-26	\$50.20	\$41.95	\$50.28	\$42.02
Apr-26	\$50.65	\$38.90	\$50.73	\$38.96
May-26	\$52.35	\$34.25	\$52.43	\$34.30
Jun-26	\$59.00	\$35.15	\$59.09	\$35.21
Jul-26	\$88.10	\$44.60	\$88.24	\$44.67
Aug-26	\$75.75	\$38.40	\$75.87	\$38.46
Sep-26	\$57.90	\$35.80	\$57.99	\$35.86
Oct-26	\$55.10	\$41.05	\$55.19	\$41.11
Nov-26	\$54.80	\$44.50	\$54.89	\$44.57
Dec-26	\$63.80	\$53.50	\$63.90	\$53.58
Jan-27	\$87.00	\$72.70	\$87.14	\$72.81
Feb-27	\$74.35	\$63.50	\$74.47	\$63.60
Mar-27	\$52.35	\$44.10	\$52.43	\$44.17
Apr-27	\$52.40	\$39.30	\$52.48	\$39.36
May-27	\$52.55	\$34.25	\$52.63	\$34.30
Jun-27	\$59.25	\$34.75	\$59.34	\$34.80
Jul-27	\$88.15	\$43.15	\$88.29	\$43.22
Aug-27	\$77.05	\$39.70	\$77.17	\$39.76
Sep-27	\$57.55	\$35.20	\$57.64	\$35.26
Oct-27	\$56.10	\$40.05	\$56.19	\$40.11
Nov-27	\$54.65	\$45.10	\$54.74	\$45.17
Dec-27	\$63.25	\$53.85	\$63.35	\$53.94
Jan-28	\$84.20	\$72.40	\$84.33	\$72.51
Feb-28	\$78.10	\$65.45	\$78.22	\$65.55
Mar-28	\$52.85	\$43.95	\$52.93	\$44.02
Apr-28	\$51.60	\$38.25	\$51.68	\$38.31
May-28	\$52.40	\$35.75	\$52.48	\$35.81
Jun-28	\$58.20	\$34.95	\$58.29	\$35.01
Jul-28	\$89.00	\$41.90	\$89.14	\$41.97
Aug-28	\$78.15	\$38.60	\$78.27	\$38.66
Sep-28	\$57.05	\$35.25	\$57.14	\$35.31
Oct-28	\$52.00	\$39.20	\$52.08	\$39.26
Nov-28	\$55.25	\$42.95	\$55.34	\$43.02
Dec-28	\$66.15	\$53.50	\$66.25	\$53.58
Jan-29	\$85.25	\$71.60	\$85.38	\$71.71
Feb-29	\$78.60	\$65.00	\$78.72	\$65.10
Mar-29	\$53.20	\$48.00	\$53.28	\$48.08
Apr-29	\$52.10	\$38.50	\$52.18	\$38.56
May-29	\$53.95	\$36.90	\$54.04	\$36.96
Jun-29	\$58.15	\$36.10	\$58.24	\$36.16
Jul-29	\$90.30	\$43.35	\$90.44	\$43.42
Aug-29	\$78.20	\$39.80	\$78.32	\$39.86
Sep-29	\$56.35	\$36.20	\$56.44	\$36.26
Oct-29	\$51.70	\$36.85	\$51.78	\$36.91
Nov-29	\$55.45	\$42.55	\$55.54	\$42.62
Dec-29	\$67.65	\$57.75	\$67.76	\$57.84

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for	:	
Approval of its Energy Efficiency and	:	Docket No. M-2025-3057325
Conservation Phase V Plan	:	

VERIFICATION

I, David Defide, being the Senior Manager of Customer Programs of Duquesne Light Company (“Duquesne Light”) hereby state that the testimony set forth in the foregoing Petition is true and correct to the best of my knowledge, information and belief. I further state that the information set forth in the Duquesne Light Energy Efficiency and Conservation Program Phase V Plan is true and correct to the best of my knowledge, information and belief.

I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unworn falsification to authorities.



David Defide

Date: December 1, 2025

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for	:	
Approval of its Energy Efficiency and	:	Docket No. M-2025-3057325
Conservation Phase V Plan	:	

- Duquesne St. 1: The Direct Testimony of David Defide, Senior Manager of
Customer Programs of Duquesne Light Company

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Petition of Duquesne Light Company for
Approval of its Energy Efficiency and
Conservation Phase V Plan**

Docket No. M-2025-3052826

Direct Testimony

Witness: David Defide

Subject: EE&C Phase V Plan Development

DIRECT TESTIMONY OF DAVID DEFIDE

Q. Please state your full name and business address.

My name is David Defide. My business address is 411 Seventh Avenue, Pittsburgh Pennsylvania 15219.

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

A. I am employed by Duquesne Light Company (“Duquesne Light” or the “Company”) as the Senior Manager of Customer Programs.

Q. What are your current responsibilities as the Manager of Customer Programs?

A. As the Senior Manager of Customer Programs, I am responsible for the development and implementation of Duquesne Light’s Energy Efficiency and Conservation (“EE&C”) programs for Act 129 Phase V. I have been responsible for implementing the Company’s EE&C Phase I, Phase II, Phase III and Phase IV Plans. I also assist with the implementation of related customer programs such as Low Income Usage Reduction Program (“Smart Comfort”), and the Income Eligible Advisory Group (“IEAG”), to facilitate coordination among the participants.

Q. Please state your educational and professional qualifications.

A. I received a Bachelor of Arts degree in Administration and Management in 1994 from LaRoche College. In 1997, I received a Master of Business Administration degree from Robert Morris University. I have been working for Duquesne Light Company since August 2009 as the Manager of Customer Programs. In August 2019 I was promoted to Senior

1 Manager of Customer Programs. In that position, I currently manage a staff of five
2 professionals. Prior to my work with Duquesne Light, I was the Chief Finance/Operating
3 Officer for Conservation Consultants, Inc. for ten years. Prior to working for Conservation
4 Consultants, I was the Finance Director and Special Assistant to the Executive Director for
5 the Housing Authority City of Pittsburgh. Prior to this position, I worked for National City
6 Bank as an Operations Supervisor.

7
8 **Q. What is the purpose of your direct testimony?**

9 A. The purpose of my testimony is two-fold. First, I will briefly explain Duquesne Light's
10 energy efficiency plan requirements pursuant to Act 129 of 2008 ("Act 129") and the
11 Public Utility Commission ("Commission") Implementation Order issued June 18, 2025,
12 at Docket No. M-2025-3057325. Second, I will explain the methodology used to design,
13 develop, analyze, and implement Duquesne Light's Energy Efficiency and Conservation
14 Phase V Plan ("EE&C Phase V Plan").

15
16 **Q. Are you sponsoring any exhibits as part of your direct testimony?**

17 A. Yes. Duquesne Light's Energy Efficiency and Conservation Phase V Plan is attached to
18 the Company's Petition and has been marked as Exhibit 1.

19
20 **Q. Have you previously testified before the Pennsylvania Public Utility Commission?**

21 A. Yes. I provided direct testimony on behalf of Duquesne Light in *Petition of PECO Energy*
22 *for an Evidentiary Hearing on the Energy Efficiency Benchmarks*, at Docket No. P-2012-
23 2320334; in support of Duquesne Light's Energy Efficiency and Conservation Petition for

1 Approval of Modifications to its Demand Response Programs and at Docket No. M-2009-
2 2093217; in support of Duquesne Light's Energy Efficiency and Conservation Phase II
3 Plan at Docket Nos. M-2012-2334399, Phase III Plan at Docket No. M-2014-2424864 and
4 Phase IV Plan at Docket No. M-2014-2424864; and on behalf of Duquesne Light in
5 *Petition of Peoples Natural Gas Company, LLC for Approval of its Energy Efficiency and*
6 *Conservation Plan*, Docket No. M-2017-2640306.

7
8 **I. BACKGROUND**

9 **Q. Please explain the Company's energy efficiency conservation and demand response**
10 **obligations under Act 129 of 2008 ("Act 129").**

11 A. Pursuant to Act 129 of 2008 ("Act 129") Electric Distribution Companies ("EDCs") with
12 at least 100,000 customers are required to achieve consumption reductions of at least one
13 percent (1%) by May 31, 2011, and at least three percent (3%) by May 31, 2013. 66 Pa.C.S.
14 § 2806.1(c)(1), (2). Additionally, pursuant to section § 2806.1(d), EDCs are required to
15 achieve a four and one-half (4.5%) percent peak demand reduction of the one hundred
16 (100) highest hours by May 31, 2013. The Phase I EEC&DR Program savings target was
17 422,565 MWh. Act 129 further required the Commission to evaluate the cost and benefits
18 of the EE&C plans by November 30, 2013, and implement additional incremental
19 consumption and peak demand reductions only if the benefits of the EE&C plans exceed
20 the costs. 66 Pa.C.S. § 2806.1(c)(3). The energy consumption reduction target for the Phase
21 II three-year energy efficiency consumption was 276,722 MWh. The Phase III five-year
22 energy efficiency consumption target was 440,916 MWh and the demand reduction target
23 was 42 MW. The Phase IV five-year energy efficiency consumption target is 348,126

MWh and 62 MW. The Commission's Orders implementing Phase V establish Duquesne Light's compliance target is 261,583 MWh. Duquesne Light has developed its energy efficiency and conservation plan to slightly exceed this amount, which is submitted herewith.

Q. How does your testimony relate to that of Company witness Ogden?

A. My testimony focuses exclusively on the strategic and programmatic elements of Duquesne Light's Phase V customer-facing work, including customer assistance, outreach improvements, and load management integration. I will describe what the Company is doing and why those activities are being pursued. In Company Statement #2, Mr. Ogden's testimony addresses a separate topic and does not overlap with the strategic program design as discussed here. Our testimonies are complementary in the sense that they support different, non-interchangeable aspects of the overall filing. There is one aspect I address from Phase IV below that is relevant to the reconciliation of the surcharges within Mr. Ogden's testimony.

Q. Was the Company successful in nominating a portion of its planned peak demand reduction from the Company's Phase IV EEC Plan in PJM's FCM?

A. Yes. The Company was successful in its nomination of a portion of its peak demand savings in the 2025/2026 PJM capacity auction. The Company created a separate PJM billing subaccount to ensure that resources that clear in the PJM FCM are bifurcated and tracked separately so that any applicable proceeds and/or penalties are traceable. The Company is planning to separately reflect the FCM activity within the over or under

collection calculation within the Company's 1307(e) reconciliation. The details of this reconciliation are provided in Company Statement #2, Testimony of David Ogden.

Q. Did the Commission order EDCs to develop and implement a plan to achieve additional energy efficiency conservation targets beyond those required by Act 129 for Phase IV?

A. Yes. Having found the Phase I program to be cost effective, on August 3, 2012, the Commission entered its Energy Efficiency and Conservation Phase II Implementation Order ("*Phase II Implementation Order*"). The Commission's EE&C Phase II Order provided that Duquesne Light was required to achieve a 2.0% energy consumption target, or 276,722 MWhs, over a three year period spanning June 1, 2013, through May 31, 2016 ("*Phase II*"). *Phase II Implementation Order* at p. 24. The Statewide Evaluator (SWE) was directed by the Commission to provide a Demand Response (DR) Potential Study to analyze the cost effectiveness of the legislative peak demand reduction requirements and of potential improvements to the peak demand reduction program. In addition, SWE was tasked with performing an Energy Efficiency (EE) Potential Study to determine the cost effective consumption reduction potential in the Commonwealth. After issuing a Tentative Order and receiving Comments and Reply Comments from a number of interested parties, the Commission issued its Energy Efficiency and Conservation Phase III Implementation Order ("*Phase III Implementation Order*") on June 11, 2015. The Commission subsequently issued a Clarification Order on August 20, 2015, to clarify certain aspects of the *Phase III Implementation Order*. After issuing a Tentative Order and receiving Comments and Reply Comments from a number of interested parties, the Commission

1 issued its Energy Efficiency and Conservation Phase IV Implementation Order (“*Phase IV*
2 *Implementation Order*”) on June 18, 2020. After issuing a Tentative Order and receiving
3 Comments and Reply Comments from a number of interested parties, the Commission
4 issued its Energy Efficiency and Conservation Phase V Implementation Order (“*Phase V*
5 *Implementation Order*”) on June 18, 2025.

6
7 **Q. Please summarize the Phase V consumption reduction and demand reductions that**
8 **the Commission adopted for Duquesne Light.**

9 A. The Commission has adopted for Duquesne Light a consumption reduction for the five
10 year Phase V period of 261,583 MWh and demand reduction target of 46.5 MW beginning
11 June 1, 2026.

12
13 **Q. Does Duquesne Light’s Phase V EE&C Plan meet these targets?**

14 A. The Company’s Phase V EE&C Plan is designed to exceed these levels and includes a
15 consumption reduction target of 274,663 MWh and a demand reduction target of 48.2 MW.

16
17 **Q. Provide your rationale for developing savings targets above the mandatory amounts.**

18 A. The Phase V EE&C Plan exceeds kWh and kW savings mandate by 5% to provide a
19 minimum buffer. Projecting the impacts of voluntary energy efficiency programs
20 necessarily carries with it a degree of uncertainty; there are many unknowns. In Phase IV,
21 for example, Duquesne’s EE&C programs were impacted by a significant number of
22 changes to the TRM, executed through a series of guidance memos, codes and standards
23 memos, and interim measure protocols issued by SWE. Additionally, there is uncertainty

1 about the stability of measure costs and market availability as well as the availability of a
2 skilled workforce. Planning to exceed the mandate by 5% represents a conservative
3 “overshoot” of the mandate providing a margin for correction in the event that programs
4 under or over perform.

5
6 **Q. How will Duquesne Light’s EE&C Phase V Plan achieve demand reduction targets?**

7 A. The proposed EE&C Plan is developed to provide necessary minimum summer or winter
8 demand reductions minimums (75%) of total demand reduction impacts through its
9 proposed measure mix. Duquesne believes this is an appropriate area of concern and is
10 expecting it to be a challenge. This measurement scheme represents a novel requirement
11 not seen or tested before, just as the design around the top 100 hours measurement impacts
12 required in Phases I and II and the design around dispatch triggered by 96% for PJM
13 forecast peaks imposed in Phase III were novel. Duquesne Light will monitor Summer and
14 Winter demand reductions at the measure, project, program and portfolio levels. Duquesne
15 Light includes in its forecast measures and measure impacts resource adequacy measures
16 including but not limited to optimized ENERGY STAR Connected Thermostats, managed
17 EV charging and C&I load shifting. Duquesne Light plans these impacts so as to render 5-
18 years of averaged impacts to increase the probability of meeting the newly imposed
19 requirement(s).

20
21 **Q. Does Act 129 provide guidance on EDCs’ allowable spending levels for their EE&C**
22 **Plans?**

1 A. Yes. Act 129 provides that “[t]he total cost of any plan required under this section shall not
2 exceed 2% of the electric distribution company's total annual revenue as of December 31,
3 2006.” An EDC’s total annual revenue is defined as “[a]mounts paid to the electric
4 distribution company for generation, transmission, distribution and surcharges by retail
5 customers.” The Commission has interpreted this to include amounts paid to the EDC for
6 generation service, including generation revenues collected by an EDC for an electric
7 generation supplier that uses consolidated billing.

8
9 **Q. Has the Commission provided further guidance on the definition of “EDC total**
10 **annual revenue?”**

11 A. Yes. On January 16, 2009, the Commission issued its EEC&DR Phase I Implementation
12 Order at Docket No. M-2008-2069887 (“*Phase I Order*”). On pages 34-35 of the *Phase I*
13 *Order*, the Commission stated:

14 “...[T]he Commission interprets “amounts paid to the [EDC] for
15 generation, transmission, distribution and surcharges by retail customer,”
16 set forth as the definition of EDC total annual revenue in 66 Pa. C.S. §
17 2806.1(m), **to include all amounts paid to the EDC for generation**
18 **service, including generation revenues collected by an EDC for an EGS**
19 **that uses consolidated billing.** This result will bring Duquesne’s program
20 budget closer to a level of parity with the other EDCs and ensure that it has
21 a more meaningful opportunity to comply with the EE&C provisions of Act
22 129.”

23 The Commission retained its interpretation of EDC total annual revenues provided in Phase
24 I, Phase II, Phase III, Phase IV, and now Phase V.

25
26 **Q. What is Duquesne Light’s budget for its Phase V EE&C Plan?**

27 A. Duquesne Light’s total 2006 annual revenues were \$723,299,451. EGS total generation
28 and transmission revenues in Duquesne Light’s service territory in December 2006 were

1 \$253,998,128. Combined, Duquesne Light and EGS 2006 annual revenues totaled
2 \$977,297,579. Applying simple arithmetic, 2% of \$977,297,579 equals \$19,545,951.58.
3 Therefore, Duquesne Light's annual budget is \$19,545,951.58, and the total five year
4 program spending cap is \$97,729,760

5
6 **II. EE&C PHASE V PLAN DEVELOPMENT**

7 **Q. How will Duquesne Light measure energy savings for the programs it proposes to**
8 **implement?**

9 A. Under Act 129, the Commission was required to implement an energy efficiency program
10 that includes a process to monitor and verify data collection and plan results. In the Phase
11 I Order, the Commission adopted the *Energy Efficiency and DSM Rules for Pennsylvania's*
12 *Alternative Energy Portfolio Standard, Technical Reference Manual* ("TRM") as a
13 component of the EE&C Program evaluation process. The Commission continued its use
14 of the TRM for the Phase II, Phase III, Phase IV and will do the same for Phase V programs.
15 The TRM in Phase I and Phase II was updated annually and used to measure and verify
16 applicable energy efficiency measures used by EDCs to meet the Act 129 consumption
17 reduction targets. For Phase III, the Commission applied the 2016 TRM, as periodically
18 amended, for the entirety of Phase III. Similarly, for Phase IV, the Commission applied
19 the 2021 TRM, as periodically amended through memos and IMPs, for the entirety of Phase
20 IV. The Commission is following a similar approach in Phase V. For Phase V, the
21 Implementation Order at page 209 states that the 2026 TRM will be applicable for the
22 entirety of Phase V but may be subject to a mid-phase TRM updates if required by changes
23 to codes and standards. In addition, in its Final Order issued September 12, 2024, at Docket

No. M-2023-3044491 (“TRM Final Order”), the Commission adopted a formal process for incorporating updates to codes, standards and Energy Star specifications occurring during Phase V without undertaking a new TRM update. In the schedule outlined in the TRM Final Order at 13, SWE will issue a codes and standards analysis memo by March 15th of a given program year covering any impactful changes that will be in effect by July 1st (in the following program year). After being subject to a comment and review process, the Commission will issue its disposition in November of the same program year. Finally, the TRM change would go into effect on June 1 of the following program year, or 14.5 months after the initial SWE memo. The expected savings discussed later in this testimony are based on the 2026 TRM.

Q. Duquesne Light’s EE&C Phase V Plan must be cost effective. How did Duquesne Light determine if its EE&C Phase V plan is cost effective?

A. Under Act 129, the Commission is required to use a Total Resource Cost (“TRC”) test to analyze the costs and benefits of EDC energy efficiency and conservation plans. Act 129 defines the TRC as “a standard test that is met if, over the effective life of each plan not to exceed 15 years, the net present value of the avoided monetary cost of supplying electricity is greater than the net present value of the monetary cost of energy efficiency conservation measures.” Under Act 129, EDCs must demonstrate that its Phase V EE&C Plan is cost effective using the TRC test. Use of the TRC test was specified in a series of six (6) Commission TRC Orders, issued sequentially, each partially modifying its predecessor.

1. *TRC Test Order*, June 18, 2009 Docket No. M-2009-2108601
2. *TRC Test Order*, July 28, 2011, Docket No. M-2009-2108601

3. *TRC Test Order*, August 20, 2012, Docket No. M-2012-2300653, M2009-2108601
4. *TRC Test Order*, June 11, 2015, Docket M-2015-2468992
5. *TRC Test Order*, December 19, 2019, Docket M-2019-3006868
6. *TRC Test Order*, November 7, 2024, Docket M-2024-3048998

Duquesne Light measured the cost effectiveness of its EE&C Phase V Plan based on all of the applicable provisions of all of these TRC Test Orders. The results of the TRC are expressed as the net present value and benefit/cost (“B/C”) ratio. Consistent with the aforementioned TRC Test Orders, a B/C ratio greater than one indicates that the program is beneficial to the utility and its ratepayers on a total resource cost basis. Duquesne Light’s proposed EE&C Phase V Plan overall TRC score is 2.04. Accordingly, the Plan is cost effective as a whole.

Q. Please describe the process used to develop Duquesne Light’s EE&C Phase V Plan.

A. The Company’s EE&C Phase V Plan was developed in partnership with prospective implementation providers to leverage industry expertise and streamline the transition from Phase IV. The EE&C Plan forecast measure detail is directly linked to prospective CSP responses to competitive solicitations, issued by Duquesne Light, for the design and implementation of the programs presented in this Plan. Accordingly, the measure mix was taken from proposals selected based on CSP expertise and innovation. The Plan measure content was reconciled with content of the 2026 Technical Reference Manual (TRM) and information provided in the SWE saturation studies and potential forecast (2024 Statewide

1 EE Potential Study¹). Measure deemed savings were updated consistently with the 2026
2 TRM. Measure costs were documented using the SWE incremental costs database,
3 contractor values, EDC research and specific measure cost web research. Incentive
4 amounts were established starting with baseline assumptions applied in the 2024 Statewide
5 EE Potential Study. These were adjusted based upon historic incentives provided by
6 Duquesne Light, the other six Pennsylvania EDCs, escalated for the Phase V performance
7 period and adjusted as required to achieve budgetary requirements. Avoided cost
8 assumptions were updated consistent with the Total Resource Cost Test (TRC) Order and
9 applied to render measure, program, portfolio, and Plan level cost-effectiveness as
10 expressed by the TRC ratio. Programs were defined based upon delivery channels within
11 each customer sector.

12 Duquesne Light worked with CSPs to establish program definitions. Residential
13 sector programs retain the successful appliance recycling, and midstream rebate offerings.
14 In addition, Duquesne Light is offering an on-line marketplace allowing eligible customers
15 the chance to shop for energy saving products and apply instant utility incentives at
16 checkout in Phase V. The Commercial and Industrial portfolios retain proven customer
17 market segment engagement channels. The Small Medium Nonresidential Energy
18 Efficiency Program (SNEEP) features a Direct-Install, Midstream, Downstream and
19 Multifamily Housing Retrofit engagement channels that successful in Phase IV and are
20 continued in Phase IV. Such programs demonstrate Duquesne Light's commitment to
21 providing comprehensive measures to under-served market segments.

¹ Energy Efficiency Potential Study for Pennsylvania, NV5, February 7, 2024
Energy Efficiency and Conservation Program Implementation Order, Docket M-2025-3052826, Table 2: Final
Phase V Targets, by EDC, page 12.

Program goal allocation and associated program budgets were designed based upon SWE Energy Efficiency Potential Study and adjusted to accommodate the Commission's Implementation Order, which required segment carve-outs for the low income segment and specified program comprehensiveness requirements. Goal allocation for the remaining customer segments was based on energy segment, as well as requirements to achieve mandated reductions at authorized budgets.

Q. What carve-outs for the low income customer segment did the Commission establish for Duquesne Light?

A. The Phase V Implementation Order provides that Duquesne Light's Phase V Plan must obtain at least 18,933 MWh in energy savings from the low-income customer segment. Phase V Implementation Order, Table 2: Final Phase V Targets, by EDC, p. 12. This constitutes approximately 7.2% of the Phase V portfolio-wide energy savings mandate of 261,583 MWh. Additionally, the Company's Phase V Plan must provide a "proportionate number of measures equivalent to the low-income sector's share of usage," or 8.40% of measures. Phase V Implementation Order pp. 27, 35. As discussed further below, the Company's Phase V Plan exceeds both these required carve-outs.

Q. Did the company engage either internal or external stakeholders input in the development of this Plan?

A. Yes, both internal and external stakeholders' meetings were held to discuss input into the Plan.

1 **Q. Please describe the process used to gather external stakeholder input on the**
2 **Company's EE&C Phase V Plan.**

3 A. During the planning process, individual stakeholder meetings were held to discuss
4 Duquesne Light's program plans for Phase V. Participants included and invitations were
5 extended to regulatory parties such as Office of Consumer Advocate, Office of Small
6 Business Advocate, Duquesne Light's Income Eligible Advisory Group ("IEAG"), lighting
7 vendors, Conservation Service Providers, EM&V contractor, and CAUSE PA.

8
9 **Q. Did the external stakeholder meetings influence the Company's EE&C Phase V Plan**
10 **development?**

11 A. Yes. Based on stakeholder input, Duquesne's Phase V Plan proposes continuing with the
12 Income Eligible Advisory Group meetings throughout the Phase. Members of this group
13 include community based organizations, OCA, CAUSE-PA, and various non-profit social
14 service agencies. At these meetings marketing material and outreach opportunities will be
15 discussed. Furthermore, DLC will conduct a stakeholder meeting with the Housing
16 Alliance of Pennsylvania, PHFA, other interested affordable housing trade groups, and
17 other interested stakeholders in Phase V to coordinate and tailor the measures targeted in
18 the development of affordable housing opportunities.

19 Moreover, during Phase V, the Company plans to continue to work with the IEAG
20 on raising awareness, marketing and outreach opportunities. Duquesne Light and its non-
21 residential CSP(s) also plan to hold additional meetings after plan approval to discuss the
22 logistics around continued partnership with the NGDCs to increase awareness of CHP
23 rebate opportunities under the Phase V plan.

1
2 **Q. Were internal stakeholders engaged in the process during development of the Phase**
3 **V EE&C Plan?**

4 A. Yes, members of DLC's Load Management Group and Advanced Grid Technology were
5 engaged in discussions. These groups plan and implement load management programs as
6 part of ongoing distribution system operations to help its customers save money and
7 improve operating efficiency of its distribution system.
8

9 **Q. Please describe the strategic work Duquesne Light is undertaking to align customer**
10 **assistance programs and load management initiatives with the Company's Act 129**
11 **planning efforts.**

12 A. Duquesne Light is undertaking a coordinated strategic effort to better integrate its customer
13 assistance portfolio with Act 129 energy efficiency and demand-response planning, with a
14 particular focus on load management. Working with its consultants, the Company has
15 evaluated how outreach, enrollment, and on-bill support tools can be more tightly linked
16 to targeted measures that reduce both energy consumption and peak demand for the
17 customers who need help the most. This includes using data-driven segmentation to
18 identify vulnerable and hard-to-reach customers, aligning assistance offerings with cost-
19 effective energy efficiency and load management opportunities. The testimony explains
20 how these efforts are being formalized into a forward-looking strategy that coordinates
21 customer engagement, program design, and system planning so that customer assistance
22 and load management are no longer treated as separate activities, but as integrated elements

of Duquesne Light's overall Act 129 energy efficiency compliance and resource planning framework.

Q. What load management activities are currently operational at Duquesne Light?

A. The following programs are currently operational at Duquesne Light:

- Peak Saver Rewards Program, a behavioral load management customer offering
- The Smart Charging Rewards pauses chargers automatically during 2-3 hour events
- The EV Time of Use Distribution Rate promotes off-peak EV charging for lower distribution rate component charges
- The Time-of-Use Supply Rate for default service customers promotes off-peak energy use through discounted rates offering significant energy savings compared to peak period charges.

These modern-day, up-and-operating resource adequacy resources demonstrate Duquesne Light's organizational depth and capabilities.

Q. Were these initiatives approved by the PA PUC?

A. Yes, Peak Saver Rewards, Smart Charging Rewards and EV Time of Use Distribution Rates were approved in Duquesne Light's 2024 distribution rate case proceeding. The Time of Use Supply Rate as approved in 2024 DSP X proceeding.

Q. What happens if these programs are not approved in subsequent regulatory proceedings?

1 A. These operational load management initiatives may serve to meet Act 129 Phase V
2 objectives and assist Duquesne Light to meet onerous Phase V demand reduction mandates.
3 Through Act 129, customers may be served by applying such resources and avoiding costly
4 program ramp-up, delay and unproven performance risk.

5
6 **III. EE&C PHASE V PLAN PROGRAMS**

7 **Q. What programs are proposed in the Company's EE&C Phase V Plan?**

8 A., Duquesne Light's proposed EE&C Phase V Plan is designed to educate customers about
9 energy efficiency and conservation and lower customer energy consumption. The Phase V
10 Plan is largely composed of home energy audits, building retrofits, appliance recycling and
11 rebates program that have been customized to meet the needs of specific customer
12 segments within Duquesne Light's service territory. The programs are organized to
13 facilitate participation by three broad customer sectors: residential, commercial, and
14 industrial customers. Additionally, each of the three customer sectors offers additional
15 programs or program components tailored to meet the specific needs of certain customer
16 segments, such as income eligible customers, small to medium commercial and industrial
17 customers, and large commercial, large industrial and GNI customers. In addition,
18 Behavioral Energy Efficiency Program reports will be sent to residential and income
19 eligible residential customers.

20
21 **Q. Please describe the Residential Program Offerings.**

22 A. Phase V Residential programs include the following: 1) Appliance Recycling; 2) On-Line
23 Marketplace; 3) Midstream; 4) Residential Behavioral Energy Efficiency Program ("R-

BEEP”); 5) Low Income Behavioral Energy Efficiency Program (“LI-BEEP”); and 6) the Residential Low Income Energy Efficiency Program (“LIEEP”). These programs are explained in detail in Section 3 of the Company’s Phase V EE&C Plan, but I will provide a brief summary:

Residential Appliance Recycling Program

The Residential Appliance Recycling Program encourages residential customers in Duquesne Light’s service territory to turn in their older refrigerators, dehumidifiers, room air conditioners, and freezers to be recycled. To encourage participation in this program, this program provides no-cost pickup and disposal as well as a rebate for each appliance recycled.

On-Line Marketplace Program

The marketplace allows eligible customers the chance to shop for energy saving products and apply instant utility incentives at checkout. The marketplace seamlessly validates customers, ensuring eligibility for utility provided rebates. Customers can shop for products including smart thermostats, dehumidifiers, advanced power strips, room air purifiers, weatherization products and more. Additional promotional discounts can be provided by product manufacturers.

Midstream Program

To provide incentives for HVAC, hot water, and auxiliary equipment through participating distributors offsetting the higher cost, and thereby drive uptake of the most efficient HVAC, hot water and auxiliary equipment options. The residential customer receives the benefit of the rebate at the point of sale (POS) through the participating distributors or through installation of the equipment by a contractor.

Residential Behavioral Energy Efficiency Programs (“R-BEEP” and “LI-BEEP”)

The R-BEEP and LI-BEEP programs send, via direct mail, home energy use reports that compare recipient customer’s energy use to the use of customers with similar home type and size. The programs provide for comparison the last two months of energy consumption by 1) the most efficient of the peer group, 2) the BEEP recipient, and 3) the entire peer group. The reports generate verifiable savings ranging from 1.5%-3.5% of total home energy use.

Residential Low Income Energy Efficiency Program (“LIEEP”)

1
2 LIEEP is an income-qualified program providing services designed to assist low-
3 income households to conserve energy and reduce electricity costs. LIEEP relies
4 on several, low income segment-specific, contributing programs to achieve
5 projected savings impacts and program cost-effectiveness. The Company intends
6 to achieve the mandated 7.2% of its energy consumption reduction savings from
7 this program and LI-BEEP.
8

9 **Q. What are the projected energy consumption savings and demand reductions for the**
10 **residential programs?**

11 A. The Company expects to achieve 6,126 MWh in energy savings and 1.145 MW in demand
12 reduction from the Residential Appliance Recycling program; 20,000 MWh in energy
13 savings and 1.086 MW in demand reduction from the Residential Midstream EE Program;
14 6,500 MWh and 3.015 MW of demand reduction from the Residential On-Line
15 Marketplace; 34,400 MWh in energy savings and 7.940 MW in demand reductions from
16 the Residential Market Rate Behavioral and Residential Low Income Behavioral Energy
17 Efficiency programs; 16,932 MWh in energy savings and 6.265 MW in demand reductions
18 from LIEEP. The Residential Sector total projected energy savings is 83,958 MWh and
19 19.451 MW in demand reduction.
20

21 **Q. Are the residential energy efficiency programs described herein cost effective?**

22 A. Yes. The residential programs offered are collectively cost-effective. Except for
23 Residential Midstream Incentives Program, each program achieved a TRC score at or
24 above 1. Specifically, the Residential Appliance Recycling Program TRC score is 2.92; the
25 Residential On-Line Marketplace Program TRC score is 2.21; the Residential Midstream
26 Incentives Program TRC score is 0.50; the Residential Behavioral Efficiency Program
27 TRC score is 1.41; and the Low Income Behavioral Efficiency Program TRC score is 1.15.

1 The LIEEP TRC score is 2.01. The overall residential energy efficiency TRC score in
2 aggregate is 1.03.

3
4 **Q. Are any of the residential customer programs currently in operation as part of**
5 **Duquesne Light's Phase IV programs?**

6 A. Yes. Programs currently in place as part of Duquesne Light's Phase IV program include
7 Residential Marketplace; Residential Midstream; Residential Behavioral Energy
8 Efficiency and Low Income Behavioral Energy Efficiency; Residential Appliance
9 Recycling Program; and the Residential LIEEP.

10
11 **Q. Are there any midstream and on-line marketplace measures that you would like to**
12 **describe in more detail?**

13 A. Yes. The Residential Midstream EE Program measures include heat pumps, air
14 conditioners, min-split heat pumps, heat pump water heaters, ENERGY STAR Level 2 EV
15 chargers and smart energy service panels. The Residential On-Line Marketplace will
16 incentivize room air conditioners, ENERGY STAR certified smart thermostats,, ENERGY
17 Star bathroom exhaust fans, water heater pipe insulation, low-flow faucet aerators and
18 showerheads, thermostatic shower restriction valves; ENERGY STAR refrigerators,
19 freezers, clothes washers, clothes dryers, dishwashers, dehumidifiers, air purifiers;
20 advanced powers trips, weather stripping, caulking, outlet gaskets, optimized ENERGY
21 STAR smart thermostats, and managed EV charging.

Q. Do LIEEP and LI-BEEP satisfy the low-income carve-outs established in the Phase V Implementation Order?

A. Yes. The Plan forecasts 21,132 MWh of energy savings from the low-income customer segment, as compared to the Phase V Implementation Order’s corresponding target of 18,933 MWh. The Plan will also meet the “proportionate number of measures” carve-out of 8.40% of measures. Of the 233 measures provided under the Plan, 51 of them – or about 21.9% percent – will be promoted in low-income programs.

Q. Please describe the energy consumption reduction programs available for Small/Medium Commercial and Industrial customers.

A. Customers served under this sector are small/medium commercial and industrial customers with demands less than 300 kW. They will have the opportunity to participate in the Small-Medium Nonresidential Energy Efficiency Program (“SNEEP”) through one of its delivery channels: SNEEP Direct Install, SNEEP Downstream, and SNEEP Midstream. These program delivery channels are explained in detail in Section 3 of the Company’s Phase V EE&C Plan, but I will provide a brief summary:

Small-Medium Nonresidential Energy Efficiency Program (SNEEP)

Serving Small and Medium sized Commercial and Industrial customers with maximum annual demand <300 kW.

Direct Install

A direct install initiative that offers small business customers the opportunity to retrofit existing equipment with more energy-efficient technologies. A turnkey program that offers customers a single source of information, technical assistance, and financial incentives. It incorporates an end-to-end approach, from initial marketing and the resulting audit process through to final equipment installation conducted by a third-party implementation contractor.

Downstream

A downstream initiative that provides customers with ongoing, one-on-one guidance for identifying comprehensive energy efficiency opportunities, assisting with the application and implementation process, obtaining technical assistance, and coordinating with trade allies on projects to create a cohesive program delivery. Through this channel SNEEP recruits and engages trade allies, which are an important source of prospective projects.

Midstream

The midstream initiative provides incentives directly to distributors and manufacturers, rather than to end users; in this way incentives offset the higher cost of efficient products and facilitates distributor stocking of efficient products. This has proven to drive uptake of the most efficient equipment options. Incentives are structured to mitigate the price premium between conventional and high-efficiency products at the point of purchase, which places efficient products in direct competition with conventional products based on quality and efficiency alone. By working with market actors directly, equipment stocking patterns are altered over time to move inefficient products off the shelves and to enable faster adoption and decreased customer costs for efficient equipment.

Q. What are the projected energy consumption savings and demand reductions expected from the Small-Medium Nonresidential Energy Efficiency Program?

A. SNEEP is projected to achieve 76,000 MWh of energy savings and 11.748 MW in demand reductions. The direct-install initiative is projected to achieve 5,179 MWh of energy savings and 0.676 MW in demand reductions. The downstream initiative is expected to achieve 20,821 MWh of energy savings and 3.564 MW in demand reductions. The midstream initiative is expected to achieve 50,000 MWh of energy savings and 7.508 MW in demand reductions.

Q. Are the energy efficiency programs available under the small/medium nonresidential sector cost effective?

1 A. Yes. The SNEEP is cost-effective with a TRC cost test ratio of ratio of 2.63:1.

2
3 **Q. Are any of the commercial programs currently in operation, part of Duquesne Light's**
4 **Phase V programs?**

5 A. Yes. The Small Business Direct-Install Program and Small-Medium Midstream Program
6 were successfully operated in Phase IV.

7
8 **Q. Please describe the energy consumption reduction programs available to large**
9 **commercial and industrial customers.**

10 A. Customers served under these sectors are commercial and industrial customers with
11 demands equal to or greater than 300 kW. They will have the opportunity to participate in
12 three (3) programs: Large Commercial Energy Efficiency Program (CEEP), Public Agency
13 Partnership Program (PAPP), and Large Industrial Energy Efficiency Program (IEEP).
14 These programs are explained in detail in Section 3 of the Company's Phase V EE&C Plan,
15 but I will provide a brief summary:

16 *Serving Large Commercial customers with maximum annual demand ≥ 300 kW*

17
18 **Large Commercial Energy Efficiency Program**

19 Provides on-site efficiency surveys and incentives to implement EE measures
20 offering prescriptive incentives (\$/wadget) as well as engineering-based projects
21 tailored to site-specific opportunities and requirements (\$/kWh saved and/or \$ per
22 kW reduced). Program promotes a full range of building efficiency equipment and
23 controls; retro-commissioning, virtual commissioning and strategic energy
24 management, whole building approaches.

25
26 **Public Agency Partnership Program**

27 The target market is state and local government, including municipalities, school
28 districts, institutions of higher education and nonprofit entities. PAPP was
29 implemented in Phases I, II and III and is brought back for Phase V to address
30 unique barriers to participation and focuses on governmental infrastructure, such as

1 water and wastewater operations, centrally located district plants and the region's
2 expansive primary, secondary and higher education institutions.

3
4 *Serving Large Industrial customers with maximum annual demand ≥ 300 kW.*

5
6 **Large Industrial Energy Efficiency Program**

7 In Phase V IEEP will focus on the strategic energy management (SEM) approach.
8 Under the SEM customers work with implementers to develop energy savings
9 action plans, progress toward goals is tracked and with whole building
10 measurement employed. IEEP will also provide prescriptive and customized,
11 engineering-based energy efficiency incentives.
12
13

14 **Q. What are the projected energy consumption reductions and demand reductions**
15 **expected from the large commercial and industrial efficiency program?**

16 A. The Large Commercial Energy Efficiency Program is projected to save 50,000 MWh with
17 a demand reduction of 8.504 MW. The Large Industrial Energy Efficiency Program is
18 projected to save 40,000 MWh and reduce peak load by 5.329 MW. The Public Agency
19 Partnership is projected to save 24,704 MWh and reduce the system peak by 3.155 MW.
20

21 **Q. Are the energy efficiency programs proposed under the large commercial and**
22 **industrial sectors cost effective?**

23 A. Yes. The Large Commercial and Industrial programs offered are collectively cost-
24 effective. The CEEP TRC score is 2.56; the PAPP TRC score is 2.31; and the IEEP TRC
25 score is 4.40. In total, the programs in these sectors have a TRC score of 2.92.
26

27 **Q. Are any of the large commercial and industrial programs currently in operation, part**
28 **of Duquesne Light's Phase V programs?**

1 A. Yes. Large commercial and industrial sector programs have been operating in every phase
2 since Phase I. The current Large Commercial Energy Efficiency Program and the Large
3 Industrial Energy Efficiency Program are an evolution of the Phase IV Large Business
4 Solutions programs serving nonresidential customers with billing demand equal to or
5 greater than 300 kW.

6
7 **IV. PROGRAM COST**

8 **Q. What is the Company's Phase V spending cap?**

9 A. As I discussed previously, Duquesne Light's Phase V annual budget is \$19,545,951.58,
10 and the total five year program spending cap is \$97,729,760.

11
12 **Q. What is the cumulative cost of the Company's proposed EE&C Phase V Plan and**
13 **what is the implementation strategy to acquire at least 15% of the consumption**
14 **reduction target in each program year as directed by the Commission?**

15 A. The Company's EE&C Phase V Plan has a budget cap of \$97,729,760. This Plan includes
16 programs that are being continued as previously implemented, modified based on previous
17 years' experiences, plus newly added programs. The forecast ramp-rates by projected
18 saving impacts across the five-year period are found in the proposed plan in Figure 1,
19 which provides for acquiring at least 15% of the consumption target in each of the Phase
20 V program years.

21
22 **Q. Please provide an overview of the EE&C Phase V Plan cost by customer sector.**

1 A. As provided in Table 13 of Section 11 of the EE&C Phase V Plan, residential energy
2 efficiency programs comprise 36.5% of the plan cost, or \$35,690,239. Small
3 Commercial/Industrial energy efficiency programs comprise 26.8% of the plan cost, or
4 \$26,166,519. Finally, Large Commercial/Industrial energy efficiency programs comprise
5 36.7% of the plan cost, or \$35,873,001. In his direct testimony, Duquesne St. No. 2, Mr.
6 Ogden describes how the Company will ensure that the programs are funded by the
7 customer sector that benefits from the programs and measures offered in the Plan.

8
9 **Q. What is your recommendation with respect to approval to this Plan as filed?**

10 A. I recommend approval of the Plan as filed. It is in the best interest of our customers by
11 empowering them to reduce energy use, save on their energy bills and manage their energy
12 loads to the benefit of all customers.

13
14 **Q. Does this conclude your testimony?**

15 A. Yes.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David Defide, hereby state that the facts above set forth in my Direct Testimony, labeled Duquesne Statement No. 1, and Rebuttal Testimony, labeled Duquesne 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 herein are made subject to the penalties of 18 Pa. C.S. §4904 (relating to unsworn falsifications to authorities).



David Defide
Senior Manager of Customer Programs
for Duquesne Light Company
Date: January 28, 2026

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for	:	
Approval of its Energy Efficiency and	:	Docket No. M-2025-3057325
Conservation Phase V Plan	:	

Duquesne St. 2: The Direct Testimony of Davide Ogden, Senior Manager, Rates &
Tariff Services, for Duquesne Light Company, with Exhibits DBO-1 through DBO-4

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF DUQUESNE LIGHT COMPANY
FOR APPROVAL OF ITS ENERGY EFFICIENCY AND CONSERVATION PLAN
PHASE V

M-2025-3057325

Direct Testimony

Witness: David B. Ogden

Subject: Energy Efficiency and Conservation Phase V Plan Cost Recovery

Direct Testimony of David B. Ogden

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I. INTRODUCTION

- Q. Please state your full name and business address.**
- A. My name is David B. Ogden. My business address is 411 7th Avenue, Pittsburgh, PA 15219.
- Q. By whom are you employed and in what capacity?**
- A. I am Senior Manager, Rates & Tariff Services, for Duquesne Light Company (“Duquesne Light” or “Company”).
- Q. What are your qualifications, work experience and educational background?**
- A. I received a Bachelor of Science in Business Administration Degree with a major in Accounting from Clarion University of Pennsylvania in 2001. I am a Certified Public Accountant. I began my career at the Company in 2008 as the Supervisor of Derivative Accounting and Special Projects. Over the last seventeen years, I have held supervisory and managerial positions within Accounting, Financial Planning and Analysis and currently the Rates Department. Prior to joining Duquesne Light, I was a senior audit associate in the Pittsburgh office of PricewaterhouseCoopers LLP, a public accounting firm, where I performed attestation, advisory and compliance services for clients throughout the United States. Prior to joining PricewaterhouseCoopers, I held audit positions within the Allegheny County Controllers Office.

1 **Q. Please describe your current responsibilities.**

2 A. In my current role as Senior Manager of Rates and Tariff Services, I am responsible for
3 overseeing the Company's retail rates and wholesale transmission rates. In addition, it is
4 my responsibility to ensure the rates are properly distributed to Customer Billing.
5

6 **Q. Have you previously testified before the Pennsylvania Public Utility Commission**
7 **("Commission") or other regulatory bodies?**

8 A. Yes. I have testified in the Company's Default Service Plan VIII ("DSP VIII")
9 proceeding at Docket No. P-2016-2543140, the Company's Distribution System
10 Improvement Charge ("DSIC") proceeding at Docket No. P-2016-2540046, the
11 Company's 2018 base rate proceeding at Docket No. R-2018-3000124, the Company's
12 Default Service Plan IX ("DSP IX") proceeding at Docket No. P-2020-3019522, the
13 Company's 2020 Phase IV Energy Efficiency and Conservation Plan (EEC) at Docket
14 No. P-2020-3020818, the Company's 2021 base rate proceeding at Docket No. R-2021-
15 3024750, the Company's 2024 base rate proceeding at Docket No. R-2024-3046523, and
16 the Company's Default Service Plan X ("DSP X") proceeding at Docket No. P-2024-
17 3048592.
18

19 **Q. What is the purpose of your testimony?**

20 A. The purpose of my testimony is three-fold. First, I will provide an overview of the
21 Company's current Energy Efficiency and Conservation ("EEC") Phase IV Plan
22 Surcharge ("EEC Surcharge"). Second, I will describe the proposed changes to the EEC
23 Surcharge to implement Duquesne Light's proposed Phase V EEC Plan. Third, I will

1 summarize the costs that Duquesne Light anticipates it will recover through the EEC
2 Surcharge to implement the Company's Phase V EEC Plan and provide an estimate of the
3 surcharges for each customer group.

4
5 Q. **Are you sponsoring any exhibits?**

6 A. Yes. I am sponsoring the following exhibits:

7 Exhibit DBO-1 – Proposed Tariff Supplement (Clean)

8 Exhibit DBO-2 – Proposed Tariff Supplement (Redline)

9 Exhibit DBO-3 – EEC Plan Cost for Planning Years 2026-2031

10 Exhibit DBO-4 – EEC Plan Surcharge Calculation Example

11
12 **II. COST RECOVERY MECHANISM**

13 Q. **Does Act 129 provide guidance on how the costs of providing EEC programs are to**
14 **be recovered by the Company?**

15 A. Yes. Act 129 of 2008 ("Act") permits electric distribution companies ("EDCs") to fully
16 recover the costs of implementing its EEC Plan. The Act permits affected EDCs to
17 recover on a full and current basis from customers, through a reconcilable adjustment
18 clause under 66 Pa. C.S. § 1307, ("Section 1307"), all reasonable and prudent costs
19 incurred in the provision or management of its plan. 66 Pa. C.S. § 2806.1(k)(1).

Q. Please summarize the methodology used by Duquesne Light in the development of its EEC Phase I Surcharge.

A. The Act required that each EDC's plan include a Section 1307 cost-recovery tariff mechanism in its EEC Plan in order to fund all reasonable and prudent costs incurred in the provision and management of its EEC Plan. To that end, on July 1, 2009, the Company filed its Phase I EEC Plan with the Commission pursuant to the requirements of Act 129. The EEC Plan proposed five surcharges to recover costs as close as reasonably possible to the customer class receiving the benefit. The five surcharges associated with the customer classes were: residential, small and medium commercial, small and medium industrial, large commercial, and large industrial. The Company designed the EEC Surcharge and reconciliation mechanism in a manner that recovered the cost of the Phase I EEC Plan via a non-bypassable charge to all of the Company's customers.

Q. Please describe the Phase I Surcharge as approved by the Commission.

A. Pursuant to the Commission's order entered October 27, 2009 at Docket No. M-2009-2093217, Duquesne Light submitted a Compliance Filing on November 9, 2009 establishing Rider No. 15 in the Company's tariff, "Energy Efficiency and Conservation and Demand Response Surcharge," effective December 1, 2009, that contained the five surcharges described above. The residential, small and medium commercial, and small and medium industrial surcharges were designed to recover costs on a cents per kilowatt-hour ("kWh") basis; and the large commercial and large industrial surcharges were designed to recover administrative costs through a fixed monthly charge and recover

incentive costs through a variable demand charge based on the customer's Peak Load Contribution ("PLC").

Q. Is the Phase I Surcharge currently in effect?

A. No. The Phase I Surcharge ended December 2014 and was completely reconciled through May 31, 2015. The residual over collection was included in the e-factor component of the Phase II rate that went into effect on September 1, 2015.

Q. How does the Company assign customers to the commercial or industrial customer classes stated in the EEC Surcharges?

A. The commercial or industrial classification is based on the North American Industry Classification System ("NAICS") code or the Standard Industrial Classification ("SIC") code provided by the customer for their business. The small, medium and large commercial and industrial ("C&I") customer classifications are based on the customer's peak monthly metered demand. Small and medium C&I customers are those customers with monthly metered demand less than 300 kW. Large C&I customers are those customers with monthly metered demand 300 kW or more. This segmentation of customers is appropriate because it aligns programs and program costs with the current tariffed rates for distribution service. This segmentation has worked successfully in the Company's Phase I, II, and III Plans and in the current EEC Phase IV Plan.

Q. Please describe the Phase II surcharge as approved by the Commission.

A. On March 14, 2013 at Docket No. M-2012-2334399, the Commission issued an Opinion and Order approving the Company’s EEC Phase II Plan. Duquesne Light submitted a filing on April 2, 2013 establishing Rider No. 15a in the Company’s tariff, “Phase II Energy Efficiency and Conservation Surcharge,” effective June 1, 2013. Having both a Phase I and Phase II surcharge in the tariff ensured that expense recovery was kept separate for each phase. The EEC Phase II Surcharge is essentially identical to the EEC Phase I surcharge except for clarifying language to explain the reconciliation process at the end of each Plan period.

Q. Please describe the Phase III surcharge as approved by the Commission.

A. On March 10, 2016 at Docket No. M-2015-2515375, the Commission issued an Opinion and Order approving the Company’s EEC Phase III Plan. Duquesne Light submitted a filing on April 1, 2016 that updated Rider No. 15A in the Company’s tariff, to reflect “Phase III Energy Efficiency and Conservation Surcharge,” effective June 1, 2016. The EEC Phase III Surcharge was essentially identical to the EEC Phase II surcharge except for clarifying language to explain the reconciliation process at the end of each Plan period, as well as a detailed description of the allocation methodology that was used to assign costs to the various customer classes.

Pursuant to the parties’ settlement in Phase III, on November 15, 2019, the Company filed *Duquesne Light Company – Revised Phase III Energy Efficiency and Conservation Plan – Petition for Modification* within Docket M-2015-2515375. In its Petition, Duquesne requested approval to modify its Phase III EEC Plan as well as Rider

No. 15A of its Retail Tariff. The Company specifically proposed to implement a single EEC surcharge for its Small & Medium Commercial customers and its Small & Medium Industrial customers, to go into effect on June 1, 2020. The Commission approved the Company's Petition by Order entered March 12, 2020, and the Company implemented the combined Small & Medium Commercial and Industrial Phase III EEC Surcharge on June 1, 2020.

Q. Please describe the Phase IV surcharge as approved by the Commission.

A. On March 25, 2021 at Docket No. M-2020-3020818, the Commission issued an Opinion and Order approving the Company's EEC Phase IV Plan. Duquesne Light submitted a filing on November 30, 2020 that updated Rider No. 15A in the Company's tariff, to reflect "Phase IV Energy Efficiency and Conservation Surcharge," effective June 1, 2021. The EEC Phase IV Surcharge was closely aligned to the EEC Phase III surcharge along with a requirement for EDCs to nominate a portion of their expected peak demand savings in its Phase IV EEC Plans into PJM's Forward Capacity Market ("FCM").

Q. Was the Company successful in nominating a portion of its planned peak demand reduction from the Company's Phase IV EEC Plan in PJM's FCM?

A. Yes. As Company witness David Defide discusses in his testimony, DLC St. No. 1, the Company was successful in its nomination of a portion of its peak demand savings in the 2025/2026 PJM capacity auction. The Company created a separate PJM billing subaccount to ensure that resources that clear in the PJM FCM are bifurcated and tracked separately so that any applicable proceeds and/or penalties are traceable. The Company

is planning to separately reflect the FCM activity within the over or under collection calculation within the Company's 1307(e) reconciliation.

Q. Please describe how the Company currently prepares its EEC Phase IV Surcharge.

A. On or about May 1 of each year, the Company submits a filing to the Commission to reconcile and update the EEC Phase IV Surcharge effective June 1 of that year. The Company typically uses the program budgets, approved by the Commission, for the Phase IV EEC Plan year, June 1 to May 31. Costs are assigned to each customer class for cost recovery purposes to ensure the customer class that receives the benefits is the same customer class financing the programs. For the large commercial and large industrial classes, the budget is separated into administrative costs and incentive costs. The program budgets are then divided by the applicable billing determinants to derive per unit rates. The rates are then adjusted to recover Pennsylvania Gross Receipts Tax ("GRT") and to establish final tariff rates.

Q. Does the EEC Phase IV Surcharge include a reconciliation component?

A. Yes. The reconciliation period for Phase IV is the twelve (12) months beginning April 1 of the previous year and ending March 31 of the current year. In the May 1 filing, the Company reconciles revenue collected through the EEC Surcharge for each customer class with the actual expenses incurred for that class in order to calculate an over or under recovery. The over or under collection amount, or "e-factor" is included in the derivation of the final EEC Surcharge for each class effective June 1 of each year. An over-

collection is refunded through a positive e-factor and an under-collection is recovered through a negative e-factor. There is no interest on over or under collections.

Q. Does the EEC Phase IV Surcharge apply to all customers in the customer class?

A. Yes. The EEC Phase IV Surcharge is a non-bypassable charge applicable to all customers in the customer class regardless of whether they are being supplied as a default service customer or by an electric generation supplier.

Q. Does the Company recover lost revenues associated with the EEC programs in the EEC Phase IV Surcharge?

A. No. In accordance with the Act, lost revenues due to reduced energy consumption or changes in energy demand that result from the Company's Act 129 EEC programs are not recoverable under the adjustment clause. EDCs may reflect reduced revenue and consumption in the revenue and sales data to calculate proposed rates in a distribution base rate proceeding under 66 Pa. C.S. § 1308. 66 Pa. C.S. §§ 2806.1(k)(2) - (3).

Q. Has the Commission provided direction for cost recovery for Phase V?

A. Yes. The Commission's June 18, 2025 Implementation Order at Docket No. M-2025-3052826, provides further guidance for the Phase V EEC Plans.

1 **Q. Please explain the Commissions guidance for cost recovery in its Implementation**
2 **Order for Duquesne Light's Phase V Plan.**

3 A. The cost provisions for the Phase V Plan are similar to those for Phase IV with a few
4 changes defined in the Phase V Implementation Order. The Commission adopted a plan
5 regarding the transition from the cost recovery methodology utilized during Phase IV,
6 ending May 31, 2026, to the cost recovery methodology to be utilized during Phase V,
7 beginning on June 1, 2026. Each EDC must reconcile its total actual recoverable EEC
8 Phase IV Plan expenditures incurred through March 31, 2026, with its actual EEC Phase
9 IV Plan revenues received through March 31, 2026. The net over or under recovered
10 amount shall be reflected as a separate line item of the e-factor calculation of the Phase V
11 rates to become effective June 1, 2026. In addition, each EDC should include, as part of
12 the calculation of the Phase V E-factor rates to become effective June 1, 2026, as clearly
13 identified separate line items, projections of the: expenses to finalize any measures
14 installed and commercially operable on or before May 31, 2026 (i.e., in April 2026 and
15 May 2026); expenses to finalize any contracts; and other Phase IV administrative
16 obligations. The Phase IV rate that became effective June 1, 2025 will remain effective
17 through May 31, 2026. The reconciliation period for Phase V will continue to run from
18 April 1 to March 31 of a given plan year. This reconciliation will reconcile actual
19 expenses incurred with actual revenues received in order to calculate an over or under
20 recovery. Per the Implementation Order, no interest will be charged on over or under
21 recoveries.

1 **Q. Please explain the cost recovery changes that were defined in the Phase V**
2 **Implementation Order.**

3 A. Section A-4 of the Phase V Implementation Order stated that peak demand reductions
4 from energy efficiency (“EE”) are no longer eligible to participate in the PJM FCM based
5 on a Federal Energy Regulatory Commission (“FERC”) decision¹ of a recent PJM tariff
6 change that disallow EE participation in the FCM and removes this consideration from
7 Act 129 planning.

8 **Q. Is the Company proposing to implement a new EEC Surcharge to accommodate its**
9 **Phase V EEC Plan?**

10 A. No. The Company is proposing to continue to use its current EEC Phase IV Surcharge to
11 recover the costs remaining for Phase IV and recovery of its Phase V EEC Plan costs in
12 accordance with the Implementation Order. Any Phase IV costs that remain through the
13 end of Phase IV on March 31, 2026 will be included and reconciled separately as separate
14 line items in the April 1, 2026 through March 31, 2027 reconciliation period for Phase V.
15

16 **Q. Have you prepared any exhibits showing the proposed change to the EEC Phase V**
17 **Surcharge to reflect this change?**

18 A. Yes. Exhibit DBO-1 is a clean version of the proposed tariff supplement and Exhibit
19 DBO-2 is a redline version of the proposed tariff supplement showing these changes.
20
21
22
23

¹ Docket No. ER24-2995-000

III. EEC PLAN SURCHARGE CALCULATION

Q. Has the Company established program costs by customer class for its proposed EEC Phase V Plan?

A. Yes. Exhibit DBO-3 shows the estimated annual EEC Phase V Plan costs for each program for 2026 to 2031. This exhibit is based on the program costs defined in the Company's EEC Plan and includes the costs for energy efficiency programs, program administration, and program incentives. Additional cost detail for customer class assignment and assignment of administrative costs is provided in the EEC Phase V Plan and testimony of Duquesne Light's witness David Defide.

Q. Do the customer class costs in Exhibit DBO-3 include excess costs from current Phase IV EEC programs?

A. No. The costs shown in Exhibit DBO-3 are for the Phase V EEC Plan only.

Q. Do the customer class costs in Exhibit DBO-3 include capital costs?

A. No. The costs shown in Exhibit DBO-3 are 100% expense.

Q. Do the customer class costs in Exhibit DBO-3 include the cost of the Statewide Evaluator?

A. No. Once actual costs are known for the Statewide Evaluator ("SWE"), the Company will allocate the SWE costs to each customer class based on the forecast sales (kWh) for that customer class.

1 **Q. How long does the Company propose to keep the EEC Surcharge in effect?**

2 A. The EEC Surcharge will remain in effect until the final reconciliation statement is
3 approved and all charges are fully recovered or refunded or until otherwise directed by
4 the Commission.

5
6 **Q. Have you prepared an exhibit showing the estimated customer class surcharges
7 using these proposed costs?**

8 A. Yes. Exhibit DBO-4 provides an illustrative calculation of what the surcharges for each
9 customer class would be for the June 2026 to May 2027 Phase V EEC Plan year at the
10 estimated annual costs in Exhibit DBO-3. The estimated surcharges are calculated using
11 the forecast cost divided by the forecast billing determinants adjusted for GRT. The
12 actual surcharges will differ due to final program costs and the Phase IV E-factor
13 adjustment for the period June 1, 2026 through March 31, 2027.

14
15 **Q. Does that conclude your direct testimony?**

16 A. Yes.



SCHEDULE OF RATES

For Electric Service in Allegheny and Beaver Counties

(For List of Communities Served, see Pages No. 4 and 5)

Issued By

DUQUESNE LIGHT COMPANY

411 Seventh Avenue
Pittsburgh, PA 15219

Kevin E. Walker

President and Chief Executive Officer

ISSUED: XXXXXXXX XX, XXXX

EFFECTIVE: XXXXXXXX XX, XXXX

Issued in compliance with the
Commission Order entered June 18, 2025, at Docket No. M-2025-3052826
and entered Xxxxx XX, 20XX, at Docket No. M-20XX-XXXXXXX.

NOTICE

THIS TARIFF SUPPLEMENT REVISES LANGUAGE IN THE
TABLE OF CONTENTS, RIDER MATRIX AND AN EXISTING RIDER

See Page Two

LIST OF MODIFICATIONS MADE BY THIS TARIFF

CHANGES**Table of Contents**XXXXX Revised Page No. 3A
Cancelling XXXXXX Revised Page No. 3A**Rider Matrix**XXXXX Revised Page No. 87
Cancelling XXXXXX Revised Page No. 87

Rider No. 15A – Phase IV Energy Efficiency and Conservation Surcharge has been renamed “Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge” in accordance with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826 and, therefore, is being renamed in the *Table of Contents* and the *Rider Matrix*.

Rider No. 15A – Phase V Energy Efficiency and Conservation Surcharge XXXXX Revised Page No. 118
Cancelling XXXXXX Revised Page No. 118XXXXX Revised Page No. 119
Cancelling XXXXXX Revised Page No. 119XXXXX Revised Page No. 120
Cancelling XXXXXX Revised Page No. 120XXXXX Revised Page No. 121
Cancelling XXXXXX Revised Page No. 121XXXXX Revised Page No. 122
Cancelling XXXXXX Revised Page No. 122

Rider No. 15A has been renamed “Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge” in accordance with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826.

Language in Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge has been revised to comply with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826.

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	RS	RH	RA	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	UMS	PAL
Rider No. 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 2				X	X	X	X								
Rider No. 3				X	X	X	X	X							
Rider No. 4	X	X	X												
Rider No. 5	X	X	X												
Rider No. 6				X											
Rider No. 7	X	X	X												
Rider No. 8	X	X	X	X	X					X	X	X	X	X	X
Rider No. 9				X	X	X	X	X	X						
Rider No. 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 11				X		X									
Rider No. 12				X	X										
Rider No. 13				X											
Rider No. 14	X														
Rider No. 15															
Rider No. 15A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 16				X	X	X	X	X							
Rider No. 17						X	X	X	X						
Rider No. 18	X	X	X	X	X	X	X								
Rider No. 19				X		X		X							

Rider Titles:

- Rider No. 1 — Retail Market Enhancement Surcharge
- Rider No. 2 — Untransformed Service
- Rider No. 3 — School and Government Service Discount Period
- Rider No. 4 — Electric Vehicle Time-of-Use Distribution Rate Pilot
- Rider No. 5 — Universal Service Charge
- Rider No. 6 — Temporary Service
- Rider No. 7 — Residential Managed Charging Pilot
- Rider No. 8 — Default Service Supply
- Rider No. 9 — Day-Ahead Hourly Price Service
- Rider No. 10 — State Tax Adjustment
- Rider No. 11 — Street Railway Service
- Rider No. 12 — Billing Option – Volunteer Fire Companies and Nonprofit Senior Citizen Centers
- Rider No. 13 — General Service Separately Metered Electric Space Heating Service
- Rider No. 14 — Residential Service Separately Metered Electric Space and Water Heating
- Rider No. 15 — Intentionally Left Blank
- Rider No. 15A — Phase V Energy Efficiency and Conservation Surcharge
- Rider No. 16 — Service to Non-Utility Generating Facilities
- Rider No. 17 — Emergency Energy Conservation
- Rider No. 18 — Rates for Purchase of Electric Energy from Customer-Owned Renewable Resources Generating Facilities
- Rider No. 19 — Community Development for New Load

(C)

Continued on Second Revised Page No. 87A

(C) – Indicates Change

ISSUED: XXXXXXXX XX, XXXX

EFFECTIVE: XXXXXXXX XX, XXXX

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE V ENERGY EFFICIENCY AND CONSERVATION SURCHARGE

(C)

(Applicable to all Rates)

The Phase V Energy Efficiency and Conservation Surcharge ("EEC V") is instituted as a cost recovery mechanism to recover the costs associated with implementing Phase V of the Company's Energy Efficiency and Conservation Plan in effect from June 1, 2026, through May 31, 2031. Act 129 of 2008 became law on October 15, 2008, requiring the Pennsylvania Public Utility Commission ("Commission") to develop an Energy Efficiency and Conservation Program applicable to electric distribution companies ("EDCs") with at least 100,000 customers. This EEC V is implemented in compliance with Docket No. M-2025-3052826 renaming the current Rider No. 15A – Phase IV Energy Efficiency and Conservation Surcharge. The EEC V is a non-bypassable Surcharge and shall be applied to all customers' bills.

RATES

Customer Class	Applicable Tariff Rate Schedule	Monthly Surcharge		
		¢/kWh	Fixed Charge \$/Month	\$/kW ⁽¹⁾
Residential	RS, RH, RA	X.XX		
Small & Medium Commercial and Industrial	GS, GM & GMH	X.XX		
Large Commercial	GL, GLH, L		\$XXX.XX	\$X.XX
Large Industrial	GL, GLH, L, HVPS		\$XXX.XX	\$X.XX
Lighting	AL, SE, SM, SH, PAL	0.00		
Unmetered	UMS	0.00		

⁽¹⁾Monthly Surcharge applicable to the customer's Peak Load Contribution.

CALCULATION OF SURCHARGE

The rate, calculated independently for each customer class in this Tariff, shall be applied to all customers served under the Tariff. The rate shall be determined in accordance with the formulas set forth below and shall be applied to all customers served during any part of a billing month:

RESIDENTIAL CUSTOMER CLASS

$$EEC(r) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: **EEC (r)** = The Energy Efficiency and Conservation Surcharge (residential) in one-hundredth of a cent which shall be added to the distribution rates for billing purposes for all residential customers.

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE V ENERGY EFFICIENCY AND CONSERVATION SURCHARGE – (Continued)

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

RESIDENTIAL CUSTOMER CLASS – (Continued)

- B =** The projected costs of the EEC (r) Plan applicable to the residential customer class for the planning year June 1 through May 31.
- e =** The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. (C)
- S =** Projected distribution sales in kWh for the residential customer class for the planning year.
- T =** The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

SMALL AND MEDIUM COMMERCIAL & INDUSTRIAL, LIGHTING AND UNMETERED CUSTOMER CLASSES

$$EEC(s) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

- Where: **EEC (s)** = The Energy Efficiency and Conservation Surcharge (small commercial & industrial) in one-hundredth of a cent. This Surcharge shall be a separate line item for billing purposes for all small and medium C&I customers.
- B =** The projected costs of the EEC (s) Plan applicable to the small and medium C&I customer class for the planning year June 1 through May 31.
- e =** The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. (C)
- S =** Projected distribution sales in kWh for the small and medium C&I customer class for the planning year.
- T =** The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE V ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)**LARGE COMMERCIAL & INDUSTRIAL CUSTOMER CLASSES**

$$\text{EEC (I) (Fixed)} = [(B_A - e_A) / C] * [(1 / (1 - T))]$$

$$\text{EEC (I) (Demand)} = [(B_i - e_i) / L] * [(1 / (1 - T))]$$

Where: **EEC (I)** = The Energy Efficiency and Conservation Surcharge (large commercial & industrial) is a two-part Surcharge. EEC (I) (Fixed) is a monthly fixed Surcharge designed to recover projected program administrative costs and EEC (I) (Demand) is a monthly demand Surcharge designed to recover projected program incentive costs. Combined, the two components are designed to recover the total projected program costs. This Surcharge shall be shown separately for billing purposes for all large C&I customers.

B = The projected costs of the EEC (I) Plan applicable to the large C&I customer class for the planning year June 1 through May 31. B_A is the projected administrative costs applicable to each customer class and B_i is the projected incentive costs applicable to each customer class.

e = The over or under recovery for the reconciliation year. e_A is the over or under recovery of program administrative costs for the reconciliation year. e_i is the over or under recovery of program incentive costs for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31.

(C)

C = Projected distribution customers for the planning year.

L = Projected Peak Load Contribution (PLC) in kilowatts (kW) for the large C&I customer class for the planning year.

T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

ANNUAL UPDATE

The Surcharges defined herein will be updated effective June 1 of each year. On or about May 1 of the filing year, the Company will file revised EEC V rates with the Commission defining rates in effect from June 1 to May 31 of the following year. The reconciliation year shall be the twelve (12) months beginning April 1 of the previous year and ending March 31 of the current year. The rates for EEC (r) and EEC (s) shall be determined based on the projected costs and sales for the planning year and the over or under collection of expenses based on actual EEC (r) and EEC (s) revenue and expense incurred for the reconciliation year.

(C)

STANDARD CONTRACT RIDERS - (Continued)**RIDER NO. 15A – PHASE V ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued****(C)****(Applicable to all Rates)****ANNUAL UPDATE – (Continued)**

The rates for EEC (I) shall be determined based on the projected costs and the projected Peak Load Contribution for the planning year and the over or under collection of expenses based on actual EEC (I) revenue and expense incurred for the reconciliation year. In accordance with 66 Pa. C.S. § 1307(e), a reconciliation statement filing will be made with the Commission by April 30 of each year. A final reconciliation statement will be filed with the Commission within thirty (30) days after the completion of the final over or under collection refund/recovery period.

Upon determination that any EEC V, if left unchanged, would result in material over- or under-collection of costs incurred or expected to be incurred during the twelve (12) month period ending March 31, the Company may request that the Commission authorize interim revisions to the EEC V to become effective upon no less than ten (10) days' notice from the date of filing upon Commission approval.

(C)**(C)****MISCELLANEOUS**

Rider No. 10 – State Tax Adjustment Surcharge (STAS) shall be applicable to the Surcharges defined in this Rider.

The EEC V shall be subject to review and audit by the Commission.

(C)

There shall be no interest applicable to over or under collections for the reconciliation period.

Customer class programs are designed to achieve reduction mandates in a cost effective manner using developed delivery channels. The projected program costs for the Residential, Small and Medium C&I and Large C&I customer classes are developed in proportion to their approximate annual energy consumption. Projected program costs are first directly assigned to customer classes based on eligibility and those costs applicable to more than one class are allocated according to their electric loads and history of program participation. Actual program costs will be assigned to customer classes based on customer class program participation. Non-direct program administrative costs are allocated to programs based on projected energy savings for the programs in that customer class. The Company will only recover actual program costs for each customer class based on customer participation in each program.

In compliance with Commission Order at M-2025-3052826, the EEC V effective June 1, 2026, will include a reconciliation component for the Energy Efficiency and Conservation Phase IV program costs, ending March 31, 2026. The total actual recoverable EEC Phase IV Plan expenditures incurred for the twelve (12) months ended March 31, 2026, will be reconciled with actual EEC Phase IV Plan revenues received for the twelve (12) months ended March 31, 2026. The net over- or under-recovered amount shall be reflected as a separate line item, without interest, as an E-factor adjustment of the EEC Phase V rates effective June 1, 2026. In addition, as a separate line item, the Phase V rates effective June 1, 2026, shall include projections of the: expenses to finalize any measures installed and commercially operable on or before May 31, 2026; expenses to finalize any contracts; and other Phase IV administrative obligations. The reconciliation of actual Phase IV expenses with actual EEC Phase IV surcharge revenue for April and May 2026 shall be reconciled with EEC Phase V revenue and expense for the twelve (12) months ending March 31, 2027.

(C)**(C)****(C)****(C)****(C)****(C)****(C)****(C)****(C)****(C)****(C)**

STANDARD CONTRACT RIDERS - (Continued)**(C) RIDER NO. 15A – PHASE V ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued****(Applicable to all Rates)****MISCELLANEOUS – (Continued)**

In order to facilitate the termination of this Rider, the Company may propose a rate adjustment to become effective on no less than ten (10) days' notice to achieve a zero (-0-) balance at calendar year end. This interim filing will adjust the E-factor in effect June 1, 2031, for reconciliation of actual revenue and expense in April and May 2031.

This Rider will remain in effect until the final reconciliation statement is approved and all charges are fully recovered or refunded or until otherwise directed by the Commission.

(C)
(C)



SCHEDULE OF RATES

For Electric Service in Allegheny and Beaver Counties

(For List of Communities Served, see Pages No. 4 and 5)

Issued By

DUQUESNE LIGHT COMPANY

411 Seventh Avenue
Pittsburgh, PA 15219

Kevin E. Walker

President and Chief Executive Officer

ISSUED: XXXXXXXX XX, XXXX

EFFECTIVE: XXXXXXXX XX, XXXX

Issued in compliance with the
Commission Order entered June 18, 2025, at Docket No. M-2025-3052826
and entered Xxxxx XX, 20XX, at Docket No. M-20XX-XXXXXXX.

NOTICE

THIS TARIFF SUPPLEMENT REVISES LANGUAGE IN THE
TABLE OF CONTENTS, RIDER MATRIX AND AN EXISTING RIDER

See Page Two

LIST OF MODIFICATIONS MADE BY THIS TARIFF

CHANGES/DECREASE

Table of Contents XXXXXX Revised Page No. 3A
Cancelling XXXXXX Revised Page No. 3A

Rider Matrix XXXXXX Revised Page No. 87
Cancelling XXXXXX Revised Page No. 87

Rider No. 15A – Phase IV Energy Efficiency and Conservation Surcharge has been renamed “Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge” in accordance with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826 and, therefore, is being renamed in the *Table of Contents* and the *Rider Matrix*.

Rider No. 15A – Phase V Energy Efficiency and Conservation Surcharge XXXXXX Revised Page No. 118
Cancelling XXXXXX Revised Page No. 118

XXXXXX Revised Page No. 119
Cancelling XXXXXX Revised Page No. 119

XXXXXX Revised Page No. 120
Cancelling XXXXXX Revised Page No. 120

XXXXXX Revised Page No. 121
Cancelling XXXXXX Revised Page No. 121

XXXXXX Revised Page No. 122
Cancelling XXXXXX Revised Page No. 122

Rider No. 15A has been renamed “Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge” in accordance with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826.

Language in Rider No. 15A - Phase V Energy Efficiency and Conservation Surcharge has been revised to comply with the provisions of the Order entered June 18, 2025, at Docket No. M-2025-3052826.

~~T~~ABLE OF CONTENTS – (Continued)

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STANDARD CONTRACT RIDERS – (Continued)**RIDER MATRIX**

	RS	RH	RA	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	UMS	PAL
Rider No. 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 2				X	X	X	X								
Rider No. 3				X	X	X	X	X							
Rider No. 4	X	X	X												
Rider No. 5	X	X	X												
Rider No. 6				X											
Rider No. 7	X	X	X												
Rider No. 8	X	X	X	X	X					X	X	X	X	X	X
Rider No. 9				X	X	X	X	X	X						
Rider No. 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 11				X		X									
Rider No. 12				X	X										
Rider No. 13				X											
Rider No. 14	X														
Rider No. 15															
Rider No. 15A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 16				X	X	X	X	X							
Rider No. 17						X	X	X	X						
Rider No. 18	X	X	X	X	X	X	X								
Rider No. 19				X		X		X							

Rider Titles:

- Rider No. 1 — Retail Market Enhancement Surcharge
- Rider No. 2 — Untransformed Service
- Rider No. 3 — School and Government Service Discount Period
- Rider No. 4 — Electric Vehicle Time-of-Use Distribution Rate Pilot
- Rider No. 5 — Universal Service Charge
- Rider No. 6 — Temporary Service
- Rider No. 7 — Residential Managed Charging Pilot
- Rider No. 8 — Default Service Supply
- Rider No. 9 — Day-Ahead Hourly Price Service
- Rider No. 10 — State Tax Adjustment
- Rider No. 11 — Street Railway Service
- Rider No. 12 — Billing Option – Volunteer Fire Companies and Nonprofit Senior Citizen Centers
- Rider No. 13 — General Service Separately Metered Electric Space Heating Service
- Rider No. 14 — Residential Service Separately Metered Electric Space and Water Heating
- Rider No. 15 — Intentionally Left Blank
- Rider No. 15A — Phase ~~IV~~ Energy Efficiency and Conservation Surcharge
- Rider No. 16 — Service to Non-Utility Generating Facilities
- Rider No. 17 — Emergency Energy Conservation
- Rider No. 18 — Rates for Purchase of Electric Energy from Customer-Owned Renewable Resources Generating Facilities
- Rider No. 19 — Community Development for New Load

(C)**Continued on Second Revised Page No. 87A****(C) – Indicates Change****ISSUED: XXXXXXXX XX, XXXX****EFFECTIVE: XXXXXXXX XX, XXXX**

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE ~~IV~~ ENERGY EFFICIENCY AND CONSERVATION SURCHARGE

(C)

(Applicable to all Rates)

The Phase ~~IV~~ Energy Efficiency and Conservation Surcharge (“EEC ~~IV~~”) is instituted as a cost recovery mechanism to recover the costs associated with implementing Phase ~~IV~~ of the Company’s Energy Efficiency and Conservation Plan in effect from June 1, ~~2026~~2024, through May 31, ~~2031~~2026. Act 129 of 2008 became law on October 15, 2008, requiring the Pennsylvania Public Utility Commission (“Commission”) to develop an Energy Efficiency and Conservation Program applicable to electric distribution companies (“EDCs”) with at least 100,000 customers. This EEC ~~IV~~ is implemented in compliance with Docket No. M-~~2025~~2020-30528263015228 renaming the current Rider No. 15A – Phase ~~IV~~ Energy Efficiency and Conservation Surcharge. The EEC ~~IV~~ is a non-bypassable Surcharge and shall be applied to all customers’ bills.

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RATES

Customer Class	Applicable Tariff Rate Schedule	Monthly Surcharge		
		¢/kWh	Fixed Charge \$/Month	\$/kW ⁽¹⁾
Residential	RS, RH, RA	~~X.XX~~ 0.19		
Small & Medium Commercial and Industrial	GS, GM & GMH	~~X.XX~~ (0.06)		
Large Commercial	GL, GLH, L		~~XXXX.XX~~ \$283.41	~~\$X.XX~~ \$0.84
Large Industrial	GL, GLH, L, HVPS		~~XXXX.XX~~ \$264.53	~~\$X.XX~~ \$0.03
Lighting	AL, SE, SM, SH, PAL	0.00		
Unmetered	UMS	0.00		

⁽¹⁾Monthly Surcharge applicable to the customer’s Peak Load Contribution.

CALCULATION OF SURCHARGE

The rate, calculated independently for each customer class in this Tariff, shall be applied to all customers served under the Tariff. The rate shall be determined in accordance with the formulas set forth below and shall be applied to all customers served during any part of a billing month:

RESIDENTIAL CUSTOMER CLASS

$$EEC(r) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: **EEC (r)** = The Energy Efficiency and Conservation Surcharge (residential) in one-hundredth of a cent which shall be added to the distribution rates for billing purposes for all residential customers.

(C) – Indicates Change

ISSUED: ~~XXXXXXXX~~ XX, XXXX

EFFECTIVE: ~~XXXXXXXX~~ XX, XXXX

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE ~~IV~~ ENERGY EFFICIENCY AND CONSERVATION SURCHARGE – (Continued)

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

RESIDENTIAL CUSTOMER CLASS – (Continued)

- B =** The projected costs of the EEC (r) Plan applicable to the residential customer class for the planning year June 1 through May 31.
- e =** The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. ~~This may include any applicable PJM Forward Capacity Market proceeds and/or penalties.~~ (C)
- S =** Projected distribution sales in kWh for the residential customer class for the planning year.
- T =** The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

SMALL AND MEDIUM COMMERCIAL & INDUSTRIAL LIGHTING AND UNMETERED CUSTOMER CLASSES

$$EEC(s) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

- Where: **EEC (s)** = The Energy Efficiency and Conservation Surcharge (small commercial & industrial) in one-hundredth of a cent. This Surcharge shall be a separate line item for billing purposes for all small and medium C&I customers.
- B =** The projected costs of the EEC (s) Plan applicable to the small and medium C&I customer class for the planning year June 1 through May 31.
- e =** The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. ~~This may include any applicable PJM Forward Capacity Market proceeds and/or penalties.~~ (C)
- S =** Projected distribution sales in kWh for the small and medium C&I customer class for the planning year.
- T =** The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE ~~IV~~ ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

LARGE COMMERCIAL & INDUSTRIAL CUSTOMER CLASSES

$$\text{EEC (I) (Fixed)} = [(B_A - e_A) / C] * [(1 / (1 - T))]$$

$$\text{EEC (I) (Demand)} = [(B_i - e_i) / L] * [(1 / (1 - T))]$$

Where: **EEC (I)** = The Energy Efficiency and Conservation Surcharge (large commercial & industrial) is a two-part Surcharge. EEC (I) (Fixed) is a monthly fixed Surcharge designed to recover projected program administrative costs and EEC (I) (Demand) is a monthly demand Surcharge designed to recover projected program incentive costs. Combined, the two components are designed to recover the total projected program costs. This Surcharge shall be shown separately for billing purposes for all large C&I customers.

B = The projected costs of the EEC (I) Plan applicable to the large C&I customer class for the planning year June 1 through May 31. B_A is the projected administrative costs applicable to each customer class and B_i is the projected incentive costs applicable to each customer class.

e = The over or under recovery for the reconciliation year. e_A is the over or under recovery of program administrative costs for the reconciliation year. e_i is the over or under recovery of program incentive costs for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. ~~This may include any applicable PJM Forward Capacity Market proceeds and/or penalties.~~ (C)

C = Projected distribution customers for the planning year.

L = Projected Peak Load Contribution (PLC) in kilowatts (kW) for the large C&I customer class for the planning year.

T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

ANNUAL UPDATE

The Surcharges defined herein will be updated effective June 1 of each year. On or about May 1 of the filing year, the Company will file revised EEC ~~IV~~ rates with the Commission defining rates in effect from June 1 to May 31 of the following year. The reconciliation year shall be the twelve (12) months beginning April 1 of the previous year and ending March 31 of the current year. The rates for EEC (r) and EEC (s) shall be determined based on the projected costs and sales for the planning year and the over or under collection of expenses based on actual EEC (r) and EEC (s) revenue and expense incurred for the reconciliation year.

(C)

(C) – Indicates Change

ISSUED: ~~XXXXXXXX~~ XX, XXXX

EFFECTIVE: ~~XXXXXXXX~~ XX, XXXX

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE ~~IV~~ ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

ANNUAL UPDATE – (Continued)

The rates for EEC (I) shall be determined based on the projected costs and the projected Peak Load Contribution for the planning year and the over or under collection of expenses based on actual EEC (I) revenue and expense incurred for the reconciliation year. In accordance with 66 Pa. C.S. § 1307(e), a reconciliation statement filing will be made with the Commission by April 30 of each year. A final reconciliation statement will be filed with the Commission within thirty (30) days after the completion of the final over or under collection refund/recovery period.

Upon determination that any EEC ~~IV~~, if left unchanged, would result in material over- or under-collection of costs incurred or expected to be incurred during the twelve (12) month period ending March 31, the Company may request that the Commission authorize interim revisions to the EEC ~~IV~~ to become effective upon no less than ten (10) days' notice from the date of filing upon Commission approval.

(C)

(C)

MISCELLANEOUS

Rider No. 10 – State Tax Adjustment Surcharge (STAS) shall be applicable to the Surcharges defined in this Rider.

The EEC ~~IV~~ shall be subject to review and audit by the Commission.

(C)

There shall be no interest applicable to over or under collections for the reconciliation period.

Customer class programs are designed to achieve reduction mandates in a cost effective manner using developed delivery channels. The projected program costs for the Residential, Small and Medium C&I and Large C&I customer classes are developed in proportion to their approximate annual energy consumption. Projected program costs are first directly assigned to customer classes based on eligibility and those costs applicable to more than one class are allocated according to their electric loads and history of program participation. Actual program costs will be assigned to customer classes based on customer class program participation. Non-direct program administrative costs are allocated to programs based on projected energy savings for the programs in that customer class. The Company will only recover actual program costs for each customer class based on customer participation in each program.

In compliance with Commission Order at M-~~2025-30528262020-3015228~~, the EEC ~~IV~~ effective June 1, ~~20262021~~, will include a reconciliation component for the Energy Efficiency and Conservation Phase ~~IVH~~ program costs, ending March 31, ~~20262021~~. The total actual recoverable EEC Phase ~~IVH~~ Plan expenditures incurred for the twelve (12) months ended March 31, ~~20262021~~, will be reconciled with actual EEC Phase ~~IVH~~ Plan revenues received for the twelve (12) months ended March 31, ~~20262021~~. The net over- or under-recovered amount shall be reflected as a separate line item, without interest, as an E-factor adjustment of the EEC Phase ~~IV~~ rates effective June 1, ~~20262021~~. In addition, as a separate line item, the Phase ~~IV~~ rates effective June 1, ~~20262021~~, shall include projections of the: expenses to finalize any measures installed and commercially operable on or before May 31, ~~20262021~~; expenses to finalize any contracts; and other Phase ~~IVH~~ administrative obligations. The reconciliation of actual Phase ~~IVH~~ expenses with actual EEC Phase ~~IVH~~ surcharge revenue for April and May ~~20262021~~ shall be reconciled with EEC Phase ~~IVV~~ revenue and expense for the twelve (12) months ending March 31, ~~20272022~~.

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(C) – Indicates Change

ISSUED: ~~XXXXXXXX XX, XXXX~~EFFECTIVE: ~~XXXXXXXX XX, XXXX~~

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE ~~IV~~ ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

MISCELLANEOUS – (Continued)

In order to facilitate the termination of this Rider, the Company may propose a rate adjustment to become effective on no less than ten (10) days' notice to achieve a zero (-0-) balance at calendar year end. This interim filing will adjust the E-factor in effect June 1, ~~2031~~2026, for reconciliation of actual revenue and expense in April and May ~~2031~~2026.

(C)

(C)

This Rider will remain in effect until the final reconciliation statement is approved and all charges are fully recovered or refunded or until otherwise directed by the Commission.

Duquesne Light Company
Energy Efficiency and Conservation Phase IV Portfolio Costs
Act 129 Years

Exhibit DBO-3

	PY 2026 <u>6/1/26- 5/31/27</u>	PY 2027 <u>6/1/27- 5/31/28</u>	PY 2028 <u>6/1/28 - 5/31/29</u>	PY 2029 <u>6/1/29 - 5/31/30</u>	PY 2030 <u>6/1/30 - 5/31/31</u>	<u>Total</u>
<u>Annual Cost Estimate</u>						
1 Residential	\$6,951,652	\$7,284,350	\$7,428,676	\$7,105,023	\$6,908,000	\$35,677,702
2 Small & Medium Commercial & Industrial	\$4,374,562	\$4,855,612	\$5,550,649	\$6,207,731	\$5,180,724	\$26,169,278
3 Large Commercial & Industrial	\$4,644,709	\$6,248,971	\$8,012,442	\$9,323,361	\$7,653,298	\$35,882,780
4 Total Portfolio Annual Budget	\$15,970,924	\$18,388,932	\$20,991,767	\$22,636,115	\$19,742,022	\$97,729,760
<u>Assignment of Costs to Customer Classes</u>						
5 Residential	\$6,951,652	\$7,284,350	\$7,428,676	\$7,105,023	\$6,908,000	\$35,677,702
6 Small & Medium Commercial & Industrial	\$4,374,562	\$4,855,612	\$5,550,649	\$6,207,731	\$5,180,724	\$26,169,278
7 Large Commercial	\$3,041,287	\$3,548,167	\$4,561,930	\$5,575,692	\$3,548,167	\$20,275,243
8 Large Industrial	\$1,603,422	\$2,700,804	\$3,450,512	\$3,747,669	\$4,105,131	\$15,607,537
9 Total	\$15,970,924	\$18,388,932	\$20,991,767	\$22,636,115	\$19,742,022	\$97,729,760
<u>Assignment of Costs for Rate Design Purposes</u>						
10 Residential	\$6,951,652	\$7,284,350	\$7,428,676	\$7,105,023	\$6,908,000	\$35,677,702
11 Small & Medium Commercial & Industrial	\$4,374,562	\$4,855,612	\$5,550,649	\$6,207,731	\$5,180,724	\$26,169,278
12 Large Commercial (Fixed-Administrative)	\$522,463	\$609,540	\$783,694	\$957,848	\$609,540	\$3,483,084
13 Large Commercial (Variable-Incentive)	\$2,518,825	\$2,938,627	\$3,778,236	\$4,617,844	\$2,938,627	\$16,792,159
14 Large Industrial (Fixed-Administrative)	\$191,161	\$321,992	\$411,372	\$446,799	\$489,416	\$1,860,741
15 Large Industrial (Variable-Incentive)	\$1,412,261	\$2,378,812	\$3,039,140	\$3,300,869	\$3,615,714	\$13,746,796
16 Total	\$15,970,924	\$18,388,932	\$20,991,767	\$22,636,115	\$19,742,022	\$97,729,760

Duquesne Light Company
Energy Efficiency and Conservation, Phase-IV
Calculation of Proposed Surcharge, Effective June 1, 2026 (1)

Exhibit DBO-4

A		B	C	D	E	F
				= B / C * 100	= 1 / (1 - .059)	= D * E
		2026-2027	Forecast	Proposed	PA GRT	Proposed
		Budget	Billing Units	Monthly	Factor	Surcharge
Customer Class			June 2026-May 2027 (2)	Charge		Rate
				Excl. GRT		Inc. GRT
1	Residential (RS, RH, RA)	\$6,951,652	3,939,352,790	0.18	1.0627	0.19 cents/kWh
2	Small & Medium Commercial & Industrial (GS, GM, GMH)	\$4,374,562	2,878,780,694	0.15	1.0627	0.16 cents/kWh
3	Large Commercial (GL, GLH, L) [Fixed]	\$522,463	8,468	\$61.70	1.0627	\$65.57 \$/Mo.
4	Large Commercial (GL, GLH, L) [Variable]	\$2,518,825	6,341,786	\$0.40	1.0627	\$0.42 \$/kW [PLC] (3)
5	Large Industrial (GL, GLH, L, HVPS) [Fixed]	\$191,161	2,267	\$84.34	1.0627	\$89.63 \$/Mo.
6	Large Industrial (GL, GLH, L, HVPS) [Variable]	\$1,412,261	3,248,794	\$0.43	1.0627	\$0.46 \$/kW [PLC] (3)
7	Total	\$15,970,924				

(1) Excludes component for Energy Efficiency and Conservation Phase IV reconciliation for the period April 1, 2025 to March 31, 2026.

(2) Estimated billing units sourced from the Company's most recent Phase IV Energy Efficiency and Conservation Surcharge at Docket No. M-2025-3054935.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David B. Ogden, hereby state that the facts above set forth in my Direct Testimony, labeled Duquesne Statement No. 2, 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 are made subject to the penalties of 18 Pa. C.S. §4904 (relating to unsworn falsifications to authorities).

David B. Ogden

David B. Ogden
Senior Manager, Rates & Tariff Services
for Duquesne Light Company
Date: January 28, 2026

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for :
Approval of its Energy Efficiency and : Docket No. M-2025-3057325
Conservation Phase V Plan :

Duquesne St. 1-R: The Rebuttal Testimony of David Defide

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Petition of Duquesne Light Company for
Approval of its Energy Efficiency and
Conservation Phase V Plan**

Docket No. M-2025-3052826

Rebuttal Testimony

Witness: David Defide

Subject: EE&C Phase V Plan Development

REBUTTAL TESTIMONY OF DAVID DEFIDE

I. INTRODUCTION

Q. Please state your full name and business address.

A. My name is David Defide. My business address is 411 Seventh Avenue, Pittsburgh Pennsylvania 15219.

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

A. I am employed by Duquesne Light Company (“Duquesne Light” or the “Company”) as the Senior Manager of Customer Programs.

Q. Are you the same David Defide that submitted Direct Testimony in this case?

A. Yes, I am and will be submitting Rebuttal testimony here.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal is to address the testimonies of OCA, CAUSE and KEEA.

Q. Are you sponsoring any exhibits as part of your rebuttal testimony?

A. No.

II. OCA Recommendation 1

Q. Mr. Defide, the Office of Consumer Advocate recommends that Duquesne Light be directed to reintroduce a comprehensive audit and direct install program for market-

1 **rate residential customers, including air sealing and other building envelope**
2 **measures. Do you agree with that recommendation?**

3 A. I do not agree that such a directive is warranted. Duquesne Light's Phase V portfolio design
4 reflects the underlying characteristics of its service territory, including end-use saturation
5 and fuel mix. Only approximately 7 percent of Duquesne Light residential customers use
6 electricity as their primary space-heating fuel, which significantly limits the achievable
7 electric savings from building shell and envelope measures in the market-rate sector. Under
8 those conditions, a comprehensive audit and direct install program would not be expected
9 to deliver electric savings at scale comparable to other delivery approaches.

10 **Q. How did those market conditions influence the Company's decision not to propose a**
11 **market-rate comprehensive program in Phase V?**

12 A. Those conditions were a central consideration. The Company placed increased emphasis
13 on midstream delivery channels, which allow high-efficiency space heating and cooling
14 equipment to be promoted through existing trade allies and distributors at greater volume.
15 This approach reflects a judgment about how best to acquire electric savings in a service
16 territory where electric space-heating saturation is low and where traditional whole-home
17 shell programs would reach a limited subset of customers.

18 **Q. Does the Company's experience in its low-income programs further inform this**
19 **judgment?**

20 A. Yes, it does. The Company has more than 22 years of experience under the Smart Comfort
21 LIURP program demonstrates that even among income-eligible customers, less than seven
22 percent of jobs involve electric space or water heating, with the overwhelming majority
23 consisting of baseload measures. These results are consistent with the underlying fuel-type

1 saturations in Duquesne Light's territory and illustrate the practical limits on scaling space-
2 heating and envelope-related electric savings, even in programs that include direct install
3 services.

4 **Q. How does Duquesne Light's electric heating saturation compare to other**
5 **Pennsylvania electric distribution companies?**

6 A. Duquesne Light's electric space-heating share of approximately 7 percent is dramatically
7 lower than the statewide average of 35.8 percent across other electric distribution
8 companies. Similarly, electric water-heating saturation in Duquesne Light's territory is 17
9 percent, compared to a statewide average of 51 percent. These differences materially affect
10 the scale of electric savings that can be achieved through comprehensive residential
11 programs focused on space and water heating.

12 **Q. In light of these facts, how does the Company view OCA's Recommendation 1?**

13 A. The Company understands OCA's interest in durable, long-lived savings; however, the
14 recommendation does not sufficiently account for the structural limits imposed by fuel
15 saturation and housing stock characteristics in Duquesne Light's service territory. The
16 Phase V Plan reflects an effort to align program design with those realities while still
17 meeting Act 129 savings requirements in a cost-effective manner. For that reason, the
18 Company does not believe that directing the reintroduction of a market-rate comprehensive
19 audit and direct install program is supported by the record.

20 **III. OCA Recommendation 2**

21 **Q. Mr. Defide, the Office of Consumer Advocate recommends that Duquesne Light scale**
22 **back its Residential Midstream Incentives Program to manage portfolio risk. Do you**
23 **agree with that recommendation?**

A. No, I do not. The Residential Midstream Incentives Program is a core element of the Company's Phase V portfolio and reflects deliberate program-design choices intended to manage risk, improve participation, and deliver cost-effective savings at scale. Importantly, the midstream delivery channel *reduces* portfolio risk by distributing savings acquisition across thousands of point-of-sale transactions rather than relying on customer-initiated downstream participation or a limited set of contractors. This structure diversifies acquisition pathways and mitigates the risk associated with underperformance of any single program or customer segment. The midstream channel was selected based on benchmarking of peer jurisdictions and consultation with program implementers, and it has demonstrated orders-of-magnitude greater market penetration than traditional downstream rebate programs.

Q. OCA raises concerns that midstream incentives may create equity or access issues for low-income, renter, or multifamily customers. How does the Company respond to those concerns?

A. The Company does not agree that the Residential Midstream Program creates inequitable outcomes. There is no equity-class impact associated with inclusion of the midstream program. Low-income customers are primarily served through the Company's Low-Income Energy Efficiency Program, which is specifically designed to address split-incentive barriers for renters and multifamily occupants through direct installation at no cost. In addition, the Phase V Plan projects low-income sector savings that exceed the mandated carve-out, further demonstrating that equity objectives are being met through targeted program design rather than through scaling back midstream offerings.

1 **Q. How does Duquesne Light intend to ensure that different customer classes have**
2 **reasonable access to midstream incentives?**

3 A. The Company's approach is described in detail in its Phase V Plan. The Residential
4 Midstream Program is designed to operate through established retail and trade-ally
5 channels, providing broad, uniform access to efficient equipment at the point of sale. Issues
6 related to income qualification, renter status, and multifamily participation are addressed
7 through separate, targeted low-income and multifamily program offerings rather than by
8 restricting the midstream channel.

9 **Q. OCA also recommends enhanced tracking and reporting to identify and remediate**
10 **any inequitable participation patterns in the midstream program. Is that necessary?**

11 A. The Company does not believe additional remedial measures are necessary because there
12 is no evidence of inequitable participation patterns associated with the Residential
13 Midstream Program. The midstream channel provides standardized incentives available to
14 all customers at participating retailers, and equity-focused objectives are more
15 appropriately addressed through programs that are specifically designed for income-
16 eligible customers. Changes in stocking practices enable access by all customers to the
17 most efficient equipment where baseline stocking behaviors are minimum federal
18 efficiency standards equipment and only those affluent customers with the money and time
19 to special order can access the most efficient equipment. Accordingly, scaling back the
20 midstream program would not improve equity outcomes; it would compromise them and
21 would risk reducing overall portfolio performance. Existing program tracking and
22 evaluation already provide sufficient visibility into participation patterns, and OCA did not

1 identify any evidence of inequitable outcomes that would justify additional reporting
2 requirements.

3 **Q. In light of these considerations, how does the Company view OCA Recommendation**
4 **2?**

5 A. The Company believes OCA Recommendation 2 is not supported by the record. The
6 Residential Midstream Incentives Program already incorporates portfolio-risk
7 management through standardized incentives and broad market reach. Scaling back this
8 program would undermine the ability to acquire savings efficiently while providing no
9 corresponding equity or risk-management benefit.

10 **IV. OCA Recommendation 3**

11 .
12 **Q. Mr. Defide, OCA recommends that Duquesne Light reduce its reliance on residential**
13 **behavioral savings, including Home Energy Reports. Do you agree with that**
14 **recommendation?**

15 A. No, I do not. The recommendation overlooks the rigor with which behavioral savings are
16 measured, the conservative adjustments already applied to those savings, and the role
17 Home Energy Reports play in supporting the broader residential energy efficiency
18 portfolio.

19 **Q. How are Home Energy Report savings measured?**

20 A. Home Energy Report savings are measured using randomized control trials, which are
21 widely recognized as the gold standard for evaluating behavioral energy efficiency
22 programs. Treatment and control groups are designed to be statistically equivalent across

usage, demographic, and dwelling characteristics, allowing observed differences in energy consumption to be causally attributed to the program.

Q. Are these savings assumed or deemed?

A. These savings are neither assumed nor deemed. Behavioral savings are empirically observed through treatment-control comparisons and verified through independent evaluation in accordance with the Pennsylvania Technical Reference Manual and Evaluation Guidance.

Q. Does the Company account for decay and persistence of behavioral savings?

A. Yes. Behavioral savings are subject to a 31.3 percent annual decay rate, derived from the Statewide Home Energy Report Persistence Study. Phase V savings projections already remove persistence in accordance with Commission-approved methods and do not overstate long-term impacts.

Q. Does OCA raise equity concerns regarding residential behavioral programs?

A. Yes, and those concerns are already addressed. The Company operates separate Market-Rate and Income-Eligible Home Energy Report programs, each with distinct measurement. Income-Eligible customers are intentionally included and receive tailored, supportive messaging, ensuring equitable access and verified savings for low-income households.

Q. Are behavioral programs targeted only to higher-income customers?

A. No. Treatment and control groups are statistically equivalent across renter status, heating fuel type, usage characteristics, and other factors. Apart from income eligibility for the Low-Income HER program, demographic characteristics are not used to exclude customers from participation.

1 **Q. Beyond direct behavioral savings, do Home Energy Reports provide additional**
2 **portfolio benefits?**

3 A. Yes. Home Energy Reports measurably increase customer participation in other Duquesne
4 Light energy efficiency programs. During Phase IV, between 8 and 18 percent of Home
5 Energy Report recipients subsequently participated in other residential efficiency
6 programs, demonstrating that HERs function as an engagement and enrollment pathway
7 rather than a substitute for measure-based savings.

8 **Q. Have acquisition costs for behavioral programs increased?**

9 A. Yes, primarily due to inflation and rising postage and delivery costs. Despite these
10 increases, both the Market-Rate and Income-Eligible behavioral programs remain cost-
11 effective, with Total Resource Cost test results exceeding 1.0 in both cases.

12 **Q. In your view, would reducing reliance on residential behavioral savings improve the**
13 **Company's portfolio?**

14 A. No. Reducing reliance on Home Energy Reports would weaken a cost-effective, rigorously
15 evaluated program that delivers verified savings, supports equity objectives, and increases
16 participation in other energy efficiency programs. Further, the Company notes that
17 behavioral programs do not displace measure-based savings but instead function as a
18 portfolio-supporting resource that enhances customer engagement and increases uptake of
19 longer-lived measures. Eliminating or constraining this resource would reduce portfolio
20 flexibility without improving savings durability or cost-effectiveness. For these reasons,
21 OCA's recommendation should be rejected.

V. OCA Recommendation 4

Q. Mr. Defide, OCA recommends that Duquesne Light eliminate residential lighting from its Phase V energy efficiency portfolio. Do you agree with that recommendation?

A. No, I do not. The recommendation fails to recognize how residential lighting savings are treated under the Phase V Technical Reference Manual and overlooks the continued, verified savings opportunities that exist in the low-income and multifamily market segments .

Q. Is the Company claiming savings for residential lighting that conflict with the Department of Energy's 45-lumens-per-watt backstop for general service lamps?

A. No. Consistent with the Phase V Technical Reference Manual, the Company's residential lighting savings are limited to direct-install delivery within the Low-Income Energy Efficiency Program, where existing baseline lamps are physically removed and documented by program staff. These savings are therefore incremental and verifiable and do not rely on assumed baselines or market delivery mechanisms that are no longer allowed.

Q. Does the Company rely on mail-based distribution of lighting products?

A. No. The Phase V Technical Reference Manual explicitly disallows mail-based distribution of general service lamps, and the Company's Phase V Plan does not include that activity. All claimed residential lighting savings are associated with direct-install delivery and on-site verification.

Q. Are there still residential lighting savings opportunities in the Company's service territory?

1 A. Yes. The Company's Phase IV experience through Program Year 17 demonstrates that
2 meaningful lighting savings remain in the low-income market segment, which is a hard-to-
3 reach population not fully addressed by broader market transformation trends.

4 **Q. Does residential lighting serve any additional customer segments beyond single-**
5 **family low-income households?**

6 A. Yes. The Low-Income Energy Efficiency Program also serves common areas of income-
7 qualified multifamily housing, which, while benefiting residential customers, are often
8 located on commercial meters and use commercial equipment. These installations are
9 treated in accordance with Section 3.1.1 of the Phase V Technical Reference Manual and
10 represent an additional verified savings opportunity.

11 **Q. Why does the Company continue to include residential lighting in the Phase V Plan?**

12 A. Residential lighting remains in the Phase V Plan because it is a valuable and cost-effective
13 resource in the low-income and multifamily segments, where baseline equipment can be
14 verified and savings remain achievable. Eliminating residential lighting would
15 disproportionately reduce savings opportunities for hard-to-reach customers and would not
16 improve overall portfolio performance.

17 **Q. In your view, should residential lighting be eliminated from the Phase V portfolio?**

18 A. No. Eliminating residential lighting would remove a verified, TRM-compliant measure that
19 continues to deliver incremental savings to low-income and multifamily customers. For
20 these reasons, OCA's recommendation should be rejected.

VI. OCA Recommendation 5

Q. Mr. Defide, OCA recommends that Duquesne Light reduce reliance on non-residential lighting in its Phase V energy efficiency portfolio. Do you agree with that recommendation?

A. No, I do not. The recommendation is inconsistent with the Commission-adopted Phase V Energy Efficiency Potential Study, which demonstrates that lighting represents the single largest source of Program achievable energy efficiency potential in the non-residential sector. The Commission's adoption of the Phase V Energy Efficiency Potential Study establishes lighting as the dominant contributor to cost-effective, achievable savings. Directing the Company to materially reduce reliance on non-residential lighting would therefore conflict with the very potential forecasts upon which Phase V savings targets are based.

Q. What does the Phase V Energy Efficiency Potential Study conclude regarding lighting potential in the non-residential sector?

A. The Phase V Energy Efficiency Potential Study shows that lighting accounts for a majority of cost-effective, achievable energy efficiency potential in the Commercial and Industrial sector. Specifically, interior and exterior lighting combined represent approximately 59 percent of Small- and Medium-C&I potential , approximately 63 percent of Large-C&I potential , and more than 55 percent of total C&I energy efficiency potential in Duquesne Light's service territory.

Q. How does that relate to the Commission's Phase V savings requirements?

A. The Commission's Phase V savings targets are explicitly derived from the Act 129 Traditional Energy Efficiency Potential identified in the Phase V Potential Study. Because

1 more than half of the achievable, budget-constrained energy efficiency potential is
2 attributable to lighting, it would be unreasonable and internally inconsistent to require an
3 EDC to materially reduce lighting savings while simultaneously holding it to savings
4 targets derived from that same lighting-dominant potential forecast.

5 **Q. Does the Phase V Potential Study assume elimination or sharp reduction of non-**
6 **residential lighting opportunities?**

7 A. No. While the study recognizes increased lighting saturation relative to earlier phases, it
8 nevertheless finds substantial remaining cost-effective lighting potential, particularly in
9 non-residential interior and exterior applications, and incorporates that potential directly
10 into the Act 129 Traditional Energy Efficiency Potential used to set Phase V expectations.

11 **Q. In your view, would reducing reliance on non-residential lighting improve Duquesne**
12 **Light's ability to meet Phase V requirements?**

13 A. No. Reducing reliance on non-residential lighting would move the Company away from
14 the measure mix assumed by the Commission-adopted potential study, increase
15 compliance risk, and undermine the feasibility of achieving mandated savings levels within
16 Act 129 budget constraints.

17 **Q. What is your conclusion regarding OCA's recommendation?**

18 A. OCA's recommendation to reduce reliance on non-residential lighting is inconsistent with
19 the Phase V Energy Efficiency Potential Study and the Commission's own methodology
20 for establishing Phase V savings targets. For these reasons, the recommendation should be
21 rejected.

VII. OCA Recommendation 6

Q. Mr. Defide, do you agree with OCA’s recommendation that Duquesne Light should expand its Phase V portfolio to include a separate, market-rate multifamily energy efficiency program?

A. No. Duquesne Light does not agree that a separate market-rate multifamily program is necessary or appropriate for Phase V. Duquesne Light has included a multifamily delivery channel within its Low-Income Energy Efficiency Program (“LIEEP”), consistent with prior Commission-approved Phase III and Phase IV program design.

Q. OCA notes that multifamily accounts for approximately 18 percent of residential potential in the Market Potential Study. Does Duquesne Light dispute that characterization?

A. No. Duquesne Light does not dispute the Market Potential Study’s identification of multifamily as a segment of residential potential. However, that potential does not mandate the creation of a standalone market-rate multifamily program. The Commission has historically permitted, and expressly approved, the delivery of multifamily savings through low-income program channels where building characteristics, tenant income composition, and master-metering structures overlap substantially.

Q. How does Duquesne Light currently address multifamily properties in its Phase V EE&C Plan?

A. Duquesne Light addresses multifamily properties through a dedicated multifamily channel embedded within LIEEP. The Phase V Plan explicitly includes multifamily activity—covering both tenant-metered and master-metered properties—alongside assessments and

behavioral offerings. This approach mirrors the structure approved in Phases III and IV and continues a Commission-endorsed delivery model.

Q. Why did Duquesne Light not establish separate multifamily participation or savings targets outside of LIEEP?

A. Separate targets were not established because multifamily participation is already accounted for within the LIEEP consumption-reduction targets. Segmenting multifamily savings into a separate market-rate category would create artificial distinctions without improving program effectiveness, while increasing administrative complexity and compliance risk. The Commission has not required such disaggregation in prior phases.

Q. Does OCA's recommendation align with prior Commission guidance regarding multifamily program treatment?

A. No. OCA's recommendation would represent a departure from established Commission practice. Prior Implementation Orders recognize that multifamily properties—particularly those with mixed-income occupancy or master-metered configurations—are appropriately served through low-income or integrated program structures. Nothing in the Phase V Implementation Order requires the creation of a standalone market-rate multifamily program.

Q. In your view, would adopting OCA's Recommendation 6 improve Phase V outcomes for customers?

A. No. Adopting OCA's recommendation would not increase achievable savings and would instead fragment an already effective delivery framework. Duquesne Light's existing approach captures multifamily savings where they are most cost-effective and

administratively feasible, consistent with Commission policy emphasizing flexibility, program continuity, and avoidance of unnecessary program proliferation.

Q. How does Duquesne Light's approach ensure that multifamily customers are not excluded from Phase V offerings?

A. Multifamily market-rate occupants and facility owner/operators can participate in residential on-line marketplace and midstream programs; commercial midstream, downstream and direct-install program offerings. Multifamily customers are explicitly included through the LIEEP multifamily channel, which addresses both tenant-metered and master-metered buildings. This structure ensures access to energy efficiency measures for income-qualified multifamily residents while recognizing the operational realities of the multifamily market.

Q. What is your conclusion regarding OCA's recommendation?

A. For the reasons stated above, Duquesne Light believes OCA's Recommendation 6 is unnecessary, inconsistent with prior Commission approvals, and unsupported by the record, and should therefore be rejected.

VIII. OCA Recommendation 7

Q. Mr. Defide, OCA recommends that Duquesne Light reallocate funding within its residential portfolio to support the multifamily program adjustments. Do you agree with this recommendation?

A. No. Duquesne Light does not agree that any reallocation within the residential portfolio is necessary. As discussed in response to Recommendation 6, the Company already addresses multifamily customers through an established multifamily channel embedded within its

1 Low-Income Energy Efficiency Program, consistent with prior Commission-approved
2 program design.

3 **Q. How are residential portfolio funding levels established under Phase V?**

4 A. Residential portfolio funding levels are the product of Commission-approved budget caps,
5 acquisition cost assumptions, and portfolio-level planning reflected in the Phase V
6 Implementation Order. Duquesne Light's Phase V Plan is designed to meet mandatory
7 MWh and MW targets within those constraints while preserving flexibility in program
8 delivery.

9 **Q. Would reallocating residential funding as OCA suggests improve compliance or cost-**
10 **effectiveness?**

11 A. No. OCA has not demonstrated that reallocating residential funding would increase
12 achievable savings, improve cost-effectiveness, or reduce compliance risk. To the contrary,
13 forced reallocation could displace cost-effective residential measures, disrupt established
14 delivery channels, and increase administrative complexity without yielding additional
15 benefits to customers.

16 **Q. Does the Commission's Phase V framework determine the best way to allocate the**
17 **budgets?**

18 A. No. The Commission establishes overall targets, budgets, and compliance requirements,
19 while preserving EDC flexibility to design portfolios that meet those requirements.

20 **Q. How does Recommendation 7 relate to OCA's Recommendation 6?**

21 A. Recommendation 7 is entirely dependent on Recommendation 6. Because the Company
22 does not agree that a separate market-rate multifamily program is required, there is no
23 predicate basis for reallocating residential funding to support such an adjustment.

1 **Q. In summary, what is Duquesne Light's position on OCA Recommendation 7?**

2 A. Duquesne Light believes OCA Recommendation 7 is unsupported by the record,
3 inconsistent with Commission-approved Phase V planning, and unnecessary to achieve Act
4 129 objectives. Accordingly, the recommendation should be rejected. Absent a
5 demonstrated statutory requirement, quantified savings benefit, or Commission directive,
6 OCA's proposed residential funding reallocation would introduce portfolio risk without
7 improving customer outcomes.

8 **IX. OCA Recommendation 8**

9 **Q. Mr. Defide, do you agree with OCA's recommendation that Duquesne Light should**
10 **improve coordination between the interconnection process and Act 129 program**
11 **engagement?**

12 A. No. I do not. The interconnection process is already governed by established Commission-
13 approved standards and procedures that operate outside the scope of Act 129, and because
14 participation in Act 129 programs is voluntary and intentionally independent of
15 interconnection approval.

16 **Q. Does the Company have an established process for interconnection?**

17 A. Duquesne Light's interconnection process for customer-owned generation is conducted
18 pursuant to Commission interconnection rules and the Company's Distribution System
19 Generation Interconnection Requirements. The process is focused on technical review,
20 system safety, and grid reliability. Act 129 program participation is not a condition of, nor
21 a factor in, interconnection approval, and the Company does not link or condition one
22 process on the other. In practice, Act 129 CSP's routinely work with DLC's
23 interconnection group on referrals and applications.

1 **Q. Does the Company currently prevent customers seeking interconnection from**
2 **participating in Act 129 programs?**

3 A. No. Customers pursuing interconnection are free to participate in Act 129 energy efficiency
4 and demand-side programs on a voluntary basis, just like any other customer. Information
5 about available programs is provided through standard outreach channels, customer
6 communications, and the Company's website. There is no barrier to participation identified
7 in the record.

8 **Q. Does OCA identify any deficiency, failure, or non-compliance in the Company's**
9 **current interconnection practices?**

10 A. No. OCA does not identify any violation of Commission rules, any instance where
11 customers were denied information, or any evidence that the existing interconnection
12 framework has impeded Act 129 participation. The recommendation appears to be
13 aspirational rather than corrective.

14 **Q. Why would formally linking interconnection and Act 129 engagement be**
15 **inappropriate?**

16 A. Because interconnection approval is a regulated engineering and safety function, while Act
17 129 programs are voluntary resource programs governed by cost-effectiveness and
18 portfolio considerations. Introducing formal coordination risks creating confusion,
19 perceived conditionality, or regulatory overreach without any demonstrated benefit. The
20 current separation appropriately preserves customer choice and regulatory clarity.

21 **Q. In your view, is OCA's Recommendation No. 8 necessary to ensure Act 129**
22 **compliance or portfolio performance?**

1 A. No. The Company's Phase V Plan already complies with Act 129 requirements, and OCA
2 has not demonstrated that additional coordination would produce measurable savings,
3 reduce costs, or improve outcomes. Absent such evidence, the recommendation is not
4 justified.

5 **Q. What is your conclusion regarding OCA's Recommendation No. 8?**

6 A. I recommend that the Commission reject OCA's Recommendation No. 8. The existing
7 interconnection framework is well-defined, Commission-approved, and appropriately
8 maintained outside the Act 129 construct; additional coordination is not necessary or
9 beneficial.

10 **X. CAUSE-PA Recommendation 1**

11 **Q. Mr. Defide, the Coalition for Affordable Utility Services and Energy Efficiency in**
12 **Pennsylvania (CAUSE-PA) recommends that Duquesne Light be directed to submit**
13 **a revised plan that increases the forecasted volume of specific measures they**
14 **characterized as "deep savings" measures such that the savings they produce increase**
15 **from 20% to 25% of low-income savings. Do you agree with that recommendation?**

16 A. I do not agree that such a directive is warranted. Act 129 does not establish minimum
17 measure-depth thresholds, nor does the Phase V Implementation Order impose any
18 requirement that a specific percentage of low-income savings be achieved through
19 comprehensive or whole-home measures. Program design decisions regarding measure
20 mix are expressly left to the Electric Distribution Company, subject to overall savings,
21 cost-effectiveness, and low-income carve-out requirements.

22 In its Phase V Plan, the Company has set aggressive targets for heat pumps and heat pump
23 water heaters, based on the end-use saturation and fuel mix characteristic of its territory.

1 Duquesne Light’s electric space-heating share is approximately 7 percent, and its electric
2 water-heating saturation is approximately 17 percent.¹ These low shares limit the savings
3 opportunities afforded by heat pumps and heat pump water heaters.

4 **Q. How do these percentages of electric fuel for space and water heating compare with**
5 **the other PA EDCs?**

6 A. Comparing EDCs in Pennsylvania, Duquesne Light has both the lowest share of customers
7 using electricity for space heating and those using it for water heating. The Company’s
8 share of approximately 7 percent for space heating is dramatically lower than the statewide
9 average of 35.8 percent across other electric distribution companies.² Similarly, electric
10 water-heating saturation in Duquesne Light’s territory is 17 percent, compared to a
11 statewide average of 51 percent.³

12 **Q. Does CAUSE-PA make any comparisons between EDCs related to this**
13 **recommendation?**

14 A. Yes, they do. CAUSE-PA favorably compares the Company’s filed Plan with those of the
15 other EDCs, noting that Duquesne’s achieves a greater share of its low-income savings
16 from “deep savings” measures than any other EDC (see Figure 1, below). And, as I

¹ Statewide Evaluator, 2023 Pennsylvania Residential Baseline Study, March 25, 2024. Table 202: Primary Heating Fuel by EDC and Table 231: DHW Fuel Mix by EDC. Docket M-2023-3044490.

² Ibid.

³ Ibid.

mentioned in my previous response, the Company is planning to do so with the lowest shares of electric space and water heating.

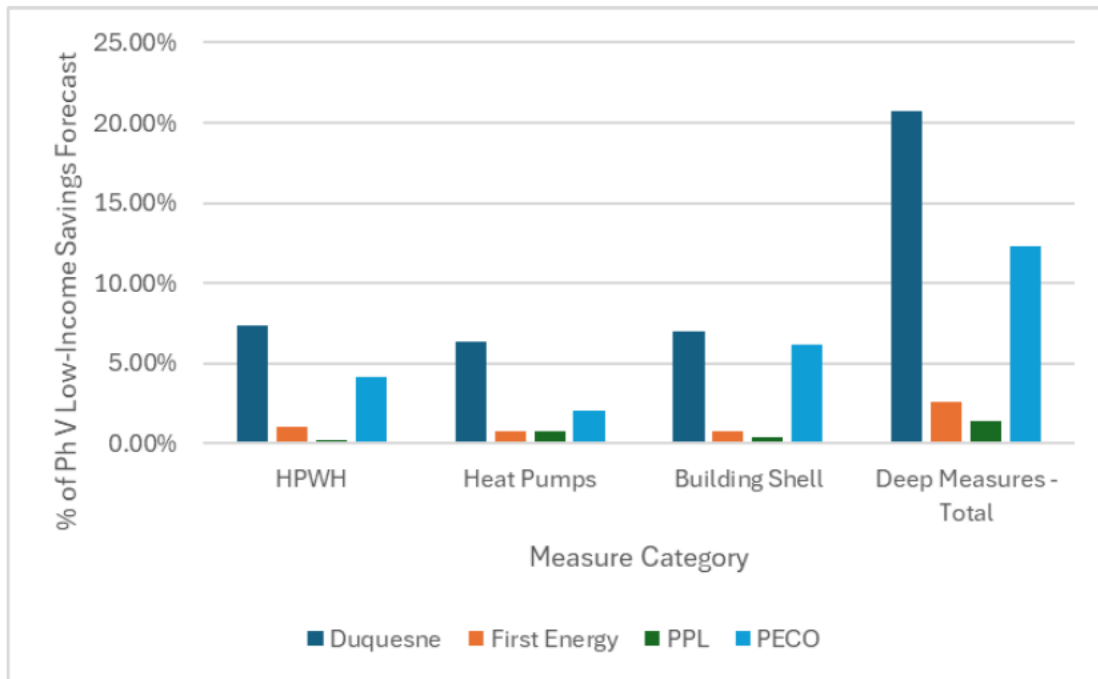


Figure 1: Reproduction of CAUSE-PA Figure 3: Deep-Saving Measures Contribution to Low-Income Savings

Q. Do you have any other comments on the concept of “deep savings” measures?

A. Yes, I do. The Company understands CAUSE-PA’s interest in durable savings that make a substantive impact on customers’ bills. However, I contend that a preference for such savings is already included in Act 129 portfolio design requirements through the Commission’s adoption of the Total Resource Cost (TRC) Test for determining the cost effectiveness of each portfolio. Since the TRC is based on the net present value of the stream of benefits and costs over the life of the measure, those measures with longer useful measure lives will tend to score more highly and be preferred when determining a program’s measure mix. Further prescriptive requirements regarding specific measure

1 mixes EDCs forecast run counter to the flexibility the Commission has historically given
2 EDCs to achieve their mandated savings.

3 **Q. In summary, what is Duquesne Light's position on CAUSE-PA recommendation 1?**

4 A. Duquesne Light believes that the Commission should not impose a specific measure mix
5 within the low-income programs and, as a result, should reject the recommendation.

6 **XI. CAUSE-PA Recommendation 2**

7 **Q. Mr. Defide, can you explain what CAUSE-PA is recommending?**

8 A. Yes. It appears that CAUSE-PA is recommending that the Commission expand existing
9 reporting functions and impose novel, measure-level achievement requirements on
10 Duquesne Light's Phase V portfolio.

11 **Q. What do you mean when you say these are novel requirements?**

12 A. In Phases I through IV, the Commission has not required EDCs to achieve specific measure
13 mixes in the course of reaching their mandated savings targets. CAUSE-PA appears to
14 request the Commission introduce such a requirement by potentially "provid[ing] further
15 direction to Duquesne to increase installation of these measures" (CAUSE-PA Testimony,
16 p. 8).

17 **Q. Does the Commission require a specific measure mix in the Company's EE&C Plan?**

18 A. No. In the Phase V Implementation Order, the Commission states that "EDCs have
19 considerable flexibility regarding designing the mix of programs and measures in their
20 EE&C plans" (p. 74). The Commission imposes certain design constraints (e.g., the
21 percentage of measures uniquely offered in low-income programs) but otherwise provides
22 the EDCs a free hand to best achieve the mandated savings.

1 **Q. Are EDCs required to achieve the specific measure mix they forecasted in their Phase**
2 **V Plans?**

3 A. No, EDCs are not required to achieve the exact mix of measures forecasted as part of the
4 Phase V planning process. The Commission has long acknowledged that there can be
5 considerable variability in the actual achievement of savings projected in the Plan over the
6 course of a phase. Even the high-level requirement that EDCs plan to achieve at least 15%
7 of their portfolio savings each year of the phase is not a compliance matter. Instead, the
8 Commission has noted in the Phase V Implementation Order that this “requirement will be
9 limited to the Commission’s review and approval of the EE&C plans and is not a target
10 that would subject the EDCs to the penalty provisions at subsection 2806.1 of the Act” (p.
11 48).

12 **Q. In summary, what is Duquesne Light’s position on CAUSE-PA recommendation 2?**

13 A. Duquesne Light believes that the Commission reject the recommendation for novel
14 compliance requirements based on achieving specific measure mixes within programs.

15 **XII. CAUSE-PA Recommendation 3**

16 **Q. Mr. Defide, CAUSE-PA recommends that the Commission disallow all savings**
17 **produced by LI-BEEP from counting toward the Company’s low-income savings**
18 **requirements. Do you agree with that recommendation?**

19 A. No, I do not. The recommendation ignores the historical record of LI-BEEP and similar
20 programs in the EDCs’ Act 129 portfolios. In making their recommendation, CAUSE-PA
21 asserts that LI-BEEP is not “qualified” to be considered, as required by the Commission, a
22 program “solely directed at low-income customers...” (CAUSE-PA, p. 25). However, the

1 LI-BEEP is indeed a program, offering Home Energy Reports tailored to low-income
2 customers, that is “solely directed” at verified low-income customers.

3 **Q. How is the program tailored and directed?**

4 A. In part, the program is tailored by sending reports prioritizing actionable, low- and no-cost
5 energy-saving actions that are feasible for customers facing financial constraints.
6 Communications focus on behavioral changes, operational adjustments, and other
7 measures that do not require significant upfront investment. Where appropriate, the reports
8 also highlight available income-qualified energy efficiency programs and assistance
9 resources, rather than promoting higher-cost measures. The program is directed
10 specifically to verified low-income customers and relies much more heavily on physical
11 mailings than does the market-rate behavioral program.

12 **Q. In summary, what is Duquesne Light’s position on CAUSE-PA recommendation 3?**

13 A. Duquesne Light strongly believes that the Commission should reject the recommendation
14 to overturn the precedence of years of program activity and disallow behavioral savings in
15 the low-income sector.

16 **XIII. CAUSE-PA Recommendation 4**

17 **Q. Mr. Defide, does Duquesne Light agree with CAUSE-PA’s recommendation**
18 **regarding health and safety?**

19 A. No, Duquesne Light does not agree with the recommendation. Act 129 is first and foremost
20 a resource acquisition statute and, as such, its programs are not primarily designed to
21 engage in health and safety remediation. Activities beyond those necessary to enable
22 installation of energy efficiency measures are limited by portfolio cost-effectiveness and

1 staff availability. For this reason, adding additional health and safety planning and
2 reporting requirements to the Company's EE&C program is inappropriate.

3 **Q. Where do you suggest is the appropriate venue for learning more about the**
4 **Company's efforts on this topic?**

5 A. Health and safety services are appropriately addressed through other Universal Service
6 programs, not through Act 129 portfolios. Duquesne Light holds regular Income-Eligible
7 Advisory Council meetings where the Company provides updates across its programs
8 serving income-eligible customers. I suggest that interested parties participate in this
9 existing engagement channel.

10 **Q. In summary, what is Duquesne Light's position on CAUSE-PA recommendation 4?**

11 A. Duquesne Light believes the Commission should reject the recommendation to impose
12 additional health and safety reporting requirements on the Company's EE&C program.

13 **XIV. CAUSE-PA Recommendation 5**

14 **Q. Mr. Defide, do you agree with CAUSE-PA's recommendation that Duquesne Light**
15 **should be directed to develop a coordination plan and file annual reports on its**
16 **coordination activities?**

17 A. No, I do not agree. Coordination of Duquesne Light's own programs serving our low-
18 income customers, along with those of our partners, is a priority for the Company.
19 However, as I noted in my response to recommendation 4, a program that is primarily
20 focused on resource acquisition is not the appropriate venue to impose cross-program
21 staffing and reporting requirements.

22 **Q. What would be an appropriate venue to discuss the Company's coordination efforts?**

1 A. The Company's existing Income-Eligible Advisory Council holds regular meetings and is
2 the venue where Duquesne Light already shares its coordination efforts across internal
3 Company programs and with external program providers.

4 **Q. In summary, what is Duquesne Light's position on CAUSE-PA recommendation 5?**

5 A. Duquesne Light believes the Commission should reject the recommendation to impose
6 additional staffing and reporting requirements related to coordination on the Company's
7 EE&C program.

8 **XV. CAUSE-PA Recommendation 6**

9 **Q. Mr. Defide, what is CAUSE-PA's final numbered recommendation?**

10 A. CAUSE-PA recommends that the Commission issue a blanket rejection of the specific
11 front-of-the-meter (FTM) measures Duquesne Light proposed in our Phase V EE&C plan
12 and instead direct the Company to redirect this funding toward low-income "deep savings"
13 measures.

14 **Q. Do you agree with this recommendation? Why or why not?**

15 A. No, I do not – for several reasons. First, and as I noted in my response to CAUSE-PA
16 Recommendation 2, the Commission has not directed EDCs to adopt specific measure
17 mixes in their planning forecasts. This appears to be CAUSE-PA's requests with that all
18 FTM funding be redirected toward low-income "deep savings" measures. In my opinion,
19 this is inappropriate.

20 **Q. Why else do you disagree?**

21 A. CAUSE-PA also states that Duquesne Light has not provided enough specificity regarding
22 its plans with FTM measures, including energy savings, demand reductions, and non-Act
23 129 funding sources. I do not agree with this assessment. In the Company's Phase V Plan,

1 Tables 8A, 8B, and 9 identify measure parameters from FTM measures as currently
2 forecast. FTM projects are based upon site-specific studies, research and application of
3 technologies that render economic and operational benefit. Projects can include distributed
4 energy resources (batteries, solar, other types of generation) and distribution system
5 upgrades that serve to offset peak period loads, reduce system losses and delay system
6 capacity upgrades. The size and type of these measures are site-specific, measure life will
7 exceed 15-years and produce deep savings. It appears that CAUSE-PA is holding FTM
8 measures to a different standard than the rest of the Plan's measures. External funding
9 sources are not included in the proposed EE&C Plan.

10 **Q. FTM measures are not accompanied by robust EM&V Plans. Is that reasonable?**

11 A. No. CAUSE-PA contends that FTM measures should not be permissible in Duquesne
12 Light's Phase V EE&C plan unless accompanied by "robust EM&V plans" (p. 46), a
13 standard to which no other measure category is held. DLC avers evaluation, measurement
14 and verification (EM&V) is performed by independent evaluators and measurement and
15 verification (M&V) is performed as a function of project completion and oversight. As
16 such no EM&V Plan would be appropriate or indicated. M&V analyses are specified in a
17 site-specific M&V Plan based on site-specific parameters, that would and could not be
18 included at the time of Plan writing. EDCs have routinely incentivized complex, custom
19 projects through their Act 129 programs and that there are established safeguards in place
20 to vet these projects, including Independent Evaluator and SWE review. I believe that
21 CAUSE-PA concern on this topic is unfounded.

22 **Q. Do you have any other observations about CAUSE-PA's recommendation?**

A. Yes, I do. In addition to objecting to Duquesne Light’s measure descriptions and requesting an EM&V plan be embedded within our portfolio plan, CAUSE-PA clearly questions the merits and validity of FTM measures savings more generally (CAUSE-PA Testimony, p. 45). That is a position, of course, that CAUSE-PA is free to take, however, the issue was decided in the Phase V Implementation Order proceeding. EDC latitude to include up to ten percent savings from FTM projects was authorized by the Commission. A Maryland working group report notwithstanding, the Commission concluded that “FTM measures like conservation voltage reduction can be low-cost, high-yield EE&C plan components and can help combat growing resource adequacy concerns in the Commonwealth. [...] Therefore, for Phase V of Act 129, the EDCs do not need to limit their proposed Phase V EE&C plans to customer-sited measures[...]” (p. 79).

XVI. KEEA Recommendations

Q. How does the Company respond to recommendations that Act 129 should broadly fund ASHRAE Level II audits required for participation in Inflation Reduction Act programs such as HEAR or HER?

A. The Company recognizes that certain Inflation Reduction Act programs require ASHRAE Level II audits as a condition of participation. These requirements are driven by federal program design and are not inherent to Act 129.

Act 129 is a resource acquisition statute evaluated under the Total Resource Cost test. ASHRAE Level II audits do not themselves produce electric energy savings and therefore cannot be treated as independent Act 129 measures. Consistent with the Phase V Implementation Order, the Company will consider participating in audit cost coverage only where such costs are directly tied to the installation of Act 129-incentivized measures and

1 are necessary to enable those installations. In such cases, audit costs are treated solely as
2 enabling expenses, not as savings-producing activities.

3 **Q. How does the Company address intervenor recommendations seeking expanded**
4 **workforce education and training initiatives within the Phase V Act 129 Plan?**

5 A. The Company agrees that workforce readiness and contractor capacity are important to the
6 successful delivery of energy efficiency programs, particularly as higher-efficiency
7 technologies are deployed. However, Act 129 is not intended to function as a general
8 workforce development program.

9 The Company's Phase V Plan appropriately focuses Act 129 resources on program delivery
10 activities that directly support the installation of cost-effective energy efficiency measures,
11 including contractor engagement and technical guidance. Broader workforce development
12 efforts are more appropriately addressed through coordination with state and federal
13 programs specifically designed for that purpose.

14 **Q. How does the Company respond to proposals that Act 129 funds be allocated for**
15 **health and safety measures that address barriers to participation?**

16 A. The Company recognizes that certain health and safety conditions may prevent otherwise
17 eligible low-income customers from participating in Act 129 energy efficiency programs.
18 Addressing these conditions can play an enabling role by allowing cost-effective measures
19 to be installed. At the same time, health and safety repairs do not themselves produce
20 electric energy savings and cannot be treated as Act 129 resource measures.

21 **XVII. Conclusion**

22 **Q. After reviewing the parties' positions, please provide your recommendations.**

1 A. While I appreciate the parties taking the time to review the filed Plan and offer opinions, it
2 is the Company's belief that the Act 129 Phase V Plan as filed still represents the overall
3 best plan for the customers.

4 Therefore, I recommend that the Commission accept the Plan as filed based upon the
5 Company's desire to implement the cost-effective Plan that is all encompassing to all
6 customer classes with expectations to meet the Commission's goal thereby avoiding any
7 penalties.

8 **Q. Does this conclude your rebuttal testimony?**

9 A. Yes, it does.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David Defide, hereby state that the facts above set forth in my Direct Testimony, labeled Duquesne Statement No. 1, and Rebuttal Testimony, labeled Duquesne 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 herein are made subject to the penalties of 18 Pa. C.S. §4904 (relating to unsworn falsifications to authorities).



David Defide
Senior Manager of Customer Programs
for Duquesne Light Company
Date: January 28, 2026

COMMONWEALTH OF PENNSYLVANIA



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January 20, 2026

Via Electronic Filing

Administrative Law Judge Erin L. Gannon(egannon@pa.gov)
Office of Administrative Law Judge
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: Petition of Duquesne Light Company for
Approval of its Act 129 Phase V Energy
Efficiency and Conservation Plan
Docket No. M-2025-3057325

Dear Honorable Judge Gannon:

Please find enclosed a copy of the Direct Testimony being submitted on behalf of the Office of Consumer Advocate in this proceeding, as follows:

- OCA Statement 1: Direct Testimony of Zack Tyler
- Exhibits
- Verification of Zack Tyler

Copies have been served on the parties as indicated on the enclosed Certificate of Service.

Respectfully submitted,

/s/ Katie Kennedy
Katie Kennedy, Esq.
Assistant Consumer Advocate
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Enclosures

cc: Secretary Matthew L. Homsher (Cover Letter and Certificate of Service Only)
Certificate of Service

CERTIFICATE OF SERVICE

Petition of Duquesne Light Company for :
Approval of its Act 129 Phase V Energy : Docket No. M-2025-3057325
Efficiency and Conservation Plan :
:

I hereby certify that I have this day filed electronically on the Commission's electronic filing system and served a true copy of the following document, the Office of Consumer Advocate's Direct Testimony as follows:

- OCA Statement 1: Direct Testimony of Zack Tyler
- Exhibits
- Verification of Zack Tyler

upon parties of record in this proceeding in accordance with the requirements of 52 Pa.

Code § 1.54 (relating to service by a participant), in the manner and upon the persons listed below.

Dated this 20th day of January 2026.

SERVICE BY E-MAIL ONLY

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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF DUQUESNE LIGHT)
COMPANY FOR APPROVAL OF ITS)
PHASE V ENERGY EFFICIENCY) DOCKET NO. M-2025-3057325
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. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS**
3 **ADDRESS?**

4 Q. My name is Zack Tyler. I am a Managing Consultant with Energy Futures
5 Group (EFG). EFG's office is located at 10298 Route 116, Hinesburg,
6 Vermont 05461. EFG provides expert consulting services related to the
7 design, implementation, and evaluation of programs and policies that promote
8 investments in energy efficiency, renewable energy, distributed energy
9 resources, and strategic electrification.

10 **Q. ON WHOSE BEHALF ARE YOU APPEARING?**

11 A. I am presenting testimony on behalf of the Pennsylvania Office of Consumer
12 Advocate (OCA).

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. On December 1, 2025, Duquesne Light Company (DLC or Company) filed a
15 *Petition of Duquesne Light Company For Approval of Its Phase V Energy*
16 *Efficiency and Conservation Plan* (Petition). EFG was retained by the OCA to
17 assist in the review of DLC's Phase V Energy Efficiency and Conservation
18 Plan and accompanying materials (Phase V Plan). My testimony addresses the
19 Phase V Plan's compliance with the Phase V Implementation Order under
20 Docket No. M-2025-3052826, the composition of programs and measures
21 included in the Phase V Plan, the savings assumptions associated with those
22 programs and measures, and the overall reasonableness of the Phase V Plan
23 from a ratepayer perspective.
24
25

1 **Q. PLEASE DESCRIBE YOUR QUALIFICATIONS, WORK**
2 **EXPERIENCE, AND EDUCATIONAL BACKGROUND.**

3 A. I have over 16 years of experience working with energy efficiency and demand
4 response programs. For approximately 14 years, I evaluated energy efficiency
5 and demand response programs across the United States and Canada. My
6 experience includes extensive work in Massachusetts, Connecticut, Vermont,
7 Rhode Island, Illinois, Pennsylvania, and Ontario, Canada.

8 Much of my evaluation experience was gained while working at NMR Group,
9 the current primary contractor serving as the Statewide Evaluator (SWE) under
10 Act 129. My work on Act 129 as part of the SWE team primarily focused on
11 residential baseline research and analyses.

12 I hold or have held multiple professional certifications related to energy
13 efficiency and demand response, including Data Center Energy Practitioner
14 (DCEP) – Generalist, Home Energy Rating System (HERS) Rater, Certified
15 Passive House Consultant (CPHC), BPI Multifamily Building Analyst,
16 Infrared Thermographer, and Residential Air Balancing and Diagnostic
17 Technician. I hold a Bachelor of Arts degree in Environmental Studies from
18 the University of Colorado at Boulder and a Master of Arts degree in Energy
19 and Environmental Analysis from Boston University. A summary of my
20 qualifications is provided in my resume, included as Attachment A.

21 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY**
22 **PROCEEDINGS ON UTILITY ISSUES?**

23 A. No, I have not.
24
25

1 **II. OVERVIEW OF DLC'S PHASE V PLAN**

2 **Q. HAVE YOU REVIEWED THE PHASE V PLAN?**

3 A. Yes. I have reviewed the materials filed in support of the Company's Phase V
4 Plan, including the Direct Testimonies of David Defide and David Ogden. I
5 have also reviewed the Company's responses to Interrogatories submitted by
6 the Coalition for Affordable Utility Services and Energy Efficiency in
7 Pennsylvania (CAUSE-PA) and the OCA.

8 **Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE**
9 **COMPANY'S PHASE V PLAN.**

10 A. DLC's Phase V Plan includes three broad customer sectors: the Residential
11 sector, the Small Commercial/Industrial (C&I) sector, and the Large C&I
12 sector. Collectively, these programs are designed to achieve approximately
13 274,633 MWh of cumulative energy savings and 48.2 MW of peak demand
14 reduction over the five-year Phase V period. The Phase V Plan also includes a
15 low-income energy savings target of 21,232 MWh.
16 The total projected cost of the Phase V Plan is \$97,729,759, which represents
17 the maximum spending level permitted under the Phase V Implementation
18 Order. The Residential sector of the Phase V Plan includes the following
19 programs: Appliance Recycling, Marketplace, Midstream Incentives,
20 Residential Behavioral Energy Efficiency, Low Income Energy Efficiency,
21 and Low-Income Behavioral Efficiency. The Small C&I sector consists of only
22 one program, the Small-Medium Nonresidential Energy Efficiency program.
23 Lastly, the Large C&I sector consists of the Large Commercial Efficiency,
24 Large Industrial Efficiency, and Public Agency Partnership programs. The
25 Midstream Incentives program within the Residential sector is new to the DLC

1 portfolio in Phase V, as are unique incentives for low-to-moderate income
2 customers, the other Phase V Plan elements are generally consistent with those
3 delivered in Phase IV.
4
5

6 **Q. DOES DLC’S PHASE V PLAN COMPLY WITH THE**
7 **REQUIREMENTS OF THE PHASE V IMPLEMENTATION ORDER?**

8 A. Yes. Based on my review, DLC’s Phase V Plan complies with the
9 requirements of the Phase V Implementation Order. The Phase V Plan
10 proposes energy efficiency and peak demand reduction portfolios that meet or
11 exceed the applicable savings targets, satisfies cost-effectiveness
12 requirements, and includes the required low-income programming elements.
13 The Plan includes an overall benefit-cost ratio of 2.0 using the Total Resource
14 Cost (“TRC”) test. The Plan projects first-year energy savings of 274,663
15 MWh, five percent more than the commission-identified goal of 261,583
16 MWh. Finally, the Plan includes 48.2 MW of peak demand reductions,
17 exceeding the commission-identified goal of 46.5 MW.
18 However, as discussed elsewhere in my testimony, there are certain aspects of
19 the Phase V Plan that raise concerns related to portfolio risk, savings
20 durability, and alignment with identified market potential. The
21 recommendations offered in this testimony are intended to address those issues
22 while maintaining full compliance with the Phase V Implementation Order.
23

24 **III. SUMMARY OF KEY ISSUES**

25 **Q. PLEASE SUMMARIZE THE KEY ISSUES YOU IDENTIFIED IN**
26 **YOUR REVIEW OF DLC’S PHASE V PLAN.**

1 A. My review of DLC’s Phase V Plan identified several issues related to program
2 design, portfolio composition, and risk management. At a high level, these
3 issues include increased reliance on short-lived or untested savings sources,
4 heightened portfolio risk associated with the introduction of new programs,
5 and gaps in program targeting for certain customer segments. These issues are
6 summarized below and discussed in greater detail in subsequent sections of
7 my testimony.

8 First, the Phase V Plan does not include a comprehensive, whole-home
9 program option for market-rate residential customers. Instead, comprehensive
10 offerings are largely limited to low-income programs. This approach appears
11 misaligned with findings from the Energy Efficiency and Peak Demand
12 Reduction Market Potential Study (“Market Potential Study”), which
13 identifies meaningful savings opportunities from air sealing and HVAC
14 upgrades across market-rate households. The absence of a comprehensive
15 market-rate pathway represents a missed opportunity to capture durable
16 savings and support deeper efficiency improvements.

17 Second, DLC’s Phase V Plan portfolio reflects elevated implementation and
18 performance risk due to the combination of no carryover savings from Phase
19 IV and the introduction of a new Residential Midstream Incentives Program
20 that represents a significant share of planned residential savings. The absence
21 of carryover savings reduces portfolio flexibility and places greater pressure
22 on Phase V programs to perform as projected from the outset. This risk is
23 amplified by DLC’s reliance on a midstream delivery channel with which it
24 has limited prior experience. In addition, the relatively small size of DLC’s

1 service territory, which may constrain distributor participation and increase
2 market concentration risk.

3 Third, the Phase V Plan relies heavily on residential behavior-based savings,
4 primarily through Home Energy Reports (HER). Behavioral savings account
5 for a substantial share of DLC's residential portfolio in Phase V, a significantly
6 higher proportion than in Phase IV. While behavioral programs can be cost-
7 effective, their savings are short-lived, decay over time, and require ongoing
8 expenditures to maintain. Increased reliance on behavioral savings raises
9 concerns regarding savings durability, long-term portfolio stability, and the
10 distribution of benefits across customer income levels, particularly given that
11 higher-usage households tend to realize greater behavioral savings.

12 Fourth, the Phase V Plan continues to include residential lighting savings as a
13 material component of the residential portfolio, despite Market Potential Study
14 findings that assume virtually no remaining residential lighting potential due
15 to federal efficiency standards and market saturation. Residential lighting
16 savings represent a non-trivial share of projected Phase V savings and are
17 assumed to remain relatively stable across the planning horizon. Continued
18 reliance on these savings raises concerns about sustainability, particularly as
19 lighting markets continue to saturate and opportunities for incremental savings
20 diminish.

21 Fifth, with respect to non-residential programs, the Phase V Plan relies heavily
22 on lighting measures, which account for approximately 41 percent of projected
23 non-residential energy savings. At the same time, the Non-Residential
24 Baseline Study indicates that LED lighting saturation is already high and
25 increasing. This reliance raises concerns about the risk of LED-to-LED

1 replacements, the sustainability of projected savings, and whether sufficient
2 effort has been made to diversify the non-residential portfolio by advancing
3 alternative technologies while lighting savings remain available.

4 Sixth, the Phase V Plan does not include a clear strategy to support market-
5 rate multifamily occupants, despite findings in the Market Potential Study that
6 approximately 9 percent of total residential energy efficiency potential is
7 associated with this segment. The Phase V Plan largely limits multifamily
8 engagement to low-income offerings and does not identify specific programs,
9 participation assumptions, or savings expectations for market-rate multifamily
10 buildings. As a result, a significant portion of identified residential potential
11 appears to be excluded from the Phase V Plan portfolio. The absence of a
12 market-rate multifamily occupant strategy raises concerns regarding equitable
13 access to programs, missed opportunities for durable savings, and the Phase V
14 Plan's ability to fully align with Commission-directed potential study findings.

15
16 Finally, the Phase V Plan does not include a clear strategy to leverage the
17 interconnection process as an opportunity to engage customers in Act 129
18 energy efficiency and demand-side programs. While interconnection and
19 energy efficiency appropriately remain separate processes, customers seeking
20 interconnection—particularly for larger or energy-intensive projects—are
21 often making design and investment decisions that will shape long-term energy
22 use and peak demand. The Phase V Plan does not describe a coordinated
23 approach to connecting these customers with Act 129 program resources
24 during the interconnection or economic development process. As a result,
25 opportunities to encourage cost-effective efficiency, demand reduction, or load

1 management at a key decision point may be missed. The absence of a
2 coordinated engagement strategy raises concerns regarding portfolio
3 optimization, system planning efficiency, and the Phase V Plan’s ability to
4 fully leverage Act 129 programs to support efficient growth within DLC’s
5 service territory.
6

7 **IV. RESIDENTIAL DIRECT INSTALL FOR MARKET RATE CUSTOMERS**

8 **Q. DOES DLC’S PHASE V PLAN PROVIDE COMPREHENSIVE AUDIT**
9 **AND DIRECT INSTALL OPPORTUNITIES FOR MARKET-RATE**
10 **CUSTOMERS?**

11 A. No. DLC’s Phase V Plan does not include a comprehensive audit program that
12 provides direct install opportunities—such as air sealing or building insulation
13 measures—for market-rate residential customers.¹ While similar offerings were
14 available to market-rate customers in Phase IV, these programs have been removed
15 from the Phase V Plan portfolio and are now largely limited to low-income program
16 offerings. As a result, market-rate customers no longer have access to a coordinated
17 pathway for identifying and addressing cost-effective building envelope
18 improvements. Building envelope improvements include measures such as air sealing,
19 attic insulation, and wall insulation. These measures deliver energy savings over long
20 periods of time due to their extended measure lives, but they often present significant
21 adoption barriers because of the upfront costs associated with comprehensive
22 insulation and air sealing work. As a result, providing access to incentives that help
23 mitigate these customer barriers is an important element of capturing impactful, long-
24 term energy savings and incorporating an additional equity consideration into the
25 portfolio.

¹ Market-rate customers are those who will receive a rebate not based upon income eligibility.

1 **Q. WHY IS THE ABSENCE OF A COMPREHENSIVE AUDIT AND**
2 **DIRECT INSTALL PROGRAM FOR MARKET-RATE CUSTOMERS**
3 **A CONCERN?**

4 A. The absence of this type of program represents a missed opportunity to capture
5 deeper, more durable energy savings. These savings are typically associated
6 with measures that have persistent savings over longer periods of time and
7 result in permanent physical changes to equipment and/or buildings. The
8 Market Potential Study identifies space heating as the residential end use with
9 the greatest remaining savings potential, and specifically flags air sealing as a
10 key contributing measure. Comprehensive audit and direct install programs are
11 well-suited to identify and implement these opportunities, particularly in
12 electrically heated homes where envelope improvements can materially reduce
13 load and improve overall system performance. Customers can benefit from the
14 in-person discussions with contractors that often take place as part of
15 comprehensive audit programs. These discussions are an opportunity for
16 contractors to educate homeowners about the opportunities in their home and
17 this can serve as a useful conversion mechanism for more robust measures with
18 deeper energy savings.

19 **Q. HOW WOULD A COMPREHENSIVE AUDIT AND DIRECT**
20 **INSTALL PROGRAM SUPPORT BROADER PHASE V PLAN**
21 **PORTFOLIO OUTCOMES?**

22 A. In addition to delivering direct savings from air sealing and other envelope
23 measures, a comprehensive audit program can serve as an effective on-ramp
24 for other high-impact measures. These programs can improve customer
25 understanding and uptake of follow-on investments such as insulation

1 upgrades, electric resistance-to-heat pump conversions, and heat pump
2 replacements or upgrades. By addressing building shell deficiencies first, these
3 programs also help ensure that HVAC investments deliver their full expected
4 savings and performance benefits.

5 **Q. WHAT STEPS ARE RECOMMENDED TO ADDRESS THIS ISSUE?**

6 A. I recommend that DLC reintroduce a comprehensive audit and direct install
7 program for market-rate residential customers as part of its Phase V Plan
8 portfolio. This program should include air sealing, identified as a high-value
9 measure in the Market Potential Study, and other envelope measures and
10 should be designed to support deeper savings and measure integration. I further
11 recommend that funding be reallocated from existing residential programs—
12 specifically the Residential Midstream Incentives Program and the HERs
13 program—to support implementation of this offering. The reallocation of
14 funding from these specific programs is discussed in later sections of my
15 testimony.

16
17 **V. RESIDENTIAL MIDSTREAM PROGRAM**

18 **Q. WHAT IS THE RESIDENTIAL MIDSTREAM INCENTIVES**
19 **PROGRAM, AND HOW DOES IT FIT INTO DLC’S PHASE V PLAN**
20 **PORTFOLIO?**

21 A. The Residential Midstream Incentives Program is a new component of DLC’s
22 Phase V Plan portfolio that provides incentives midstream to distributors or
23 trade allies to encourage the adoption of high-efficiency residential equipment.
24 I acknowledge and appreciate DLC’s efforts to pursue new programmatic
25 strategies in Phase V and to explore delivery channels that may support market
26 transformation. Introducing new program approaches can be an important part

1 of portfolio evolution, particularly as traditional measures become more
2 constrained.

3 **Q. DOES THE SCALE OF THE PROPOSED MIDSTREAM PROGRAM**
4 **RAISE ANY CONCERNS?**

5 A. Yes. While innovation is important, the Phase V Plan proposes that
6 approximately 24 percent of residential energy savings be delivered through a
7 new midstream program with no prior implementation history in DLC's
8 territory. This represents a significant share of the residential portfolio for a
9 program with limited demonstrated performance, uncertain adoption rates, and
10 untested evaluation and verification outcomes. Allocating such a large portion
11 of residential savings to a new delivery channel increases portfolio risk,
12 particularly in a phase that begins with no carryover savings from Phase IV.
13 The concern is not with the midstream approach itself, but with allocating
14 nearly one-quarter of residential savings to a delivery channel with no prior
15 implementation history in DLC's territory.

16 **Q. HOW DOES THE INTRODUCTION OF THE MIDSTREAM**
17 **PROGRAM RELATE TO THE ABSENCE OF A COMPREHENSIVE**
18 **MARKET-RATE RESIDENTIAL PROGRAM?**

19 A. In response to discovery (OCA-I-7), DLC acknowledges that the lack of a
20 comprehensive audit and direct install program for market-rate residential
21 customers is due, in part, to the increased focus on the residential midstream
22 program. This tradeoff is concerning. As discussed elsewhere in my testimony,
23 comprehensive programs offer opportunities for deeper, more durable savings
24 and serve as an effective platform for integrating envelope, insulation, and
25 HVAC measures—particularly in electrically heated homes. The decision to

1 prioritize a new midstream program appears to have come at the expense of
2 direct install opportunities for market rate customers.

3 **Q. DOES THE DESIGN OF THE RESIDENTIAL MIDSTREAM**
4 **PROGRAM RAISE ANY CONCERNS REGARDING EQUITY OR**
5 **CUSTOMER BENEFITS?**

6 A. Yes. The Phase V Plan and DLC's discovery responses (including OCA-I-3,
7 OCA-I-4, and OCA-I-5) provide limited clarity regarding how equitable
8 access to the midstream program will be monitored or ensured. It remains
9 unclear how participation will be tracked by income level, housing type, or
10 tenure, and how DLC will assess whether low- and moderate-income
11 customers are meaningfully benefiting from the program. In addition, the
12 Phase V Plan does not clearly explain how passthrough incentives will be
13 verified to ensure that incentives provided to distributors or trade allies are
14 ultimately reflected in customer pricing, rather than retained upstream.
15 The Plan also does not include any coordination with other utilities with
16 respect to the residential midstream program. These types of programs benefit
17 from cross-territory coordination as the market actors these programs rely on
18 (e.g., distributors and trade allies) operate regionally, not utility by utility.
19 These market actors prefer consistent incentive structures across their service
20 territory as it simplifies their customer engagement and messaging. As a result,
21 cross-territory coordination can increase distributor participation, minimize
22 customer confusion, and help to reduce geographic inequities that may be
23 associated with midstream programs in a small service territory.

24 **Q. WHAT CHANGES DO YOU RECOMMEND WITH RESPECT TO**
25 **THE RESIDENTIAL MIDSTREAM PROGRAM?**

1 A. I recommend that DLC scale back the residential midstream program to
2 approximately 12 percent of residential energy savings at the outset of Phase
3 V, with the option to ramp up participation over time as program performance,
4 adoption, and evaluation results are demonstrated. This approach would allow
5 DLC to pursue innovation while managing portfolio risk (similar to a pilot
6 program) and addressing current uncertainties related to equity, verification,
7 and market response. Relying heavily on midstream incentives when they are
8 a new program element introduces a high risk that savings will not materialize,
9 potentially jeopardizing overall portfolio targets under Pennsylvania's Act 129
10 framework. I further recommend that the savings and funding reduced from
11 the midstream program be reallocated to support the previously recommended
12 comprehensive audit and direct install program for market-rate residential
13 customers.
14
15

16 **V. HOME ENERGY REPORTS**

17 **Q. WHAT ROLE DOES THE HOME ENERGY REPORTS PROGRAM** 18 **PLAY IN DLC'S PHASE V PLAN RESIDENTIAL PORTFOLIO?**

19 A. The market rate (non-low income) HER program represents the largest single
20 contributor to residential energy savings (36 percent of the residential
21 portfolio) in the Phase V Plan. This represents a slight reduction compared to
22 the Phase IV Plan, where 40 percent of residential energy savings were from
23 the market rate HER program. Because of its scale within the portfolio and its
24 behavioral nature, the HER program has a significant influence on the
25 durability, risk profile, and long-term performance of the residential portfolio.
26
27

1 **Q. WHY IS THE CONTINUED AND INCREASED RELIANCE ON HER**
2 **SAVINGS A CONCERN?**

3 A. While the HER program has historically delivered cost-effective residential
4 energy savings, continued reliance on HER savings in Phase V raises concerns
5 related to savings durability and the magnitude of customer benefits. HER
6 savings are behavioral in nature and do not result in permanent physical
7 improvements to customer homes. This means that savings require ongoing
8 program expenditures to sustain and do not provide the same long-term
9 certainty as equipment-based or building envelope measures. Measures such
10 as heat pumps and insulation have 15-year measure lives providing an
11 opportunity for greater lifetime savings. Moreover, due to the lack of physical
12 improvements, HER savings do not persist across homeowners or tenants
13 when occupancy changes within a housing unit.

14 In addition, the per-household energy savings associated with behavioral
15 measures are generally modest relative to comprehensive efficiency upgrades.
16 As a result, HER programs typically have a limited ability to meaningfully
17 reduce household energy burden, particularly for customers facing high fixed
18 energy costs or inefficient building conditions. Behavioral savings also tend to
19 be driven disproportionately by higher-usage customers, which may affect
20 how program benefits are distributed across income groups.
21 Finally, while the HER programs remain cost-effective, DLC's Phase V Plan
22 reflects a substantial increase in HER acquisition costs relative to Phase IV—
23 particularly for market-rate customers, where the cost nearly doubles. This
24 upward trend reduces the relative advantage of behavioral savings and

underscores the importance of rebalancing the residential portfolio toward more durable, physically persistent measures (see Table 1)..

Table 1. Comparison of Phase IV and Phase V Acquisition Costs for Home Energy Report Programs.

	Phase IVPlan	Phase VPlan
Market Rate HER Acquisition Cost (\$/MWh)	\$83.82	\$165.87
Low Income HER Acquisition Cost (\$/MWh)	\$148.69	\$199.00
Source: DLC Phase IVPlan (see Table 10) and DLC Phase VPlan (see Table 11)		

Q. WHAT ARE THE PORTFOLIO-LEVEL IMPLICATIONS FOR DLC OF CONTINUED 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 risk for DLC 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.² Given the fixed budgets associated with

² American Council for an Energy-Efficient Economy (ACEEE), *Measuring and Valuing Lifetime Energy Savings in Policy and Planning*, Report U1902 (2019).

1 Act 129 programs, greater reliance on HER savings may therefore limit the
2 extent to which program resources are directed toward more comprehensive
3 residential strategies, such as building envelope improvements and residential
4 heat pump technologies. Phase V presents an opportunity to leverage near-
5 term behavioral savings while beginning to rebalance the residential portfolio
6 toward more durable strategies that provide longer-lived savings and greater
7 long-term value for ratepayers

8 **Q. WHAT CHANGES DO YOU RECOMMEND FOR THE HER**
9 **PROGRAM?**

10 A. I recommend that the proportion of residential savings attributable to the non-
11 low income HER program be reduced from 36 percent to 10 percent of the
12 residential portfolio. I also recommend that the HER program be limited to
13 customers that use 7.7 kWh per square foot per year.³ This is equivalent to
14 150% of the average home's energy usage in Pennsylvania per the United
15 States' Energy Information Administration's Residential Energy Consumption
16 Survey ("RECS") Dashboard.⁴ This approach would help ensure that the HER
17 program targets high usage customers that will generate deeper savings are
18 more likely to participate in other DLC programs. I further recommend that
19 the associated program funding be reallocated to a comprehensive direct install
20 program for residential market rate customers and/or to support rebates and
21 services for market rate multifamily customers. These programs can offer
22 customers energy efficiency improvements that are not available through other

³ 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.

⁴ U.S. Energy Information Administration, Residential Energy Consumption Survey Dashboard for Pennsylvania, <https://experience.arcgis.com/experience/cbf6875974554a74823232f84f563253>.

1 delivery channels, most notably air sealing and envelope insulation measures.
2 The Market Potential Study identifies space heating as the single largest end
3 use in terms of program potential for market rate customers in the DLC
4 territory. The Market Potential Study notes that those savings are driven by
5 electric resistance heating to heat pump conversions, incremental
6 improvements to heat pumps systems, and air sealing. Providing market rate
7 customers with a comprehensive program that includes an onsite energy audit
8 and direct install measures would allow DLC to provide air sealing to wide
9 range of customers and conduct targeted sales pitches to customers with
10 electric resistance heating or dated heat pump technologies.
11 I believe these changes can be accommodated while achieving the energy and
12 demand savings targets identified in the Phase V Implementation Order and
13 maintaining portfolio cost-effectiveness. The Phase IV portfolio included
14 onsite energy audits and direct install opportunities for market rate customers
15 and DLC was on track to achieve the Phase IV targets based on the SWE's
16 Final Annual Report for Program Year 16.

17 **Q. DO YOU RECOMMEND ANY CHANGES TO THE LOW INCOME**
18 **HER PROGRAM?**

19 A. Yes. Consistent with my recommendation that the non-low income HER
20 program focus on customers with high electricity usage, I recommend that the
21 Income Eligible HER program be limited to customers with usage that qualifies
22 for the Company's Low Income Usage Reduction Program ("LIURP"), which
23 applies to income qualified customers with annual usage exceeding 6,000 kWh.
24

1 **VII. RESIDENTIAL LIGHTING**

2 **Q. WHAT ROLE DOES RESIDENTIAL LIGHTING PLAY IN DLC'S**
3 **PHASE V PLAN RESIDENTIAL PORTFOLIO, AND IS THE**
4 **PROPOSED APPROACH COMPLIANT WITH APPLICABLE**
5 **REQUIREMENTS?**

6 A. In response to OCA's interrogatories, DLC provided a detailed table of the
7 measure-level assumptions included in the Phase V Plan (see DLC Response
8 to OCA I-27). The table details show that residential lighting measures are
9 responsible for 8,613 MWh of savings in the Phase V Plan. These savings
10 represent 3 percent of total portfolio energy savings, 10 percent of the
11 residential portfolio energy savings, and 41 percent of the low-income carve
12 out. All of the residential lighting savings are associated with the low-income
13 direct install program. This approach is compliant with applicable
14 requirements, and my concerns regarding residential lighting do not relate to
15 regulatory compliance or program eligibility.
16
17
18

19 **Q. WHY DOES CONTINUED PROGRAM SUPPORT FOR**
20 **RESIDENTIAL LIGHTING RAISE CONCERNS IN PHASE V?**

21 A. Residential lighting is a mature and highly saturated market, particularly
22 following the adoption of updated federal minimum efficiency standards for
23 general service lamps. As a result, many customers would likely install LED
24 lighting absent program intervention, raising concerns that a portion of claimed
25 savings may reflect spillover or naturally occurring market activity rather than
26 incremental program influence. In addition, residential lighting is widely
27 viewed as a market that has largely achieved transformation, meaning

1 continued program funding is likely to yield diminishing returns over time.
2 This is supported by the 2023 Pennsylvania Statewide Act 129 Residential
3 Baseline Study, which found that LED lighting accounts for approximately 59
4 percent of all residential sockets statewide, with LEDs occupying 44 percent
5 of sockets in the average Pennsylvania home, representing roughly a doubling
6 since the 2018 baseline study.⁵ LED penetration was found to be nearly
7 universal, with approximately 99 percent of homes containing at least one LED
8 bulb, indicating a highly saturated and largely transformed residential lighting
9 market.

10 **Q. WHAT ARE THE IMPLICATIONS FOR DLC OF CONTINUING TO**
11 **SUPPORT RESIDENTIAL LIGHTING FOR LONG-TERM**
12 **PORTFOLIO STRATEGY?**

13 Continued investment in residential lighting limits the resources available for
14 other residential measures that offer more durable savings and greater long-
15 term value, such as building envelope improvements and residential heat pump
16 technologies. While residential lighting may continue to generate short-term
17 savings, Phase V presents an opportunity to begin shifting program focus away
18 from highly saturated measures and toward strategies that better position the
19 DLC residential portfolio for sustained savings and future phase requirements.

20 **Q. WHAT CHANGES DO YOU RECOMMEND FOR RESIDENTIAL**
21 **LIGHTING IN THE PHASE V PLAN?**

22 A. I recommend that residential lighting be removed from the Phase V Plan.
23 While DLC's residential lighting offerings comply with applicable federal
24 efficiency standards and program requirements, residential lighting represents

⁵ 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 a highly saturated and largely transformed market. This was shown in the most
2 recent Act 129 Residential Baseline Study, which showed LEDs account for
3 59 percent of all residential sockets statewide with 99 percent homes
4 containing at least one LED.⁶ As a result, continued program support for
5 residential lighting is unlikely to produce incremental, durable savings and
6 may largely reflect spillover or 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
10 limited Act 129 resources. Continued investment in residential lighting can crowd out
11 funding for measures with deeper and longer lasting energy impacts. Eliminating
12 residential lighting would allow DLC to redirect program funding toward more
13 comprehensive residential measures, such as building envelope improvements (e.g.,
14 air sealing, attic insulation, and wall insulation) and residential heat pump
15 technologies, that better support long-term portfolio performance and future phase
16 objectives. These measures deliver energy savings over long periods of time due to
17 their extended measure lives, but they often present significant adoption barriers
18 because of the upfront costs associated with installation. As a result, providing access
19 to incentives that help mitigate these customer barriers is an important element of
20 capturing impactful, long-term energy savings and incorporating an additional equity
21 consideration into the portfolio.

22
23 The measure-level table provided by DLC (see OCA-I-27) shows that various
24 heat pumps measures and building envelope measures, particularly those

⁶ Ibid.

1 within the residential low-income sector, are highly cost-effective. This
2 suggests the portfolio should be able to accommodate this shift while
3 remaining in compliance with the Phase V Implementation Order. These
4 measures are harder to access for low-income customers and further support
5 for these measures will make a more substantial impact on the energy burden
6 faced by low-income customers than residential lighting measures that are
7 easily accessed given the state of the market.
8

9 **VIII. NONRESIDENTIAL LIGHTING**

10 **Q. WHAT ROLE DOES NON-RESIDENTIAL LIGHTING PLAY IN** 11 **DLC'S PHASE V PLAN?**

12 A. Non-residential lighting represents a substantial portion of the savings
13 proposed in DLC's Phase V Plan. Based on the Phase V Plan's savings
14 projections, non-residential lighting accounts for approximately 41 percent
15 C&I sector energy savings and approximately 28 percent of total portfolio
16 savings. This indicates that lighting is the single largest source of non-
17 residential savings in Phase V. This reliance warrants careful consideration
18 given broader market trends and the availability of alternative non-lighting
19 opportunities identified in Commission-directed studies.

20 **Q. WHY DOES DLC'S LEVEL OF RELIANCE ON NON-RESIDENTIAL** 21 **LIGHTING RAISE CONCERNS IN PHASE V?**

22 A. Continued heavy reliance on non-residential lighting raises concerns because
23 lighting markets are increasingly mature and approaching saturation.
24 Statewide baseline and market potential analyses indicate high levels of LED
25 adoption in commercial buildings, which increases the risk that future lighting
26 incentives may support LED-to-LED replacements rather than truly

1 incremental upgrades. As saturation increases, the incremental savings
2 associated with lighting measures tend to decline, while evaluation risk and
3 uncertainty increase.

4 **Q. WHAT ARE THE LONG-TERM PORTFOLIO IMPLICATIONS FOR**
5 **DLC OF CONTINUED HEAVY RELIANCE ON NON-RESIDENTIAL**
6 **LIGHTING?**

7 A. Concentrating a large share of non-residential savings in a mature and
8 increasingly saturated measure category may limit the portfolio's flexibility
9 and resilience over time. As remaining cost-effective lighting opportunities
10 diminish, continued reliance on lighting could constrain DLC's ability to adapt
11 its portfolio in later years of Phase V or in future phases. Phase V presents an
12 opportunity to leverage the near-term stability of lighting savings while
13 gradually shifting emphasis toward a more diversified mix of non-residential
14 measures with greater long-term durability.

15 Alternative non-lighting strategies—such as HVAC upgrades, building
16 controls and optimization, refrigeration improvements, process efficiency, and
17 electrification measures—can help diversify savings sources and reduce long-
18 term portfolio risk while continuing to deliver cost-effective energy
19 reductions.

20 **Q. WHAT CHANGES DO YOU RECOMMEND WITH RESPECT TO**
21 **NON-RESIDENTIAL LIGHTING IN DLC'S PHASE V PLAN?**

22 A. I recommend that DLC modestly reduce the share of C&I portfolio savings
23 attributed to non-residential lighting from approximately 41 percent to 30
24 percent of C&I savings. This adjustment would recognize the continued cost-
25 effectiveness and near-term value of lighting measures while beginning to

1 reduce reliance on a mature measure category with diminishing long-term
2 potential. Focusing on a mature non-residential market such as lighting may
3 simplify short-term compliance, but it prevents investment in emerging
4 measures that require extended runways to become accepted in the
5 marketplace. These investments are necessary now to help establish traction in
6 the market that can be relied upon in future program phases.

7 The savings and funding associated with this reduction could be reallocated to
8 support non-lighting C&I strategies that enhance portfolio diversity and long-
9 term durability. Given the Phase V Plan's projected performance in excess of
10 required energy savings targets and its overall cost-effectiveness, I expect that
11 this rebalancing could be accommodated without jeopardizing DLC's
12 compliance with the Phase V Implementation Order.
13

14 **IX. MULTIFAMILY**

15 **Q. HOW DOES DLC'S PHASE V PLAN ADDRESS MULTIFAMILY** 16 **CUSTOMERS?**

17 A. DLC's Phase V Plan addresses multifamily customers primarily through the
18 Low-Income Energy Efficiency Program (LIEEP). As confirmed in DLC's
19 response to OCA-I-11, multifamily activity in Phase V is embedded within
20 LIEEP and is treated as a program channel alongside assessments and
21 behavioral offerings. The Phase V Plan does not include a standalone
22 multifamily program, nor does it establish specific participation or savings
23 targets for multifamily customers.

24 **Q. DOES THE PHASE V PLAN INCLUDE A STRATEGY FOR** 25 **MARKET-RATE MULTIFAMILY OCCUPANTS?**

1 A. No. While it is possible that some market-rate multifamily occupants may
2 participate incidentally in other residential program channels, the Phase V Plan
3 does not include a targeted strategy to support or prioritize market-rate
4 multifamily buildings and their occupants. DLC’s response to OCA-I-11
5 confirms that multifamily efforts in Phase V are limited to low-income
6 programming and do not address market-rate multifamily occupants as a
7 distinct segment. This is notable given that the Market Potential Study
8 identifies a meaningful share of residential potential—approximately 9
9 percent—associated with market-rate multifamily buildings. Absent a targeted
10 approach, there is no assurance that this identified potential will be
11 systematically or equitably captured during Phase V.

12 **Q. HOW DOES THIS APPROACH COMPARE TO PRIOR PHASES AND**
13 **TO THE FINDINGS OF THE MARKET POTENTIAL STUDY?**

14 A. While DLC notes that its Phase V multifamily approach is similar to Phases
15 III and IV, the Market Potential Study reflects updated market conditions and
16 identifies substantial remaining potential in the multifamily sector beyond low-
17 income households. Phase V does not appear to respond to these updated
18 findings and instead continues a legacy approach that effectively equates
19 multifamily with low-income participation. As a result, the Phase V Plan does
20 not demonstrate how market-rate multifamily savings will be captured during
21 Phase V.

22 **Q. WHAT CHANGES DO YOU RECOMMEND FOR MULTIFAMILY IN**
23 **THE PHASE V PLAN?**

24 A. I recommend that DLC expand its existing multifamily delivery approach—
25 currently implemented through the Low-Income Energy Efficiency

1 Program—to explicitly include market-rate multifamily buildings and their
2 occupants on a pilot basis. Rather than creating a new standalone program, this
3 approach would leverage DLC’s existing landlord and property manager
4 recruitment strategies, implementation processes, and administrative
5 infrastructure. Expanding the current multifamily framework would allow
6 DLC to begin addressing the documented market-rate multifamily potential
7 identified in the Market Potential Study while minimizing implementation risk
8 and administrative complexity.

9 I further recommend that funding for this expanded multifamily pilot be
10 reallocated from other residential program areas, such as a scaled-back HERs
11 program or a reduced residential midstream allocation, rather than requiring
12 new budget authority. This approach would allow DLC to address a currently
13 unserved market segment within existing portfolio constraints.
14

15 **X. ACT 129 AND THE INTERCONNECTION PROCESS**

16 **Q. DO YOU BELIEVE THERE ARE MISSED OPPORTUNITIES TO**
17 **BETTER LEVERAGE ACT 129 PROGRAMS IN CONNECTION**
18 **WITH DLC’S INTERCONNECTION PROCESS?**

19 A. Yes. Based on my review of the Company’s interconnection process and their
20 response to OCA-I-25, it appears that DLC may be missing an opportunity to
21 more proactively promote energy efficiency and Act 129 programs at a key
22 customer decision point. While interconnection approval appropriately
23 remains separate from participation in Act 129 programs, customers seeking
24 interconnection—particularly for larger or energy-intensive projects—are
25 often making significant design, equipment, and investment decisions that
26 directly affect long-term energy use and peak demand.

1 During the interconnection review process, DLC evaluates system capacity
2 and identifies potential infrastructure needs. This process presents an
3 opportunity to voluntarily inform and connect customers with Act 129
4 program resources that could help reduce load, manage peak demand, or
5 improve overall system efficiency. Such engagement could include referrals to
6 Act 129 account managers, targeted information on demand reduction and
7 efficiency opportunities, or coordination with economic development teams
8 working with prospective customers.

9 This opportunity may be particularly relevant for customer segments that
10 frequently pursue interconnection, such as data centers or other large
11 commercial and industrial customers. Establishing clearer pathways for
12 coordination between interconnection staff, Act 129 program staff, and
13 economic development entities could help ensure that customers are aware of
14 available efficiency and demand-side options early in the project development
15 process. Incorporating voluntary Act 129 engagement at this stage would help
16 reduce missed opportunities for cost-effective efficiency, support more
17 efficient homes and businesses, and better align customer investments with
18 system needs—without conditioning or delaying interconnection approval.
19
20

21 **XI. CONCLUSIONS AND RECOMMENDATIONS**

22

23 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING DLC’S**
24 **PHASE V PLAN.**

25 A. Based on my review, DLC’s Phase V Plan generally complies with the
26 requirements of the Phase V Implementation Order; however, several aspects
27 of the Plan raise concerns related to portfolio risk, savings durability, and

1 alignment with identified market potential. As discussed throughout my
2 testimony, the Phase V Plan relies heavily on short-lived or untested savings
3 sources, while scaling back or eliminating program offerings that support
4 deeper, more durable energy savings. In addition, certain customer segments
5 with documented efficiency potential—most notably market-rate single-
6 family and multifamily customers—are not adequately addressed through
7 targeted program design. Collectively, these issues raise questions regarding
8 whether the Phase V Plan represents the most effective and equitable use of
9 Act 129 funds from a ratepayer perspective. I acknowledge and appreciate
10 DLC’s effort to pursue new programmatic strategies in Phase V, namely the
11 introduction of a residential midstream program; however, the Plan lacks key
12 details related to how the program will function and how risk will be managed.
13 As such, the portfolio would benefit from scaling back this program element
14 and working out these details prior to implementation at the proposed levels.

15 **Q. WHAT RECOMMENDATIONS DO YOU OFFER TO ADDRESS**
16 **THESE ISSUES?**

17 A. The recommendations summarized below are not new proposals but rather
18 reflect recommendations that have been presented and discussed in detail in
19 the preceding sections of this testimony. Each recommendation follows
20 directly from the issue-specific analysis addressing portfolio risk, savings
21 durability, equity considerations, and alignment with the Market Potential
22 Study.

23 These recommendations are intended to be incremental and practicable within
24 the existing Phase V framework. In my judgment, the combination of the Phase
25 V Plan’s overall cost-effectiveness, projected energy savings in excess of the

Phase V Implementation Order requirements, and the flexibility afforded by the five-year budget cap indicate that these adjustments can be accommodated while maintaining compliance with Act 129 Phase V requirements.

1. Reintroduce comprehensive audit and direct install opportunities for market-rate residential customers.

Direct DLC to reintroduce a comprehensive audit and direct install program for market-rate residential customers, including air sealing and other building envelope measures. This program should be designed to support deeper, more durable space-heating savings and to serve as an on-ramp for follow-on measures such as insulation upgrades and heat pump installations.

2. Scale back the Residential Midstream Incentives Program and manage portfolio risk.

Direct DLC to reduce the share of residential savings attributable to the Residential Midstream Incentives Program from approximately 24 percent to a more limited share at the outset of Phase V, with the option to ramp up participation over time as program performance and evaluation results are demonstrated. This adjustment would reduce portfolio risk associated with the introduction of a new delivery channel while preserving DLC's ability to pursue market transformation strategies.

3. Reduce reliance on residential behavioral savings.

Direct DLC to reduce the share of residential savings attributable to the non-low-income HERs program and reallocate those resources toward programs that deliver longer-lived, physically persistent savings. This rebalancing would improve savings durability, reduce reliance on short-lived behavioral impacts, and better align residential investments with identified market potential.

1 **4. Eliminate residential lighting from the Phase V Plan portfolio.**

2 Direct DLC to remove residential lighting measures from the Phase V Plan
3 portfolio and redirect associated funding toward residential measures with
4 greater durability and long-term value. Given the maturity and saturation of
5 the residential lighting market, continued reliance on these savings is unlikely
6 to represent the most effective use of Act 129 funds.

7 **5. Reduce Reliance on Non-Residential Lighting in the Phase V Plan**
8 **Portfolio.**

9 Direct DLC to reduce the share of non-residential portfolio savings attributed
10 to lighting measures and reallocate the associated funding toward non-lighting
11 strategies with greater long-term durability and diversification value. Given
12 the increasing saturation of LED lighting in commercial and industrial
13 buildings and the associated risk of LED-to-LED replacements, continued
14 heavy reliance on non-residential lighting is unlikely to represent the most
15 effective use of Act 129 funds over the duration of Phase V. Redirecting a
16 portion of these resources toward measures such as HVAC upgrades, building
17 controls and optimization, refrigeration improvements, and other non-lighting
18 strategies would help reduce portfolio risk, improve long-term savings
19 persistence, and better position the non-residential portfolio for future phases.

20 **6. Expand multifamily program offerings to address market-rate**
21 **multifamily customers.**

22 Direct DLC to expand its existing multifamily delivery approach—currently
23 embedded within the Low-Income Energy Efficiency Program—to explicitly
24 include market-rate multifamily buildings on a pilot basis. This expansion
25 should leverage the same landlord and property manager engagement

1 strategies currently used for low-income multifamily housing and establish
2 clear participation and savings expectations for market-rate multifamily
3 customers.

4 **7. Reallocate funding within the residential portfolio to support these**
5 **adjustments.**

6 Direct DLC to fund the recommended comprehensive market-rate residential
7 and multifamily enhancements through reallocations from other residential
8 program areas, including a scaled-back Residential Midstream Incentives
9 Program and a reduced HERs program. These reallocations would allow DLC
10 to address identified gaps in the Phase V Plan portfolio without increasing
11 overall program spending.

12 **8. Improve coordination between the interconnection process and Act 129**
13 **program engagement.**

14 Direct DLC to establish a voluntary coordination framework that connects
15 customers seeking interconnection with Act 129 energy efficiency and
16 demand-side program resources at appropriate points in the interconnection
17 and economic development process. This coordination should not condition or
18 delay interconnection approval but should ensure that customers—particularly
19 those pursuing large or energy-intensive projects—are made aware of
20 available opportunities to reduce load, manage peak demand, and improve
21 overall system efficiency. Establishing clearer referral pathways between
22 interconnection staff, Act 129 program staff, and economic development teams
23 would help reduce missed opportunities for cost-effective efficiency and better
24 align customer investment decisions with system needs.

25 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

1 A. Yes, it does.

2

3

Attachment A

Resume 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.

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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

Pennsylvania Public Utility Commission

v.

Duquesne Light Company

:
:
:
:
:
:
:

Docket No. M-2025-3057325

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:

Zachary Tyler

Zack Tyler

Address:

P.O. Box 587,
Hinesburg, VT 05461

EXHIBIT A

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Office of Consumer Advocate

Set I

Response by: David Defide

OCA-I-3

3. Provide all analyses, studies, evaluations, assessments, projections, or other documents that DLC has prepared or relied upon concerning the equity impacts of the Residential Midstream Program, including but not limited to analyses of anticipated or actual participation segmented by (a) household income level, (b) renter versus owner status, and (c) multifamily versus single-family properties.

Response:

Duquesne Light did not prepare or rely on any analyses, studies, evaluations, assessments, projects, or other documents concerning equity impacts of the Residential Midstream Program.

There is no equity-class impact associated with the Plan's inclusion of a Residential Midstream Program. As related in detail in the Company's response to CAUSE-PA-II-3, low-income sector program targets exceed DLC's Phase V Low Income mandated carve out of 18,933 MWh, projecting 21,132 MWh savings. Renters (multifamily of single-family occupants) are often subject to split-incentive barriers (industry term) where participation is surmounted, primarily, though direct installation at no cost to occupants. Such treatment is reserved for low-income customers served under the Low Income Energy Efficiency Program. Targeted midstream engagement channels demonstrate orders of magnitude greater penetration than traditional downstream rebate programs. See Phase V EE&C Plan, Section 3.1 (Discussion of Criteria and Process Used for Selection of Programs), p. 17, describing benchmarking of peer jurisdictions and CSP-informed program selection.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
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**Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Office of Consumer Advocate**

Set I

Response by: David Defide

OCA-I-4

4. Explain how DLC intends to ensure that low-income, moderate-income, renter, and multifamily customers receive reasonable access to midstream incentives, and identify any guardrails, outreach plans, or retailer participation requirements.

Response:

See Phase V EE&C Plan, Section 3.2 (Residential Sector Programs), and Section 3.2.1.3 (Residential Midstream Incentives Program), pp. 26 and 32–33 for a description of the Residential Midstream Program.

See DLC's response to OCA-Set1-3.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
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**Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Office of Consumer Advocate**

Set I

Response by: David Defide

OCA-I-5

5. Identify how DLC will track, report, and remediate inequitable participation patterns in the midstream channel, including whether incentive distribution will be reported by zip code or customer class.

Response:

See responses to OCA Set-1-3 and 4. DLC asserts no inequitable participation pattern exists.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

**Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Office of Consumer Advocate**

Set I

Response by: David Defide

OCA-I-7

7. Explain why DLC did not propose a market-rate comprehensive or whole-home program despite the Potential Study identifying significant savings potential in combined shell, Heating, Ventilation, and Air Conditioning (HVAC), and interactive measures.

Response:

Duquesne Light developed its Phase V plan with the goal of streamlining program participation for its customers. As such, increased focus was placed on the midstream distribution channel (including trade allies, distributors, and contractors) so that participation can occur via existing sales channels at volume. Both space heating and cooling measures, which account for approximately 50% of traditional EE program potential in the Phase V Energy Efficiency Potential Study, are offered through the midstream channel. As noted in the 2023 Pennsylvania Statewide Act 129 Residential Baseline Study, only 7% of the Company's customers heat their homes with electricity, significantly limiting the savings achievable with building shell measures (see also OCA-I-28).

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

**Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Office of Consumer Advocate**

Set I

Response by: David Defide

OCA-I-11

11. Explain why DLC did not include specific multifamily (MF) participation or savings targets in Phase V, given that MF accounts for 18% of residential potential in the Market Potential Study.

Response:

Duquesne Light has included a multifamily (MF) program channel similar to Phases III & IV multifamily program embedded in The Low-Income Energy Efficiency Program (LIEEP) as in the past referenced phases above. The proposed LIEEP targets include consumption reduction from three channels, assessments, behavioral and multifamily (both tenant metered and master metered).

Please see the multifamily emphasis at Phase V EE&C Plan Section 3.2.2.1 Low-Income Energy Efficiency Program Target Market and Program Description as well as DLC's response to OCA-I-15.b.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
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Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Office of Consumer Advocate

Set I

Response by: David Defide

OCA-I-25

25. Please describe the process DLC uses to encourage energy efficiency businesses that are seeking utility interconnection?

Response:

Duquesne Light's interconnection process for customer-owned generation, including solar and other distributed energy resources, is governed by established interconnection procedures that are distinct from the Company's Act 129 energy efficiency and conservation programs. Participation in energy efficiency programs is voluntary and independent of a customer's pursuit of interconnection; Duquesne Light does not condition interconnection approval on participation in energy efficiency offerings.

For customers seeking to interconnect a solar or other distributed generation system to Duquesne Light's distribution system, the Company follows the Pennsylvania Public Utility Commission's interconnection standards and its own Distribution System Generation Interconnection Requirements. The interconnection process generally includes the following steps:

1. Interconnection Application:
Interested customers must submit a completed interconnection application, including site plans, electrical one-line diagrams, equipment specifications, and applicable fees. Interconnection applications are submitted via Duquesne Light's online portal or as directed on the Customer Owned Generation page of the Company's website.
2. Technical Review and Approval:
Duquesne Light reviews the application to determine the appropriate interconnection level (e.g., certified inverter-based small systems versus larger or non-certified systems),

assesses system impact and distribution safety, and identifies any required system upgrades or metering changes.

3. Notification of Approval:

Upon successful review, the Company issues a work order number and service point identifier, enabling the applicant to proceed with installation.

4. Certificate of Completion and Witness Testing:

Once installation is complete, the customer submits a Certificate of Completion and inspection documentation. Duquesne Light may conduct witness testing where required. The Company then installs or modifies bi-directional metering, as appropriate, and completes the interconnection.

5. Net Metering and Billing:

Eligible interconnected systems are enrolled in Duquesne Light's net metering service (Rider 21), under which customers receive billing credits for exported generation in accordance with applicable Pennsylvania Public Utility Commission rules.

Throughout this process, Duquesne Light publishes application forms, technical requirements, and guidance on its Customer Owned Generation webpages. Duquesne Light also provides contact information for its Interconnection Group (e.g., Interconnection@duqlight.com) and offers FAQs to assist customers in understanding requirements, technical standards, and next steps.

While Duquesne Light encourages all customers and energy efficiency businesses to consider participation in the Company's energy efficiency and conservation programs as a means to reduce energy consumption and costs, participation in energy efficiency programs is not a condition of, nor directly linked to, the interconnection process. Customers pursuing interconnection are informed of available energy efficiency offerings through standard customer communications, program outreach materials, and the Company's website.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
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**Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Office of Consumer Advocate**

Set I

Response by: David Defide

OCA-I-27

27. Please provide workable spreadsheets, with assumptions, for the costs, savings, and TRC provided throughout the filing.

Response:

Please see the spreadsheet entitled "OCA_Interrogs-I-27.xlsx" for Duquesne Light's response to this request.

Sector	Residential
2026 PA TRM Measure Name	(Multiple Items)

Sum of Total kWh

8,613,110.09

MWh					Total portfolio %		
	Portfolio MWh for Res	Res % Lighting	Total Portfolio	res lighting	LI Portfolio	% LI portfolio	
	8,613	83,958	10%	274,663.00	3%	21,132.00	41%

Sector	C&I
2026 PA TRM Measure Name	(Multiple Items)

Sum of Total kWh

78,079,481.49

MWh					Total portfolio %	
		Porfolio MWh for C&I	C&I % Lighting	Total Portfolio	C&I lighting	
	78,079.48	190,704.00	41%	274,663.00	28%	

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David Defide, Senior Manager of Customer Programs for Duquesne Light Company, verify that the foregoing Answers of Duquesne Light Company to the following Interrogatories from Set I Interrogatories and Request for Production of Documents of the Office of Consumer Advocate are true and correct to the best of my knowledge, information and belief. I understand that false statements herein are made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsifications to authorities.

Date: December 22, 2025



David Defide

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for : Docket No. M-2025-3057325
Approval of its Energy Efficiency and :
Conservation Phase V 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 4, 2026



COMMONWEALTH OF PENNSYLVANIA

January 28, 2026

The Honorable Erin Gannon
Administrative Law Judge
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation Phase V Plan / Docket No. M-2025-3057325

Dear Judge Gannon:

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 Duquesne Light Company for : Docket No. M-2025-3057325
Approval of its Energy Efficiency and :
Conservation Phase V Plan :**

REBUTTAL TESTIMONY

of

JUSTIN B. FARR

on behalf of

Pennsylvania Office of Small Business Advocate

Topic:

**Support of Recommendation to Reduce Reliance
on Non-Residential Lighting**

Date Served: January 28, 2026

Date Submitted for the Record: _____

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 Duquesne Light Company’s (“Duquesne Light” 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.

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 Duquesne Light to avoid over-reliance on non-
13 residential lighting measures and to continue diversifying its non-residential
14 portfolio toward non-lighting measures. While lighting measures have historically
15 delivered cost-effective savings, increased market saturation may heighten
16 realization and persistence risk over the Phase V period. Reducing the share of
17 C&I portfolio savings attributed to non-residential lighting from 41 percent to 30
18 percent as recommended by OCA 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?**

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 Duquesne Light's Phase V EE&C
12 Plan and offers this rebuttal testimony solely to reinforce OCA's recommendation
13 that will enhance program effectiveness and durability for small commercial
14 customers.

15 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

16 A. Yes, it does.

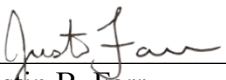
**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for : Docket No. M-2025-3057325
Approval of its Energy Efficiency and :
Conservation Phase V 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 28, 2026



Justin B. Farr

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for : Docket No. M-2025-3057325
Approval of its Energy Efficiency and :
Conservation Phase V 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 Erin L. Gannon
Administrative Law Judge
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
egannon@pa.gov

Allison Kaster, Esquire
Director
Bureau of Investigation & Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
akaster@pa.gov

Katie Kennedy, Esquire
Janna E. Williams, Esquire
Ryan Morden Esquire
PA Office of Consumer Advocate
Forum Place
555 Walnut Street, 5th Floor
Harrisburg, PA 17101
OCAPhaseVDLC25@paoca.org

Aron J. Beatty, Esquire
Michael Brechlin, Esquire
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411 Seventh Avenue
Pittsburgh, PA 15219
abeatty@duqlight.com
mbrechlin@duqlight.com

John W. Sweet, Esquire
Levi A. Phillips, Esquire
Elizabeth R. Marx, Esquire
Ria M. Pereira, Esquire
Lauren N. Berman, Esquire
Pennsylvania Utility Law Project
118 Locust Street
Harrisburg, PA 17101
pulp@pautilitylawproject.org

Meagan Moore, Esquire
PNG Companies LLC
375 North Shore Drive, Suite 600
Pittsburgh, PA 15212
meagan.moore@peoples-gas.com

Justin L. Carpenter, Esquire
Keystone Energy Efficiency Alliance
614 South 4th Street, #307
Philadelphia, PA 19147
jcarpenter@keealliance.org

Date: January 28, 2026

/s/ Steven C. Gray
Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney ID No. 77538

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company	:	
for Approval of Phase V Energy Efficiency	:	Docket No. M-2025-3057325
and Conservation Plan	:	

**DIRECT TESTIMONY OF JIM GREVATT
ON BEHALF OF
THE COALITION FOR AFFORDABLE UTILITY SERVICES AND
ENERGY EFFICIENCY IN PENNSYLVANIA (CAUSE-PA)**

January 20, 2026

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Appendix A: Jim Grevatt Resume and List of Proceedings

Appendix B: Cited Discovery Responses

PREPARED DIRECT TESTIMONY OF JIM GREVATT

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 Virginia² 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 Appendix 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 Coalition for Affordable Utility Services and Energy
7 Efficiency in Pennsylvania (CAUSE-PA) in Docket Nos. P-2014-2459362⁴, 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).

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 Duquesne Light Company (Duquesne, DLC, or the Company) proposes in hopes
18 that I may inform the Commission's consideration of the Company's Petition. The Company filed
19 a Petition for Approval of its Act 129 Phase V Energy Efficiency and Conservation Plan (Phase V
20 Plan or Plan) on December 1, 2025 with the Pennsylvania Public Utility Commission

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, which includes both proceedings regarding 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.

(Commission). The Phase V Plan was filed pursuant to the requirements of Act 129 and the Commission's Act 129 Phase V Energy Efficiency and Conservation Implementation Order (Final Implementation Order or FIO), entered on June 18, 2025, at Docket No. M-2025-3052826. 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. The Company proposes a suite of programs for residential customers, including specific programs for those customers with incomes at or below 150% of the Federal Poverty level (FPL), and also for small and large nonresidential customers. Duquesne states that in developing its Plan it "prioritized affordability for customers and committed to continuous evaluation to ensure the cost-effective delivery of energy efficiency goals."⁶ Duquesne further states that its Plan "emphasizes consolidation of program offerings where feasible, reducing redundancies and aligning resources to maximize impact and streamline administration."⁷ The Company indicates that "Phase

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 Duquesne Phase V EE&C Plan (Plan), p. 8 of 213.

⁷ Plan, p. 8 of 213.

V programs will be executed by [Conservation Service Providers] CSPs with Duquesne Light providing oversight and support.”⁸

2. The Company states that “Residential Energy Efficiency market-rate customer programs include appliance recycling, an online marketplace, a midstream incentives program and behavioral home energy reports program.”⁹ Of the roughly 63,000 MWh forecast for residential non-low-income program savings nearly half (30,200 MWh) are expected to come from Behavioral program savings. Midstream incentives are forecast to contribute 20,000 MWh, the online marketplace 6,500 MWh, and appliance recycling 6,126 MWh.

3. The Company’s low income initiative “is an umbrella program comprising two specific low-income residential customer program activities. Individual program components include a low-income comprehensive audit and direct install program and a tailored low-income behavioral efficiency program.”¹⁰ The first of these is the Low Income Energy Efficiency Program (LIEEP). It states further that “LIEEP will focus, incorporate and engage community organizations to enroll and engage customers”¹¹ and that “[r]esidential customers can qualify as low-income through Duquesne Light’s existing low and moderate-income verification process. Customers will be allowed to provide an affidavit for self-attestation of required data.”¹² LIEEP is forecast to achieve

⁸ Plan, p. 8 of 213.

⁹ Id. p. 26 of 213.

¹⁰ Id. p. 38 of 213.

¹¹ Id. p. 20 of 213.

¹² Id. p. 34 of 213.

1 nearly 17,000 MWh savings, with the low-income Home Energy Reports program
2 forecast to achieve an additional 4,200 MWh savings.¹³

3 4. Duquesne further says that “[t]he target audience of LIEEP...includes single family and
4 multifamily residences where occupants meet established income eligibility criteria”¹⁴
5 and that the “multifamily component of LIEEP targets properties with both individually
6 metered or master-metered units” to deliver “in-unit energy assessments, direct
7 installation of efficiency upgrades such as lighting, water-saving devices, and smart
8 thermostats, as well as common area improvements including LED retrofits and
9 controls.”¹⁵ It is important and appropriate for low income programs to provide services
10 to eligible households in the wide variety of housing types in which they live –
11 including individually and master-metered multifamily residences.

12 5. Over the five-year Plan period the Low-Income Behavioral Energy Efficiency Program
13 (LI-BEEP) contributes nearly 20% of the forecast LI savings – more savings to the low-
14 income portfolio than any other single measure. Lighting measures total over 40% of
15 the forecast LI savings.¹⁶ While such measures contribute savings towards Duquesne’s
16 low-income goal, they are unlikely to significantly reduce energy burdens for low-
17 income households. Duquesne also forecasts non-trivial installations of heat pumps,
18 heat pump water heaters, and building insulation and air sealing measures that would
19 reduce energy burdens for participating households. Although the forecasts exceed the

¹³ Plan, Figure 4, p. 18 of 213.

¹⁴ Id. p. 38 of 213.

¹⁵ Id.

¹⁶ DLC Response to CAUSE-PA II-20, Attachment (All cited discovery responses are attached hereto at Appendix B).

1 installed measure quantities reported to date in Phase IV, they will only make a small
2 dent compared with the needs of the Company's customers.

3 6. Duquesne states that it will "refer confirmed low-income customers who participate in
4 any general residential program to its Act 129 low-income programs, Universal Service
5 programs, LIHEAP, and LIURP. The Company will also coordinate with natural gas
6 distribution companies (NGDC) and community-based organizations, as applicable, to
7 provide comprehensive low-income services."¹⁷ A high level of coordination, including
8 the use of the same Conservation Service Providers (CSP) to perform audits and install
9 measures across multiple programs, will benefit customers by reducing participation
10 barriers and increasing household savings, thus reducing energy burdens for
11 participants. Duquesne's proposed plan, however, lacks specificity regarding
12 coordination with Weatherization Assistance providers and the Home Electrification
13 Rebates (HER) program administered by the Department of Environmental Protection.

14 7. Duquesne states that it "makes provision for [front-of-the-meter] FTM measures within
15 its listing of eligible measures...[but] the size and type of these prospective measures is
16 unknown at the time of this Plan filing."¹⁸ This vague and noncommittal statement fails
17 to comply with the Commission's requirements to "[i]nclude the expected contribution
18 to portfolio MWh and MW savings and disclose all non-Act 129 funding sources the
19 EDC plans to leverage for FTM measure installation"¹⁹ as outlined in its Phase V
20 Energy Efficiency and Conservation Plan Template.

¹⁷ Plan, p. 40 of 213.

¹⁸ Id. p. 23 of 213.

¹⁹ See Final Phase V EE&C Plan Template, Section 3.1.6.

Q. What are your recommendations to the Commission regarding approval of the Companies' Act 129 Phase IV Filing?

A. My recommendations are as follows:

1. Approve the Company's low-income programs but require it submit a revised Plan that demonstrates its commitment to increase its promotion of heat pumps, heat pump water heaters, and building insulation and air sealing such that in aggregate these measures contribute no less than 25% of forecast low-income savings.
2. Monitor the quantity of the Company's installation of deep-savings measures for its low-income customers, including heat pumps, ductless mini-splits, heat pump water heaters, and building insulation and air sealing measures annually, and provide further direction to Duquesne to increase installation of these measures if it does not meet its forecast participation.
3. Disallow savings from the proposed LI-BEEP from being counted towards achievement of Duquesne's low-income savings requirement. The Company has not demonstrated that this subcomponent 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 tailored home energy reports to low-income customers as part of its R-BEEP.
4. Direct the Company to submit with its revised Plan a supplemental health and safety protocol and reporting framework that includes the following:
 - a. A description of protocols and processes for addressing health and safety issues, including clear criteria for making referrals to LIURP or outside agencies vs. addressing the health and safety issues within the Act 129 programs.

b. A project tracking approach and tool to allow the Company to track when repairs are made and by whom, and to follow up by installing energy efficiency measures that had been deferred.

c. Reporting metrics, for inclusion in the Company's annual report, which include at minimum the number of deferred jobs due to health and safety issues, the number of referrals for remediation through other programs, the number of remediated jobs handled through Act 129, and the measures that were installed as a result of the remediation.

d. A process flow chart that illustrates the customer journey from audit through health and safety remediation through installation of energy efficiency measures.

5. Direct Duquesne to take the steps necessary to develop the seamless coordination practices I describe in Section IV.D. below regarding Program Coordination, and to require Duquesne to file a report of its actions and results along with its first annual report in Phase V and with each subsequent annual report.

6. Reject the Company's inclusion of vaguely defined FTM measures and direct Duquesne to redirect any funding that might have been targeted for FTM measures towards increased participation of deep-savings measures by low-income households.

I discuss these 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

1 households in proportion to that sector's share of the total energy usage in a given service
2 territory.²⁰ In Phase II, the Commission added a requirement that each EDC obtain a minimum of
3 four-and-a-half percent (4.5%) of its overall consumption reduction requirements from the low-
4 income sector.²¹ To meet the low income consumption reduction target, the Commission allowed
5 EDCs to include all savings achieved through dedicated low-income programs, as well as a portion
6 of savings achieved through non-low income programs based on estimated low income
7 participation.²²

8 In Phase III, the Commission increased the low-income consumption reduction
9 requirement to five-and-a-half percent (5.5%) of the overall electric consumption savings
10 achieved.²³ The Commission required that "[s]avings counted towards the 5.5% target may only
11 come from specific low-income programs or low-income verified participants in multifamily
12 housing programs."²⁴ In other words, for Phase III, deemed savings from non-low-income
13 programs were no longer permitted to be counted for compliance with the low income
14 consumption reduction target. In addition to the specific savings carve-out and elimination of the
15 prior deemed savings policy, the Commission further directed that "low-income savings should
16 primarily come from measures that are directly provided to low-income households" – as opposed
17 to upstream rebates or other indirect programming.²⁵

18 In Phase IV, the Commission proposed to increase the percentage of total consumption
19 reduction it required EDCs to achieve from the low income sector to 5.8%, and maintained its
20 requirement from Phase III that low income savings be derived from programs "solely directed at

²⁰ 66 Pa. C.S. §2806.1(b)(1)(i)(G).

²¹ Phase II Implementation Order at 55, Docket No. M-2012-2289411.

²² Id. at 58.

²³ Phase III Implementation Order at 69, Docket No. M-2014-2424864.

²⁴ Id. at 69.

²⁵ Id.

low-income customers or low-income-verified participants in multifamily housing programs.”²⁶

The Commission later revised the final Phase IV low-income target for DLC to 5.3% based on potential overestimation of the prevalence of electric space and water heating in DLC’s service territory.²⁷ Notably, while the 5.3% savings requirement was only a slight reduction in the *percentage* of savings DLC was required to achieve in the low-income sector for Phase IV, DLC’s Phase IV low income target was nearly 30% less than it was for Phase III in terms of actual MWh savings because overall portfolio savings targets were lower in Phase IV than in Phase III.²⁸

In Phases II, III, and IV of Act 129, the Commission allowed EDCs to carry over savings achieved in the prior phase that exceeded the overall portfolio and low income consumption reduction targets and apply carried over savings toward savings targets in the subsequent phase.²⁹

The Commission’s permissive carryover policy allowed EDCs to rely on carryover savings to meet their portfolio and low-income savings targets, resulting in EDCs dramatically underspending EE&C program budgets intended to help Pennsylvanians access energy efficiency and conservation measures. The results of Phase III illustrate the impact of the Commission’s carryover policy – EDCs ended Phase III with carryover savings averaging 28% toward their respective Phase IV low income savings targets while over \$149 million dollars intended to be utilized to help Pennsylvanians save energy went unspent.³⁰ While it is critical that funds be spent wisely, leaving these funds unspent robs utility customers of vital opportunities to better manage their household costs through increased energy efficiency.

²⁶ Phase IV Implementation Order at 28, Docket No. M-2020-3015228.

²⁷ Id. at 35.

²⁸ Id. at 36; See Table 1, below.

²⁹ 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.

³⁰ SWE Final Annual Report Act 129 Program Year 16 (2025) at 8; SWE Phase III Final Report at 50.

1 **Q. Please summarize the low income energy savings requirements for Phase V of Act**
 2 **129.**

3 A. For Phase V, the Commission set the percentage of total consumption reduction it requires
 4 each EDC to achieve from the low income sector to targets ranging from 6.7% to 7.9%,
 5 representing 7.5% of the statewide MWh savings target in aggregate.³¹ The Commission derived
 6 these percentages by “allocating 13% of each EDC’s Act 129 budget to programs solely directed
 7 at low-income customers or low-income-verified participants in multifamily housing programs.”³²
 8 The Commission maintained the requirement from Phases III and IV that “[s]avings from non-
 9 low-income programs, such as general residential programs, would not be counted toward these
 10 targets.”³³

11 Phase V total portfolio savings targets for each EDC are lower than they were in Phase
 12 IV.³⁴ As such, although the Phase V low income savings targets are higher as a *percentage* of
 13 overall portfolio savings, the actual MWh savings requirement is again lower in Phase V than it
 14 was in Phase IV for all EDCs except for Duquesne Light Company, which had its low-income
 15 savings target increased slightly, by 367 MWh.³⁵ For Phase V, the Commission set DLC’s low
 16 income savings target at 18,933 MWh, representing 7.2% of the Company’s overall portfolio
 17 consumption reduction target.³⁶ While nominally more than in Phase IV, DLC’s Phase V low
 18 income target is 27% lower than it was for Phase III, meaning that fewer low-income households

³¹ Phase V Implementation Order at 69.

³² Id.

³³ Id. at 55.

³⁴ Compare Id. at 48; Phase IV Implementation Order at 18.

³⁵ Phase V Implementation Order at 55, 68.

³⁶ Id. at 55, 68; 48 (18,933 MWh is 7.2% of the final 261,583 MWh Phase V portfolio savings target for DLC).

will save energy on their bills than would have if it had remained consistent across the phases. This is shown in Table 1 below:

Table 1: DLC Low Income Target in Each Phase³⁷

Phase	Low-Income Target
Phase II	12,453 MWh
Phase III	25,884 MWh
Phase IV	18,566 MWh
Phase V	18,933 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.”³⁸ 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.³⁹ The Commission made clear, however, “that EDCs can, and should, design their Phase V plans to meet their Phase V goals without the use of any carryover, as the EEPDR Potential Study indicates Phase V goals are achievable without carryover.”⁴⁰

³⁷ 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 34, Docket No. M-2020-3015228; Phase V Implementation Order at 55, Docket No. M-2025-3052826.

³⁸ Phase V Implementation Order at 72.

³⁹ *Id.* at 84, 241.

⁴⁰ *Id.* at 85.

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).⁴¹ With some exceptions, most utility assistance programs require households to have income that is not greater than 150% FPL to qualify.⁴² Act 129 specifically mandates that EDCs’ EE&C Plans contain specific energy efficiency measures for households at or below 150% FPL.⁴³ DLC customers at or below 150% FPL would be eligible for the company’s Low-Income Energy Efficiency Program (LIEEP) and Low-Income Behavioral Energy Efficiency Program (LI-BEEP), outlined in its proposed Phase V EE&C Plan, and are eligible for LIEEP and LI-BEEP under the company’s existing Phase IV EE&C Plan.⁴⁴

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).⁴⁵ Table 2 provides a breakdown of household income by the 2025 FPL and household size:

Table 2: 2025 Federal Poverty Levels by Household Size and Annual Income⁴⁶

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

⁴¹ See 52 Pa. Code § 54.72 (Defining low-income customers for the purposes of EDC Universal Service programs and reporting).

⁴² See e.g. DLC, *Universal Service & Energy Conservation Plan, 2020-2025* (DLC USECP 2020-2025) at 7.

⁴³ 66 Pa. C.S. 2806.1(b)(1)(i)(G).

⁴⁴ DLC Proposed Phase V EE&C Plan at 38, 44; DLC Revised Phase IV EE&C Plan at 38, 43.

⁴⁵ See US Dept. of Health & Human Services, *HHS Poverty Guidelines for 2025*, available at:

<https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>.

⁴⁶ *Id.*

1 **Q. How many low-income customers does DLC have?**

2 A. Like other large regulated public utilities in Pennsylvania, DLC must track its low-
 3 income customer population in two ways: “*estimated low-income customers*” and “*confirmed low-*
 4 *income customers*.”⁴⁷ The “estimated low-income” customer number is derived using local census
 5 data, scaled against residential customer counts in a given geographic area, to approximate the
 6 percentage of low-income households in a utility’s service territory.⁴⁸ The “confirmed low-
 7 income” number is a count of those customers for whom the Company has obtained information
 8 that would reasonably indicate that the customer’s income is at or below 150% of the federal
 9 poverty level (FPL).⁴⁹ The BCS census-based estimated low-income count, which is collected and
 10 published by the federal government, is a more accurate tool for assessing the number of eligible
 11 customers in DLC’s service territory.⁵⁰ In 2024, DLC reported 550,437 total residential customers,
 12 of which 116,695 (21.2%) were estimated low-income and 53,730 (9.8%) were confirmed low-
 13 income.⁵¹

14 For all 2024 participants in universal service programs statewide, average annual
 15 household income for electric customers was \$22,362.⁵² The average electric CAP household (two
 16 persons) had an income of \$16,031, which placed these households’ incomes at approximately
 17 78% of FPL (for two persons) for 2024, and 76% for 2025.⁵³ In other words, the *average* income
 18 of households that are eligible to participate in the low-income programs is roughly half of the

⁴⁷ See Pa. PUC, BCS, 2024 Report on Universal Service Programs & Collections Performance (2024 Universal Service Report), at 5-7, available at: <https://www.puc.pa.gov/media/3771/2024-universal-service-report-final.pdf>.

⁴⁸ Id. at 7.

⁴⁹ Id. at 2.

⁵⁰ See Pa. PUC v. Philadelphia Gas Works, Docket No. R-2023-3037933, Opinion and Order at 221-222 (Entered Nov. 9, 2023).

⁵¹ 2024 Universal Service Report at 5-7.

⁵² Id. at 48.

⁵³ Id. at 51.

1 *qualifying* income level. Electric customers who received LIURP services in 2024 had average
 2 annual household incomes of \$21,580.⁵⁴

3 **Q. How does the cost of energy impact low-income households?**

4 A: To contextualize the impact of energy costs on low-income households, it is helpful to
 5 understand the relative energy burden shouldered by low-income ratepayers as compared to other
 6 Pennsylvanians. A household's energy burden is the percentage of household income required to
 7 pay for energy services.⁵⁵ According to formal Commission policy, to be considered affordable, a
 8 household's combined energy burden (electric and gas) should not exceed 6% of household income
 9 for those with incomes between 0-50% FPL, or 10% of household income for those with income
 10 between 51-150% FPL.⁵⁶ But across Pennsylvania, households with income at or below 150% FPL
 11 spend as much as 30% of their income on energy costs alone.⁵⁷ By comparison, the Bureau of
 12 Consumer Services (BCS) estimates that the energy burden of Pennsylvania's residential
 13 customers as a whole (exclusive of those enrolled in a Customer Assistance Program (CAP)) is
 14 roughly 4%.⁵⁸ The overwhelming energy burdens on low-income households leave families with
 15 insufficient funds to pay for housing, water costs, food, medicine, childcare, and other basic needs
 16 and pose significant obstacles for low-income families to afford their monthly bills and stay
 17 connected to essential energy services in their homes.

⁵⁴ 2024 Universal Service Report at 48.

⁵⁵ 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.

⁵⁶ Id.

⁵⁷ See Fisher, Sheehan & Colton, The Home Energy Affordability Gap: Pennsylvania (April 2023).

http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html.

⁵⁸ Energy Affordability for Low income Customers, Docket No. M-2017-2587711, Order, at 8 (Jan. 17, 2019)

1 Home energy prices are higher than they have been in a decade, and are projected to
 2 continue rising.⁵⁹ Energy insecurity resulting from high energy burdens impacts roughly 1 in 4
 3 Pennsylvania households.⁶⁰ According to the United States Census Bureau's Household Pulse
 4 Survey, roughly 24.4% of Pennsylvania households were unable to afford their home energy bills
 5 in 2024, compared to 23% nationwide.⁶¹ Nearly 1 in 20 Pennsylvania households have past-due
 6 energy utility debt, with an average overdue balance exceeding \$1,200, far above the national
 7 average of \$789.⁶² According to the Energy Information Administration (EIA) Residential Energy
 8 Consumption Survey (RECS), 33.6% of United States residents reported experiencing energy
 9 insecurity; 24.6% reported reducing or forgoing food or medicine to pay for energy costs; and
 10 12.2% reported leaving their homes at unhealthy temperatures because they could not afford to
 11 pay for energy.⁶³ Energy insecurity is more pronounced for low-income Black families. EIA's

⁵⁹ 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>.

⁶⁰ 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/>.

⁶¹ US Census Bureau, *Household Pulse Survey: Pennsylvania, Unable to Pay Energy Bill* (April 9-29 2024), available at: https://www.census.gov/data-tools/demo/hhp/#/?measures=ENERGYBILL&s_state=00042.

⁶² 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/>.

⁶³ United States Energy Information Administration, *2020 Residential Energy Consumptions Survey*, Table HC11.1 Household energy insecurity, 2020 available at: <https://www.eia.gov/consumption/residential/data/2020/hc/pdf/HC%2011.1.pdf>.

1 RECS data revealed that 52% of Black and African American households experience energy
2 insecurity, compared to 23.2% of white households.⁶⁴

3 According to a recent study of the National Energy Assistance Directors Association and
4 the Center for Energy Poverty and Climate, in February 2024, 51.9% of households with income
5 under \$50,000 reported at least one month where they reduced or went without food, medicine,
6 and other basic needs in order to pay an energy bill.⁶⁵ In addition, 34% kept their home at a
7 temperature that felt unsafe or unhealthy in order to save money on energy bills.⁶⁶ The data
8 reviewed in the study found that, far and away, the greatest increase in energy insecurity in 2024
9 was among households with children.⁶⁷ As recent research and data has continually showed,
10 vulnerable low-income families simply cannot afford the cost of energy services.

11 **Q. Is there other evidence that the Company's low-income customers struggle to afford**
12 **electricity service?**

13 A. Yes. The Commission's Universal Service Reports show that the Company's
14 confirmed low-income customers are terminated for nonpayment at more than 3 ½ times the rate
15 of residential customers overall. In 2024, the termination rate for the Company's residential
16 customers was 4.7%, but for confirmed low-income customers the termination rate was 17.2%.⁶⁸
17 Confirmed low-income customers are also more likely to be payment troubled. Despite making up
18 only 9.8% of residential customers, confirmed low-income customers make up 24.2% of payment

⁶⁴ U.S. Energy Information Admin., In 2020, 27% of U.S. households had difficulty meeting their energy needs - U.S. Energy Information Administration (EIA), available at: <https://www.eia.gov/todayinenergy/detail.php?id=51979>.

⁶⁵ Nat'l Energy Assistance Dir. Assoc. (NEADA), Center for Energy Poverty & Climate, Energy Hardship Report, slide 10 (April 2024), available at: <https://neada.org/wp-content/uploads/2024/04/neadahardshipreportAPR24.pdf>.

⁶⁶ Id.

⁶⁷ Id.

⁶⁸ 2024 Universal Service Report at 11-12.

1 arrangements and 33.8% of payment troubled customers (defined as failing to maintain at least
2 one payment arrangement).⁶⁹

3 **Q. What are the consequences of utility termination for low-income households?**

4 A. Utility termination has severe, destabilizing impacts on low-income households.
5 Involuntary loss of electricity has a deep and lasting impact on the health and well-being of an
6 entire household – as well as the community. The loss of electric service can often mean that a
7 household is unable to use their primary heating source in the winter, even if that heating source
8 is non-electric. When a household is unable to use a primary or secondary heating system, or their
9 primary system is otherwise inadequate to heat their home, they often resort to dangerous and/or
10 high-cost heating, cooking, and lighting alternatives – such as the use of alternate fuels or portable
11 generators – which can increase the risk of carbon monoxide poisoning and home fires.

12 The loss of electric service can also have a significant impact on the ability of vulnerable
13 populations to manage medical conditions and is particularly dangerous for certain groups –
14 including seniors, families with young children, and individuals with a disability – each of whom
15 are more likely than other residential households to experience poverty and income insecurity.⁷⁰
16 Furthermore, utility insecurity and resulting payment trouble is increasingly recognized as a
17 predictor of first-time homelessness.⁷¹ Involuntary loss of electric service is often a contributing
18 factor leading to family separation through the child welfare system.⁷²

⁶⁹ 2024 Universal Service Report at 6, 8, 10.

⁷⁰ 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, available at: <https://www.nclc.org/resources/report-protecting-seriously-ill-consumers-from-utility-disconnections-what-states-can-do-to-save-lives-now/>.

⁷¹ Colin Middleton, Kim Boynton, David Lewis & Andrew M. Oster, The Value of Utility Payment History in Predicting Homelessness, PLOS (Oct. 9, 2023), available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0292305>.

⁷² Comments of Cynthia Figueroa, Commissioner, Philadelphia Dept. of Human Services, Review of Universal Service and Energy Conservation Programs, Pa. PUC Docket No. M-2017-2596907 (Aug. 8, 2017).

Q. Does the Company's customer assistance program (CAP) alleviate these struggles?

A. CAP helps; however, CAP does not reach all eligible customers. In 2024, only 38,336 of the Company's customers were enrolled in CAP – this is just 32.9% of estimated low-income customers.⁷³ Thus, nearly 70% of estimated low-income customers are not enrolled in CAP and are charged the full residential rate.

Further, CAP customers have a limited annual CAP credit (the difference between the CAP rate and the full residential tariff rate). Customers that expend their maximum CAP credit within a 12-month period must pay the full tariff rate until the credit resets at the beginning of the next 12-month period.⁷⁴ In DLC's last base rate case, evidence revealed that thousands of CAP customers who exceeded their maximum CAP credits were ultimately terminated for nonpayment within a few short months of exceeding DLC's maximum CAP credit limits.

Table 3: CAP Terminations for Nonpayment After Exceeding CAP Credit Limits⁷⁵

	Total Exceeding Max CAP Credits	Total Terminated Following Exceedance	Term w/in 0-30 Days	Term w/in 31-60 Days	Term w/in 61-90 Days	Term w/in 91-120 Days	Term w/in 120 Days
2022	8,075	3,209	192	379	486	481	1,671
2023	10,422	2,685	185	406	571	571	952
2024 (Jan-Apr)	4,724	1,306	25	37	157	135	0
TOTAL	23,221	6,248	402	822	1,214	1,187	2,623

As Table 3 shows, in DLC's service territory, more than one in four CAP customers (27%) who exceeded their maximum CAP credit limits from January 2022 through April 2024 were subsequently terminated for nonpayment within 120 days of that exceedance. This rate of

⁷³ 2024 Universal Service Report at 56.

⁷⁴ DLC USECP 2020-2025 at 8-9.

⁷⁵ Pa. P.U.C. v. Duquesne Light Company, Docket No. R-2024-3045623, CAUSE-PA Direct Testimony at 37 (submitted June 11, 2024).

1 termination is shockingly high even compared to the disproportionate termination rates for DLC's
 2 confirmed low-income customers generally, which was 17.2% in 2024 (compared to 4.7% for
 3 residential customers as a whole).⁷⁶

4 **Q. What is the relationship between energy efficiency and CAP?**

5 A. CAP costs are recovered through a rider assessed to all residential customers; thus,
 6 lowering energy costs for CAP participants helps reduce their CAP credits, which, in turn, helps
 7 reduce terminations and brings down the cost of service for other ratepayers.⁷⁷ The Commission
 8 has acknowledged the financial savings potential available through low-income energy efficiency
 9 improvements, stating in its 2026 TRC Test Final Order that:

10 *Utilities can realize financial savings from their low-income EE programs. The*
 11 *efficient technologies installed by EE programs often result in reduced energy*
 12 *bills for participants, which can decrease the likelihood that customers will*
 13 *experience difficulties paying their utility bills. In turn, utilities may realize*
 14 *reduced costs associated with arrearages and late payments, uncollectible bills*
 15 *and bad debt write-offs, service terminations and reconnections, bill-related*
 16 *customer calls, and the bill collections process.*⁷⁸

17 Energy efficiency enables CAP customers to reduce their usage and thereby reduce the
 18 amount of CAP credit utilized each month. Providing comprehensive and effective EE&C
 19 programing to CAP customers helps them to afford their bill and helps control costs for all
 20 ratepayers. The greater the energy savings in each participating household, the greater the cost
 21 savings in reduced CAP expenditures will be for the customer base as a whole.

⁷⁶ 2024 Universal Service Report at 11-12.

⁷⁷ Duquesne Light Company Tariff Electric Pa. P.U.C. No. 25 (Supp. No. 84) at 7th Revised Page No. 93.

⁷⁸ 2026 TRC Test Final Order at 56.

1 **Q. What is the relationship between poverty and home energy efficiency?**

2 A. Energy insecurity is rooted in the interconnection of poverty and housing deficiencies.⁷⁹
 3 Low-income consumers are far more likely to live in aging, inefficient, and potentially unsafe
 4 housing.⁸⁰ Low-income consumers are more likely to live in housing with poor quality insulation
 5 or no insulation at all.⁸¹ Many low-income households are unable to afford the costs of repairs and
 6 improvements necessary to stem high consumption as a result of inefficiencies or other factors in
 7 their homes. As a result, households that experience energy insecurity spend 26.5% more per
 8 square foot on energy costs than households that do not experience energy insecurity.⁸²
 9 Remediating housing deficiencies, such as health and safety barriers, is thus critical to ensuring
 10 the effective delivery of energy efficiency improvements to low-income households.

11 Further, the intersection of poverty and racism produces a pronounced disparity in energy
 12 burdens across low-income communities of color, driven primarily by historic inequities in
 13 housing and community investment.⁸³ Census tracts with higher concentrations of Black
 14 households have disproportionately high energy use intensity, reflective of the greater energy
 15 inefficiency of housing in these areas.⁸⁴ Housing in predominantly Black neighborhoods is less

⁷⁹ 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/>.

⁸⁰ 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>.

⁸¹ 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>.

⁸² 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>.

⁸³ 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>.

⁸⁴ 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/>.

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.⁸⁵

Q. Does the Company's Low Income Usage Reduction Program (LIURP) satisfy the need for low income energy efficiency programming?

A. LIURP is a vital program, but it cannot, by itself, satisfy the need for low income energy efficiency programming. While there are substantial similarities between Act 129 and LIURP, each of the two programs provides distinct and important benefits to low-income households. Specifically, Act 129 programs allow any low-income household to access energy efficiency measures without being subject to the LIURP minimum usage threshold. This benefit is particularly important for low-income residents in multifamily buildings and small single family homes, who may have relatively high usage but may not meet the usage threshold to qualify for LIURP.⁸⁶ LIURP, on the other hand, is specifically designed to target the very highest users to help reduce collections and universal service costs.⁸⁷ But even for those low-income customers who meet LIURP's usage threshold, LIURP on its own is unable to meet the need for low income energy efficiency services across DLC's service territory under the current program budget. In its most recent LIURP Needs Assessment, DLC reported 24,494 potential LIURP participants.⁸⁸ Under DLC's current LIURP budget, with 3,100 projected participants per year, it would take

⁸⁵ 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>.

⁸⁶ DLC USECP 2020-2025 at 35 (DLC generally requires a minimum annual usage threshold of 500 kWh).

⁸⁷ See *id.* at 32; see also 52 Pa. Code § 58.1.

⁸⁸ DLC USECP 2020-2025 at 40.

1 nearly 8 years to treat every potential participant.⁸⁹ Act 129 provides critical additional funds to
 2 help meet the need for low income energy efficiency in DLC's service territory.

3 While it is critical that the two programs work in close coordination to effectively leverage
 4 impact, the Company must be careful that coordination between Act 129 and LIURP programs
 5 does not compromise the integrity of the distinct program budgets. I understand from counsel that
 6 Act 129 requires that EDC's respective Act 129 low-income expenditures be *in addition to* LIURP
 7 expenditures.⁹⁰ It is thus critical that the integrity of each program be maintained – even as we
 8 move to harmonize the two programs to streamline services and delivery to low-income
 9 consumers.

10 IV. ACT 129 PHASE V LOW INCOME PROGRAMS

11 *A. Comprehensive Savings Opportunities for Low-Income Customers*

12 **Q. Please summarize the Company's low income offerings in its proposed Phase V Plan.**

13 A. The Company proposes two low-income program components to meet its savings carve-
 14 out requirements. The principal low-income program is the Low-Income Energy Efficiency
 15 Program (LIEEP), which the Company describes as “a ‘direct-install’ program where walk-through
 16 and comprehensive audits are performed, energy efficiency education is provided, and energy
 17 efficient products and equipment are installed at no cost to income qualified households.”⁹¹
 18 Duquesne further states that “[t]he objective of the Residential Low-Income Energy Efficiency
 19 Program is to improve energy efficiency and reduce energy costs for income-qualified

⁸⁹ DLC USECP 2020-2025 at 40.

⁹⁰ 66 Pa. C.S. § 2806.1(b)(i)(G).

⁹¹ Plan, p. 38 of 213.

households.”⁹² LIEEP is available to low-income households in both single family and multifamily homes.

Q. What is the second low-income program component?

A. The second low-income program proposed by Duquesne is the Low-Income Behavioral Energy Efficiency Program (LI-BEEP), which contributes nearly 20% of the forecast LI savings – more savings to the low-income portfolio than any other single measure. LI-BEEP measures contribute savings towards Duquesne’s low-income goal, but they are unlikely to significantly reduce energy burdens for low-income households. In fact, one of the Company’s stated goals for LI-BEEP is to “deliver energy savings of more than 1% of average participant’s electric usage”⁹³ – and 1% is a very small amount of savings for a highly energy-burdened household. Further, it is not apparent that LI-BEEP differs from the Residential Behavioral Energy Efficiency Program (R-BEEP) in a way that would qualify it as a program “solely directed at low-income customers or low-income-verified participants in multifamily housing programs” – the bar established by the Commission to determine whether program savings can be counted towards an EDC’s low-income savings requirement.

Q. Does Duquesne explain how LI-BEEP differs from R-BEEP?

A. Duquesne says that “[t]he LI-BEEP provides home energy reports, tailored to its low-income treatment groups, with sector-specific outreach and content, educating customers on low-cost, no-cost approaches to save on their electric bills.”⁹⁴ The Company explains further that

[T]he Low-Income HER differs in its content, emphasis, and calls-to-action. The Low-Income HER prioritizes actionable, low- and no-cost energy-saving actions that are feasible for customers facing financial constraints.

⁹² Plan, p. 38 of 213.

⁹³ Id. p. 44 of 213.

⁹⁴ Id. p. 107 of 213.

1 *Communications focus on behavioral changes, operational adjustments, and*
 2 *other measures that do not require significant upfront investment. Where*
 3 *appropriate, the reports also highlight available income-qualified energy*
 4 *efficiency programs and assistance resources, rather than promoting higher-*
 5 *cost measures.⁹⁵*

6 I think it is appropriate for the Company to design its outreach and information for home
 7 energy reports so that they are applicable for low-income customers, but I do not agree that LI-
 8 BEEP is “solely directed at low-income customers or low-income-verified participants in
 9 multifamily housing programs.” It is in essence simply a minor modification of the R-BEEP.

10 Notably, R-BEEP should include information about residential and low income programs.
 11 As I explained above, there are many low-income consumers in DLC’s service territory that DLC
 12 has not identified as low income. If DLC is only marketing low income programs to identified
 13 low-income customers through the LI-BEEP, it will continue to miss eligible households.

14 For these reasons, I recommend the Commission disallow savings from the proposed LI-
 15 BEEP from being counted towards achievement of Duquesne’s low-income savings requirement.

16 **Q. Does the Company provide evidence that supports its contention that LIEEP is**
 17 **designed to reduce energy costs for participants?**

18 A. I think the most relevant evidence the Company provides is its forecast of the measures it
 19 will promote to reach its savings target. The Company indicates that there are 54 different measures
 20 it intends to make available to participating low-income households, though nearly 80% of the
 21 forecast savings come from only 10 measures, and 37 of the measures provide less than 1% of
 22 forecast portfolio savings each – in some cases far less. And, as I indicated earlier, the single largest
 23 contribution to the low-income savings forecast – nearly 20% of the total – is expected to come
 24 from LI-BEEP. The Company forecasts that, on average, low-income customers who receive a

⁹⁵ DLC Response to CAUSE-PA II-19 (a).

Home Energy Report will save only around 61 kWh per year,⁹⁶ and those savings decay rapidly.⁹⁷ Therefore, I would say that the “biggest” measure in the portfolio will not have a significant effect in meaningfully reducing participating customers’ electricity usage and bills. However, Duquesne does otherwise forecast a relatively high penetration of “deep saving” measures.

Q. What do you mean by the term “deep savings” measures?

A. I use the term “deep savings” to describe measures and projects that have a significant effect in reducing energy use, especially when those savings are expected to last for ten to fifteen years or more. I use the contrasting term “shallow savings” to describe measures and projects that provide only a small amount of savings compared to overall household electricity use – effectively measures that will not in and of themselves materially reduce energy burdens for participating households. In my opinion the use of the term “comprehensive” in the context of EDC’s Act 129 EE&C Plans has lost meaning and should be discarded in favor of the terms “deep savings” and “shallow savings” to describe the electricity saving impacts of different measures and projects.

Deep savings measures in the context of LIEEP would include measures such as heat pumps, heat pump water heaters, and building insulation and air sealing measures, and a deep saving project would include the installation of several of these measures.⁹⁸

⁹⁶ Plan, LI-BEEP Savings Targets and Estimated Participation, p. 46 of 213.

⁹⁷ 2026 TRM Section 2.7.3.

⁹⁸ See Final Phase V EE&C Plan Template Tables – Excel Workbook, Table 8 Addendum.

1 **Q. Can you provide an example of a shallow saving measure?**

2 Yes. For example, in the 2026 TRM a Tier 1 advanced power strip is estimated to save
3 around 74 kWh per year.⁹⁹ Compared with the average low-income household's annual electricity
4 use of over 11,000 kWh¹⁰⁰ for customers with electric heat, this power strip provides only shallow
5 savings – roughly 0.67% of total electricity use. This modest amount of savings will not
6 substantively reduce the energy burden of households who receive one, in contrast with a “Ductless
7 Mini-Split ENERGY STAR Cold Climate rated” heat pump that the Company estimates will save
8 2,400 kWh per installation¹⁰¹ That would cause roughly a 22% annual savings for the same average
9 customer – over 30 times the savings that the smart strip would cause. Combining heat pump
10 installation with a heat pump water heater and building insulation and air sealing could save even
11 more, dramatically reducing household energy costs.

12 Here, I use the term “average” low-income customer as a quick reference; though it would
13 be incorrect to assume that “average” is representative of the electricity use of most low-income
14 customers. By definition, some customers would use less, but some would use more – potentially
15 far more – than average. Consider a customer who has electric heat and uses 25% more than the
16 average low-income electric heating customer. This customer would only see a bill reduction of
17 0.53% from the same advanced power strip – a savings that would hardly be noticeable in
18 comparison to the large bills the household would receive. For low-income customers who use
19 more electricity than average, the relative benefit provided by such shallow measures would be
20 small, though the need for savings would be much greater.

⁹⁹ 2026 TRM Vol. 2, p. 170, specific use unspecified.

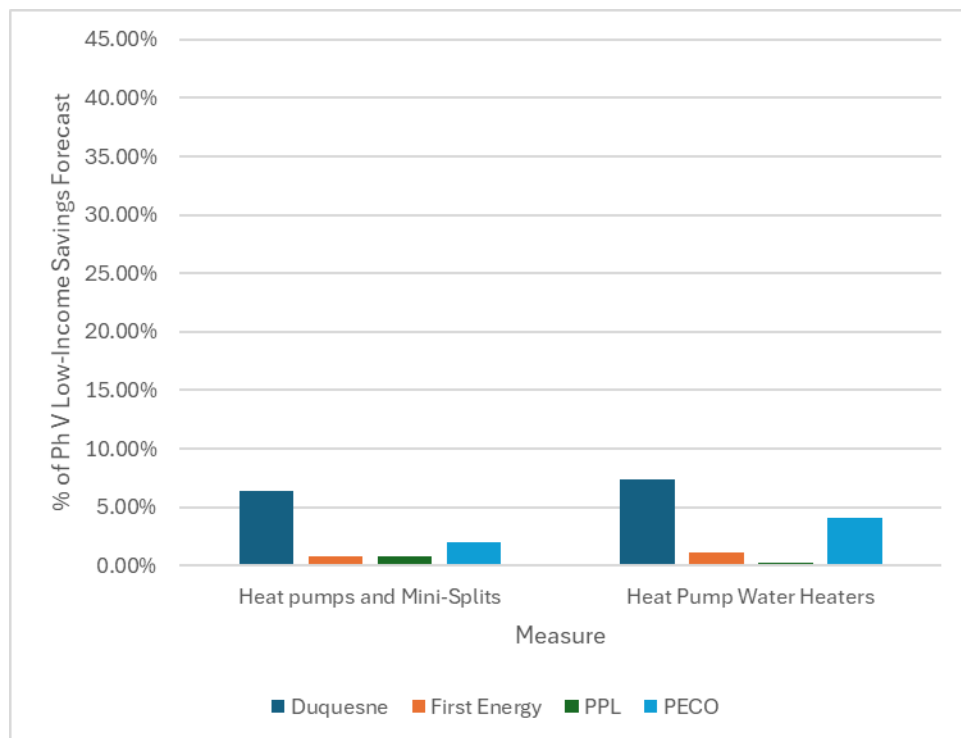
¹⁰⁰ DLC Response to CAUSE-PA I-2, Attachment.

¹⁰¹ DLC Response to CAUSE-PA II-20, Attachment.

Q. Please explain what you mean when you say that Duquesne forecasts a relatively higher penetration of “deep saving” measures.

A. Based on the projected measure quantities provided by the Company, it appears that it forecasts more installations of heat pumps, heat pump water heaters, and building shell improvements such as insulation and air sealing than the other EDCs have included in their plans. In some cases the difference is quite significant. For example, consider Figure 1 below, showing that Duquesne projects it will obtain savings from heat pumps for low-income customers equal to more than three times what PECO forecasts, and more than eight times as much as PPL.

Figure 1: Heat Pump and Heat Pump Water Heater Contribution to Low-Income Savings¹⁰²

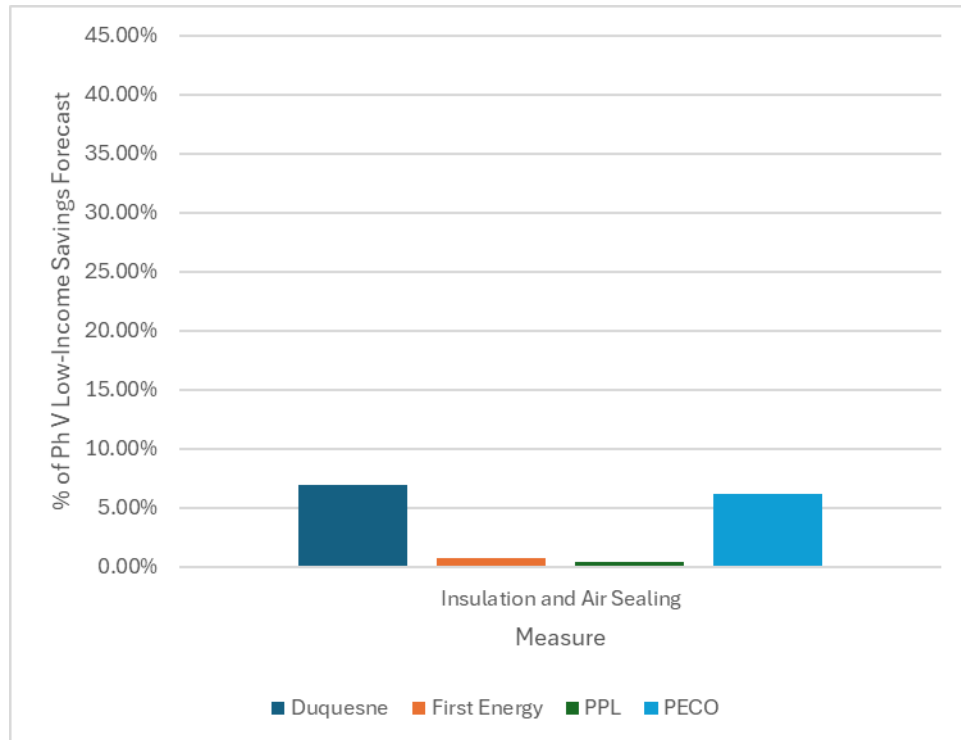


¹⁰² Duquesne Response to CAUSE-PA II-20, attached hereto to at Appendix B; PPL from Proposed Phase V EE&C Plan, Docket No. M-2025-3057329, Table 9; PECO from Proposed Phase V EE&C Plan, Docket No. M-2025-3057328, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation. FirstEnergy from Proposed Phase V EE&C Plan, Appendix B, Table 9, with WARM Plus and WARM Extra Measures allocated to measure categories based on Phase IV results.

1 **Q. Does Duquesne also forecast more installations of long-lasting insulation and air**
 2 **sealing measures than do the other EDCs?**

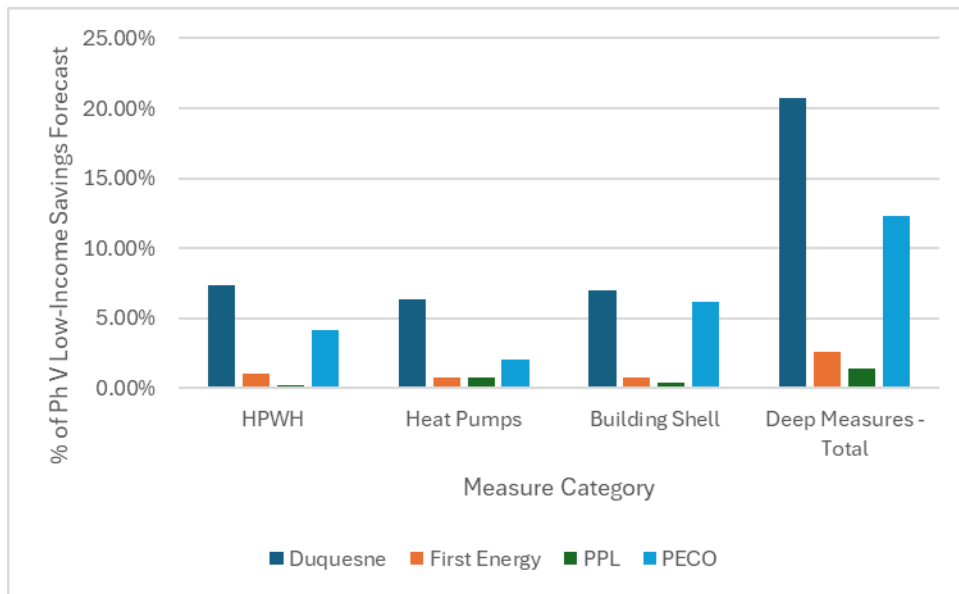
3 A. Yes, Duquesne forecasts far more insulation and air sealing measures than PPL and slightly
 4 more than PECO. This is shown in Figure 2 below.

5 *Figure 2: Building Shell Measures Contribution to Low-Income Savings¹⁰³*



6
 7
 8 Looked at in aggregate, Duquesne proposes that over 20% of its low-income savings will
 9 come from “deep-saving” measures. This is illustrated in Figure 3.

¹⁰³ Duquesne Response to CAUSE-PA II-20, attached hereto to at Appendix B; PPL from Proposed Phase V EE&C Plan, Docket No. M-2025-3057329, Table 9; PECO from Proposed Phase V EE&C Plan, Docket No. M-2025-3057328, Table 21. FirstEnergy from Proposed Phase V EE&C Plan, Appendix B, Table 9, with WARM Plus and WARM Extra Measures allocated to measure categories based on Phase IV results.

Figure 3: Deep-Saving Measures Contribution to Low-Income Savings¹⁰⁴

Q. Is Duquesne’s forecast that 20% of low income savings will come from deep-saving measures sufficient to meet the needs of its customers?

A. No – the forecast quantities of these measures will reach hundreds of customers, but there are many thousands who experience high energy burdens. In its comments on the Commission’s Tentative Implementation Order, CAUSE-PA recommended the Commission “[r]equire the EDCs to achieve no less than 25% of the low-income savings goal through comprehensive whole-home program measures.”¹⁰⁵ While I recognize and appreciate that Duquesne proposes a significant focus on the kinds of measures that can make a real difference in reducing the bills of participating

¹⁰⁴ Duquesne Response to CAUSE-PA II-20, attached hereto to at Appendix B; PPL from Proposed Phase V EE&C Plan, Docket No. M-2025-3057329, Table 9; PECO from Proposed Phase V EE&C Plan, Docket No. M-2025-3057328, Table 21. Residential Low-Income Subprogram Estimated Savings and Participation. FirstEnergy from Proposed Phase V EE&C Plan, Docket No. M-2025-3057327, Appendix B, Table 9, with WARM Plus and WARM Extra Measures allocated to measure categories based on Phase IV results.

¹⁰⁵ Joint Comments of the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) and the Tenant Union Representative Network (TURN), Phase V Energy Efficiency and Conservation Program, Docket No. M-2025-3052826, p. 19 (submitted April 7, 2025).

low-income customers, I urge the Commission to direct the Company to increase its forecasts to be consistent with the recommended 25%.

Q. Is the volume of deep-savings measures forecast in Duquesne’s Plan consistent with what it is achieving in Phase IV?

A. Duquesne’s Phase V forecast suggests a significant ramp-up in deep-saving measures compared with Phase IV. In response to discovery from CAUSE-PA, Duquesne indicated that in Phase IV to date it has provided low-income customers with nearly 3,300 refrigerators, but only 14 heat pumps and ductless mini-splits – and neither measure has been provided since PY16. What is more, according to the Company’s discovery response it has not funded a ceiling insulation job through its EE&C programs since PY13.¹⁰⁶

Q. Do you have any recommendations for the Commission regarding Duquesne’s proposed low-income energy efficiency portfolio?

A. I recommend the Commission direct the Company to adjust its forecast to “achieve no less than 25% of the low-income savings goal through comprehensive whole-home program measures.” Specifically, Duquesne should achieve 25% of its low-income savings goal through heat pumps, heat pump water heaters, and building insulation and air sealing measures that will provide substantive, long lasting energy savings to participating households. I further recommend the Commission monitor the quantity of these deep-savings measures funded by the Company’s EE&C programs annually and provide further direction to Duquesne to increase installation of these measures if it does not meet its forecast participation. Such monitoring is consistent with the Commission’s direction to the Bureau of Technical Utility Services to “work with the SWE to

¹⁰⁶ DLC Response to CAUSE-PA I-22, Attachment.

1 develop reporting requirements for comprehensive program offerings and whole-home,
 2 comprehensive measures for the EDCs' low-income programs in Phase V."¹⁰⁷

3 ***B. Low Income Multifamily Opportunities***

4 **Q. How does the Company say it will approach providing energy efficiency to low-**
 5 **income multifamily properties?**

6 The Company says that:

7 The multifamily component of LIEEP targets properties with both individually metered or
 8 master-metered units that represents a significant proportion of low-income residents. The
 9 program delivers in-unit energy assessments, direct installation of efficiency upgrades such
 10 as lighting, water-saving devices, and smart thermostats, as well as common area
 11 improvements including LED retrofits and controls. Coordination with property managers
 12 and owners ensures streamlined scheduling and implementation. The program aims to
 13 maximize energy and water savings, reduce maintenance costs, and enhance tenant
 14 comfort, while leveraging partnerships with community organizations to reach and serve
 15 disadvantaged populations.¹⁰⁸

16 Further, the Company indicates that "[f]or multifamily properties, in-unit work is no-cost
 17 provided that 45% or more of the units are low-income, and units are individually metered."¹⁰⁹

18 **Q. Does the Company indicate what the cost share will be for participating property**
 19 **owners and tenants of multifamily properties?**

20 DLC's proposed Plan states that "Multifamily facility upgrade cost-shares are negotiated
 21 on a case-by-case basis depending upon the percentage of low-income occupants in the facility,
 22 facility need and savings opportunity."¹¹⁰

¹⁰⁷ Phase V Implementation Order at 72.

¹⁰⁸ Plan, p. 39 of 213.

¹⁰⁹ *Id.* p. 41 of 213.

¹¹⁰ *Id.* p. 43 of 213. CAUSE-PA served DLC discovery requesting additional details on December 18, 2025, however, the Company's responses were delayed. CAUSE-PA reserves the right to file supplemental direct amending our testimony upon review of those responses.

Q. Does the Company address the opportunity to co-fund ASHRAE Level 2 audits for multifamily?

In its plan, Duquesne “acknowledges the requirement for an ASHRAE Level 2 audit in order to qualify for these IRA-funded incentives” and states that “Duquesne will evaluate contributing to the cost of these audits on a case-by-case basis.”¹¹¹ Duquesne does not, however, include any projected spending for co-funding ASHRAE Level 2 audits in its Plan tables. In response to discovery, Duquesne indicated that it “anticipates contributing a portion of eligible audit costs, generally estimated to range between 15 and 20 percent of total audit cost, with the precise contribution determined on a case-by-case basis.”¹¹² DLC further stated that it is unable to project the number of audits it projects co-funding or total audit expenditures.¹¹³ As with the potential cost sharing requirements for the multifamily facilities participating in LIEEP, the Company does not provide specific estimates of the cost share that will be required of property owners. While I recognize that details are still emerging on DEP’s programs, it will be critical for the Company to establish expectations around audit cost sharing as soon as possible in order to engender interest in program participation from the multifamily sector.

Q. Does the need for transparency extend beyond the cost share for audits?

A. Absolutely. By definition, the purpose of affordable multifamily properties is to maintain housing affordability for vulnerable households. To do this, property managers require transparency and predictability when contemplating building improvements. Capital expenditures and other investments must be reliably known to avoid untenable risk for such properties. Therefore, in order to make program participation a viable and attractive option for multifamily

¹¹¹ Plan, p. 76 of 213.

¹¹² DLC Response to CAUSE-PA II-10.

¹¹³ Id.

properties the Company should develop measure offers including cost sharing requirements as soon as practicable.

Q. Is it apparent from the Company's filing whether it forecasts a significant focus on deep saving measures in multifamily properties?

A. It is not clear whether the forecast participation in heat pumps, heat pump water heaters, and building insulation and air sealing measures will carry through to multifamily housing – but it is worth noting that Duquesne forecasts that roughly 40% of low-income savings will come from lighting, and much of this from linear tube upgrades.¹¹⁴ This suggests a heavy focus on lighting measures in multifamily – and while upgrading lighting is good, it is not enough. Duquesne should ensure that all available measures – including deep saving measures where applicable – are pursued in multifamily projects to maximize benefits for tenants and support landlords in maintaining housing affordability.

C. Addressing Health and Safety Barriers

Q. Does Duquesne propose to address health and safety barriers in homes where they would otherwise prevent the installation of deep-saving energy efficiency measures?

A. The Company makes several statements regarding its approach to health and safety barriers. First, it says that it will provide “[h]ealth and Safety Routing: Triaging health and safety issues and braiding funding with other programs to address deferred maintenance before energy upgrades.”¹¹⁵ It states further that it:

...coordinates its Act 129 Low-Income Energy Efficiency Program (LIEEP) and its Universal Services Low-Income Usage Reduction Program (LIURP) Smart Comfort. Where LIEEP falls short of implementing health and safety measures, per se, Smart Comfort can and does install such measures. Duquesne Light uses a

¹¹⁴ DLC Response to CAUSE-PA II-20, Attachment.

¹¹⁵ Plan, p. 41 of 213.

1 common contractor for LIEEP and LIURP, the visits and assessments are
 2 implemented by the same crews and coordinated with regional natural gas
 3 distribution utilities. In this way Duquesne Light ensures no customer lacks
 4 consideration and attention to health and safety measures.¹¹⁶

5 Duquesne indicates, however, that it “does not specifically track when a deferred customer
 6 reaches back out after completing health and safety repairs.”¹¹⁷ My takeaway from these various
 7 statements is that the company may refer low-income households to its LIURP program where that
 8 program may be better positioned to address health and safety issues, it may refer the household
 9 to outside organizations to seek assistance, or it may address health and safety using Act 129 funds.
 10 It is not entirely clear how such decisions are made or whether they are applied consistently.

11 **Q. Does Duquesne propose a certain budget to be directed towards remediation of health**
 12 **and safety barriers?**

13 A. The Company states it “does not set aside a specific dollar amount within the Phase IV
 14 EE&C Plan budget for H&S remediation. Our goal is to serve all customers to the best of our
 15 ability while ensuring safety. For this reason, there is no maximum individual allowance or per-
 16 job spending cap for H&S remediation.”¹¹⁸ I agree with this approach – the very point of having
 17 energy efficiency programs is to address the barriers that prevent “natural adoption” of energy
 18 efficiency, and by not having an arbitrary cap on health and safety spending the Company can
 19 ensure that it can serve as many of its vulnerable customers as possible. That said, while I am
 20 supportive of retaining discretion to ensure flexibility in the field to meet the needs of the customer,
 21 I am concerned that DLC is not adequately tracking and reporting on its health and safety spending
 22 to ensure follow-through.

¹¹⁶ Plan, p. 77 of 213.

¹¹⁷ DLC Response to CAUSE-PA I-24.

¹¹⁸ DLC Response to CAUSE-PA I-17.

Q. What do you recommend?

A. I recommend the Commission direct the Company to submit with its revised Plan a supplemental health and safety protocol and reporting framework that includes the following:

- a. A description of protocols and processes for addressing health and safety issues, including clear criteria for making referrals to LIURP or outside agencies vs. addressing the health and safety issues within the Act 129 programs.
- b. A project tracking approach and tool to allow the Company to track when repairs are made and by whom, and to follow up by installing energy efficiency measures that had been deferred.
- c. Reporting metrics on the number of deferred jobs due to health and safety issues, the number of referrals for remediation through other programs, the number of remediated jobs handled through Act 129, and the measures that were installed as a result of the remediation.
- d. A process flow chart that illustrates the customer journey from audit through health and safety remediation through installation of energy efficiency measures.

D. Program Coordination

Q: What has the Commission said regarding coordination for 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.¹¹⁹ The Commission acknowledged that program coordination can “lead to improved outcomes for ratepayers” and

¹¹⁹ Phase V Implementation Order at 158.

1 “potentially allow the EDCs to accomplish more with the same funding.”¹²⁰ The Commission
 2 further stated its position that “remediation of health and safety issues is an ideal area for
 3 coordination.”¹²¹

4 **Q. Does Duquesne discuss its proposed approach for coordinating services to low-income**
 5 **customers across LIURP and Act 129, as well as with other energy efficiency programs that**
 6 **may be available to its customers?**

7 A. Yes. First, Duquesne says that LIEEP “begins with targeted outreach and enrollment
 8 facilitated by community-based organizations and direct communications.”¹²² In my experience,
 9 community-based organizations often have deep connections to the vulnerable communities they
 10 serve that can facilitate program enrollments for utilities.

11 **Q. Does Duquesne plan to coordinate services with natural gas delivery companies**
 12 **“NGDCs”)?**

13 A. Yes, Duquesne Light reports that it will

14 *...facilitate...coordination by inviting representatives from the NGDCs with*
 15 *overlapping service territories to its Act 129 Stakeholder meetings and will*
 16 *place the issue of Duquesne Light/NGDC coordination on the agenda of those*
 17 *meetings. Duquesne Light has actively participated in several stakeholder*
 18 *meetings with NGDCs throughout Phases III and IV in conjunction with the*
 19 *Income Eligible Advisory Group to gain valuable stakeholder input. Duquesne*
 20 *Light will also work with NGDCs to, where possible, provide joint rebates when*
 21 *the NGDC provides rebates to customers below 150% of the federal poverty*
 22 *level and to provide inter-utility audits to customers whose total household*
 23 *income is below 150% of the federal poverty level when available.*¹²³

24 A very high level of coordination is, in my view, best practice for providing participating
 25 customers with effective services through a low-hassle process. Delivering joint program audits

¹²⁰ Phase V Implementation Order at 158.

¹²¹ *Id.* at 167.

¹²² Plan, p. 39 of 213.

¹²³ *Id.* p. 40 of 213.

1 and installations greatly eases the process for households, leading to more savings, more bill
2 reductions, and better customer satisfaction.

3 **Q. What does Duquesne say about coordinating its LIEEP program with LIURP?**

4 A. The Company says that it “utilizes a single Conservation Service Provider (CSP) that
5 manages both LIURP and EE&C programs. Eligible customers are enrolled and proceed through
6 the program that best fits their job needs. All income-qualified customers are served through either
7 LIURP or EE&C, ensuring that they receive appropriate services based on program criteria and
8 project requirements.”¹²⁴ Further, it states that it “closely coordinates its Act 129 Low-Income
9 Energy Efficiency Program (LIEEP) and its Universal Services Low-Income Usage Reduction
10 Program (LIURP) Smart Comfort...Duquesne Light uses a common contractor for LIEEP and
11 LIURP, the visits and assessments are implemented by the same crews and coordinated with
12 regional natural gas distribution utilities.”¹²⁵ As I said above, I view a high level of coordination
13 to be a best-practice approach for program delivery, in that it works toward reducing participation
14 hassles for customers while simultaneously providing them with the most energy savings possible.

15 **Q. Can you say more about why this is a best practice in your opinion?**

16 A. Yes, of course. Simply put, participating in a program – even when the benefits are non-
17 trivial – takes effort on the part of the household. There are applications to be filled out, in some
18 cases income must be documented, and audits must be scheduled when someone is home – which
19 may require taking time off work. Someone needs to be home when the installation crew is ready
20 to install improvements too – which may also require missing work. All this can be a lot for a
21 household when participating in a single program, but having to repeat the process – say for EDC

¹²⁴ DLC Response to CAUSE-PA I-30.

¹²⁵ DLC Plan, p. 77 of 213.

1 and NGDC LIURP programs – can simply be overwhelming. But if both programs are coordinated
2 so that a single process leads to both gas and electric saving measures, with no additional hassle,
3 then the household stands to save more money on energy, reducing energy burdens more, and
4 increasing that household’s opportunity for improved stability, with all the benefits that can
5 provide. Maximizing household savings with each “transaction” should be the goal of these
6 programs, and Duquesne is heading in the right direction for achieving this desired outcome by
7 working to streamline the process for participation and increase the installation of deep saving
8 measures for its customer who stand to benefit the most.

9 **Q. What does Duquesne say about coordinating its LIEEP with the Weatherization**
10 **Assistance Program?**

11 A. Duquesne’s proposed plan indicates that the Company will “continue to work closely
12 with...state weatherization agencies” but does not provide any detail about the structure of that
13 coordination or how it plans to collaborate with weatherization providers to deliver coordinated
14 services.¹²⁶ In response to discovery the Company indicated that it “maintains an ongoing
15 relationship with NGDC programs and WAP to collaborate regularly on joint audits and the
16 implementation of weatherization measures,” but did not provide any concrete description of its
17 relationship with WAP providers or how it coordinates with them to deliver efficiency services to
18 customers.¹²⁷

¹²⁶ Plan, p. 104 of 213.

¹²⁷ DLC Response to CAUSE-PA II-9.

Q. Why is it important for Duquesne’s Act 129 programs to be closely coordinated with other home repair, weatherization, and energy efficiency programs serving low-income households in its service territory?

A. Effective coordination between energy efficiency, home repair, and weatherization programs is essential to achieve whole-home energy savings for low-income households in Duquesne’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.¹²⁸ Partnering with home repair and weatherization programs provides a critical opportunity for Duquesne 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 could be a critical tool to increasing achievement of durable, cost-effective energy savings in housing stock with high levels of need.

Q. In your view what would effective coordination look like?

A. In my view, effective coordination planning is done with the key objectives front and center, and effective coordination implementation tracks and reviews key performance metrics to ensure that those objectives are met. I suggest that Duquesne minimize participation challenges by taking a “general contractor” approach to coordinating services, including by offering: 1) unified applications; 2) multi-partner audit data collection through a shared audit done for all parties by a single CSP; 3) health and safety remediation in the context an overall job; and 4) jointly funded

¹²⁸ Martín, C., et al., Catalyzing a Movement to Produce Greater Public, Private, and Civil Resources to Improve Housing Conditions Through Home Repair Programs, Joint Center for Housing Studies of Harvard University (Aug. 2024) at 4, 8, <https://www.jchs.harvard.edu/research-areas/working-papers/catalyzing-movement-produce-greater-public-private-and-civil>.

1 measure installations to maximize savings and minimize scheduling conflicts, overhead expenses,
2 and transactions costs. Duquesne should collaborate with other partners, including NGDCs, the
3 Weatherization Assistance Program, home preservation programs, DEP, and others to develop
4 unified processes and shared objectives for delivering the best services possible to customers, as
5 measured by ease of participation and magnitude of benefits. Duquesne's stated intentions and its
6 current practices of leveraging Act 129 funds to increase benefits for LIURP participants and co-
7 scheduling audits with NGDCs are a good start, but more is needed to coordinate at the level
8 necessary to drive greater benefit to individual households and to the programs as a whole –
9 helping to ultimately reduce duplicative application, audit, and other program delivery and
10 administrative costs.

11 **Q. What is your recommendation to the Commission?**

12 A. I recommend the Commission direct Duquesne to take the steps necessary to further
13 develop the seamless coordination practice I just described, and to require Duquesne to file a report
14 of its actions and results along with its first annual report in Phase V and with each subsequent
15 annual report. Specifically, to ensure meaningful collaboration with local programs, the
16 Commission should require Duquesne to work with potential partners to adopt concrete
17 coordination mechanisms. At a minimum, the Company should be directed to:

- 18 • **Establish formal referral protocols** with major home repair and weatherization program
19 administrators in its service territory;
- 20 • **Develop data-sharing agreements** that allow for timely identification of eligible homes
21 and information regarding completed repairs and associated energy savings;

- 1 ● **Define clear scopes of work and sequencing standards** identifying which types of
- 2 repairs Duquesne will refer to local repair and weatherization agencies as well as the
- 3 order in which such measures will be addressed;
- 4 ● **Create a process flow chart** illustrating the customer journey from audit through health
- 5 and safety remediation through installation of energy efficiency measures;
- 6 ● **Develop and implement data tracking tools and protocols** to allow the Company to
- 7 track deferred jobs, when repairs are made and by whom, and to follow up by installing
- 8 energy efficiency measures that had been deferred including follow up procedures to
- 9 keep customers from falling through the cracks;
- 10 ● **Dedicate staff capacity and administrative resources** responsible for managing
- 11 coordination efforts;
- 12 ● **Establish a rhythm for project coordination check-ins** with parties that are managing
- 13 coordinated programs, and come to agreement on future joint development of common
- 14 applications, jointly funded measures installations, etc., and;
- 15 ● **Report regularly on coordination outcomes**, including the number of referrals made,
- 16 services delivered, and the role of coordination in enabling deeper energy efficiency
- 17 savings.

18 Absent such requirements, Duquesne’s coordination efforts are unlikely to advance beyond the

19 limited and informal practices reflected in the Phase IV record, and the opportunity to leverage

20 existing public investments to support deeper and more equitable energy efficiency outcomes for

21 low-income households in its service territory will remain unrealized.

E. Front-of-the-Meter Savings Proposal

Q. Does Duquesne's Plan include a proposal for front-of-the-meter savings?

A. The Company does not include a specific proposal for front-of-the-meter (FTM) measures that would lead to reportable savings. Instead, it "makes provision for FTM measures within its listing of eligible measures. Whether conservation voltage reduction or other distribution system upgrades resulting in reduced system losses or delay system capacity upgrades, the size and type of these prospective measures is unknown at the time of this Plan filing."¹²⁹ This falls far short, in my view, of the Commission's requirement to "Describe any front-of-the meter (FTM) measure(s) included in the EE&C plan. Include the expected contribution to portfolio MWh and MW savings and disclose all non-Act 129 funding sources the EDC plans to leverage for FTM measure installation."¹³⁰ Instead, Duquesne seems to be saying that it can add savings from FTM measures later, if it identifies them. I recommend the Commission reject this aspect of the Company's Plan. Instead, the Commission should require Duquesne to file a petition to amend its Plan in the future should it identify and wish to add such measures to its portfolio. I understand that CAUSE-PA's counsel will address the requirements for filing a petition for plan change in briefing.

Q. Why does Duquesne want to pursue FTM savings, even though it has not identified what type of FTM measure(s) it might propose?

A. The Company claims that "in a period of potential generation shortfalls, saving every kilowatt-hour is valuable regardless of whether savings occur in front of or behind the meter, because all verified savings reduce marginal energy, capacity, transmission, and distribution costs

¹²⁹ Plan, p. 23 of 213.

¹³⁰ Phase V Implementation Order at 78.

1 and therefore benefit all customers—participants and non-participants alike.”¹³¹ While I agree that
 2 it could be beneficial for the Company to pursue FTM savings, I strongly object to the notion that
 3 any EDC can simply reserve the right to include FTM savings in its reports when it has not even
 4 defined at the most basic level what it intends to include and how it will ensure that the savings
 5 protocols it employs will produce legitimate, verifiable savings.

6 **Q. Are savings methodologies for FTM measures widely uniform and accepted across**
 7 **the industry?**

8 A. Not at all. In fact, the Maryland Commission recently accepted a work group
 9 recommendation that “CVR [Conservation Voltage Reduction] impacts should be excluded from
 10 the goal-setting process after the 2024-26 program cycle.”¹³² This decision was made, in part,
 11 because the independent evaluator proposed that the CVR savings methodologies were out of date
 12 and recommended

13 *the Commission consider ordering new CVR studies and industry research to*
 14 *update the assumptions and calculations to ensure consistency across utilities*
 15 *and reflect the current state of the Maryland electric appliance fleet and industry*
 16 *practice. The Loper Team appreciates that there are challenges associated with*
 17 *new studies as it does represent a considerable undertaking in both costs and*
 18 *coordination between utilities. Given the signal-to-noise issues inherent in CVR*
 19 *modeling, a new impact evaluation would need to have sufficient statistical*
 20 *power and experimental rigor to justify replacing prior assumptions.*¹³³

21 **Q. If the Company achieves up to 10% of its portfolio required savings from FTM**
 22 **measures would there be any implications for customer-sited behind the meter savings?**

23 A. Absolutely. FTM savings will displace program savings that provide direct benefits to
 24 customers. This is especially concerning with respect to customers who do not qualify for low-

¹³¹ DLC Response to CAUSE-PA II-16.

¹³² EmPOWER Conservation Voltage Reduction Working Group Report, August 1, 2024, p. 5.
<https://webpscxb.psc.state.md.us/DMS/case/9705>. ML 311369.

¹³³ Id.

income programs but who nevertheless struggle to meet their energy costs. Reducing program savings that directly benefit such customers by replacing them with FTM measures should not be allowed – especially when the FTM measures are not-defined, and are not accompanied by robust EM&V plans that ensure the legitimacy of the savings. Before approving the use of limited Act 129 funds for a vaguely described optional FTM measure, the Commission should require Duquesne to do its due diligence and research the experience of other jurisdictions to demonstrate that there is a reasonable likelihood that, in the context of Act 129, any FTM measures would be a good use of ratepayer funds. Any proposal for inclusion of FTM measures should be vetted with the Statewide Evaluator prior to being put before the Commission. I recommend the Commission reject Duquesne’s FTM measure inclusion and direct the Company to use the funds to provide more deep savings measures for its low-income customers.

V. RECOMMENDATIONS

Q. What are your recommendations to the Commission regarding approval of the Companies’ Act 129 Phase IV Filing?

A. My recommendations are as follows:

1. Approve the Company’s low-income programs but require it to increase its promotion of heat pumps, heat pump water heaters, and building insulation and air sealing such that in aggregate these measures contribute no less than 25% of low-income savings counted towards the carve out requirement.
2. Monitor the quantity of the Company’s installation of deep-savings measures for its low-income customers, including heat pumps, ductless mini-splits, heat pump water heaters, and building insulation and air sealing measures annually, and provide further direction to

1 Duquesne to increase installation of these measures if it does not meet its forecast
2 participation.

3 3. Disallow savings from the proposed LI-BEEP from being counted towards achievement
4 of Duquesne's low-income savings requirement. The Company has not demonstrated that
5 this subcomponent would be "solely directed at low-income customers or low-income-
6 verified participants in multifamily housing programs." However, I recommend that the
7 Company continue with its proposed tailored home energy reports to low-income
8 customers as part of its R-BEEP.

9 4. Direct the Company to submit with its revised Plan a supplemental health and safety
10 protocol and reporting framework that includes the following:

11 a. A description of protocols and processes for addressing health and safety issues,
12 including clear criteria for making referrals to LIURP or outside agencies vs.
13 addressing the health and safety issues within the Act 129 programs.

14 b. A project tracking approach and tool to allow the Company to track when repairs
15 are made and by whom, and to follow up by installing energy efficiency measures
16 that had been deferred.

17 c. Reporting metrics on the number of deferred jobs due to health and safety issues,
18 the number of referrals for remediation through other programs, the number of
19 remediated jobs handled through Act 129, and the measures that were installed as
20 a result of the remediation.

21 d. A process flow chart that illustrates the customer journey from audit through health
22 and safety remediation through installation of energy efficiency measures.

1 5. Direct Duquesne to take the steps necessary to develop the seamless coordination practices
2 I describe in section IV.D. regarding Program Coordination, and to require Duquesne to
3 file a report of its actions and results along with its first annual report in Phase V and with
4 each subsequent annual report.

5 6. Reject the Company's inclusion of vaguely-defined FTM measures and direct Duquesne
6 to redirect any funding that might have been targeted for FTM measures towards increased
7 participation of deep-savings measures by low-income households.

8 **Q. Does this conclude your Direct Testimony?**

9 **A. Yes.**

CAUSE-PA, 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 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

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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

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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

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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

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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

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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 Statement 1, Grevatt

Appendix B

Interrogatories of CAUSE-PA to DLC

DLC Response to CAUSE-PA I-2, Attachment

DLC Response to CAUSE-PA I-17

DLC Response to CAUSE-PA I-22, Attachment

DLC Response to CAUSE-PA I-24

DLC Response to CAUSE-PA I-30

DLC Response to CAUSE-PA II-9

DLC Response to CAUSE-PA II-10

DLC Response to CAUSE-PA II-16

DLC Response to CAUSE-PA II-19

DLC Response to CAUSE-PA II-20, Attachment

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set I

Response by: Dave Defide

CAUSE-PA-I-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:

- 1) All residential customers
- 2) Confirmed low income customers
- 3) CAP customers
- 4) Confirmed low income customers, excluding CAP customers
- 5) 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 relied upon for each response.

Response:

Please see the following Microsoft Excel that contains the average monthly kwh usage per electric heating residential account served by the company. Please note that the column, MASTER_SA_TYPE_CD, contains RHM as it denotes a residential heating master service agreement. The information was derived from SQL queries that ran against the company's customer database.

- CAUSE-PA I-2.XLSX

Average of AVERAGE_KWH		Column Labels							2021 Total	Grand Total
	2021									
Row Labels	June	July	August	September	October	November	December			
ALL RES ACCTS	555.46	600.31	592.05	605.02	495.51	583.94	986.36	631.23	631.23	
ALL RES W/O CLI	542.09	595.80	587.08	600.65	489.28	555.55	927.69	614.02	614.02	
CAP ACCTS	639.39	640.46	630.48	635.38	543.87	733.26	1273.39	728.03	728.03	
CLI	644.04	659.11	633.36	655.29	535.11	711.87	1224.77	723.36	723.36	
CLI NON CAP	612.81	623.93	616.66	625.44	520.73	694.71	1220.78	702.15	702.15	
Grand Total	598.76	623.92	611.93	624.36	516.90	655.87	1126.60	679.76	679.76	

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Average of AVERAGE_KWH Column Labels														2022 Total	Grand Total
Row Labels	2022	January	February	March	April	May	June	July	August	September	October	November	December		
ALL RES ACCTS		1191.67	1529.82	1097.48	833.10	605.36	502.89	596.33	575.13	569.34	497.20	589.62	984.25	797.68	797.68
ALL RES W/O CLI		1128.88	1455.88	1034.42	779.38	570.15	490.86	590.22	567.01	563.90	480.34	556.71	926.39	762.01	762.01
CAP ACCTS		1519.03	1905.73	1425.66	1119.48	806.57	589.33	655.17	639.66	622.66	608.94	783.45	1294.83	997.54	997.54
CLI		1420.22	1820.50	1323.07	1018.28	720.53	545.33	619.14	613.91	595.15	562.71	710.03	1218.00	930.57	930.57
CLI NON CAP		1436.64	1824.07	1348.42	1040.57	743.51	548.06	620.10	608.75	591.41	563.93	722.65	1218.52	938.89	938.89
Grand Total		1339.29	1707.20	1245.81	958.16	689.22	535.29	616.19	600.89	588.49	542.63	672.49	1128.40	885.34	885.34

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Average of AVERAGE_KWH Column Labels														2023 Total	Grand Total
Row Labels	2023 January	February	March	April	May	June	July	August	September	October	November	December			
ALL RES ACCTS	1278.61	1143.18	905.24	787.24	542.61	466.15	361.02	540.52	537.58	445.66	555.52	876.24	703.30	703.30	
ALL RES W/O CLI	1209.15	1074.32	845.96	736.65	509.27	452.39	493.18	536.86	531.22	431.50	523.62	821.85	680.50	680.50	
CAP ACCTS	1629.12	1511.55	1226.43	1066.80	739.66	561.13	117.66	568.40	586.28	530.51	741.32	1182.84	871.81	871.81	
CLI	1594.81	1441.59	1151.42	1008.22	690.15	551.33	394.79	592.60	594.27	550.08	722.42	1123.02	867.89	867.89	
CLI NON CAP	1577.43	1431.78	1153.52	1001.78	681.98	523.74	209.22	562.52	563.48	506.12	691.67	1100.49	833.64	833.64	
Grand Total	1457.82	1320.48	1056.52	920.14	632.73	510.95	315.18	560.18	562.56	492.77	646.91	1020.89	791.43	791.43	

Average of AVERAGE_KWH Column Labels														2024 Total	Grand Total
Row Labels	January	February	March	April	May	June	July	August	September	October	November	December			
ALL RES ACCTS	1109.37	1094.68	816.29	696.03	467.72	485.62	595.67	580.54	539.48	456.62	509.59	919.89	689.29	689.29	
ALL RES W/O CLI	1038.66	1031.07	763.66	648.76	446.38	474.63	584.06	570.04	531.36	445.28	478.70	858.99	655.97	655.97	
CAP ACCTS	1500.19	1447.89	1106.01	973.07	607.02	564.48	672.24	646.75	605.92	532.22	698.26	1252.39	883.87	883.87	
CLI	1406.89	1413.40	1069.30	913.68	578.24	554.82	664.77	645.71	591.33	509.63	667.59	1232.66	854.00	854.00	
CLI NON CAP	1408.42	1371.64	1047.83	897.72	553.14	530.88	639.55	627.32	581.53	502.70	635.03	1167.98	830.31	830.31	
Grand Total	1292.70	1271.73	960.61	825.85	530.50	522.09	631.26	614.07	569.92	489.29	597.84	1086.38	782.69	782.69	

Average of AVERAGE_KWH													Column Labels	
	2025											2025 Total	Grand Total	
Row Labels	January	February	March	April	May	June	July	August	September	October	November			
ALL RES ACCTS	1300.60	1338.44	998.35	632.95	467.73	452.83	611.57	595.59	501.13	435.01	561.72	717.81	717.81	
ALL RES W/O CLI	1221.16	1269.10	933.66	589.71	444.37	433.45	597.71	583.41	489.89	422.01	527.42	682.90	682.90	
CAP ACCTS	1697.27	1732.44	1369.99	885.64	621.19	582.83	710.26	680.17	574.48	519.02	782.71	923.27	923.27	
CLI	1757.40	1673.90	1343.09	854.47	592.44	542.61	643.06	657.72	562.52	500.04	745.21	897.50	897.50	
CLI NON CAP	1625.64	1611.46	1282.75	814.02	563.98	540.43	670.30	659.04	559.03	495.64	717.38	867.24	867.24	
Grand Total	1520.41	1525.07	1185.57	755.36	537.94	510.43	646.58	635.18	537.41	474.34	666.89	817.74	817.74	

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202106	June	2021	RHM	ALL RES W/O CLI	542.09
202106	June	2021	RHM	CAP ACCTS	639.39
202106	June	2021	RHM	CLI	644.04
202106	June	2021	RHM	CLI NON CAP	612.81
202106	June	2021	RHM	ALL RES ACCTS	555.46
202107	July	2021	RHM	ALL RES W/O CLI	595.80
202107	July	2021	RHM	CAP ACCTS	640.46
202107	July	2021	RHM	CLI	659.11
202107	July	2021	RHM	CLI NON CAP	623.93
202107	July	2021	RHM	ALL RES ACCTS	600.31
202108	August	2021	RHM	ALL RES W/O CLI	587.08
202108	August	2021	RHM	CAP ACCTS	630.48
202108	August	2021	RHM	CLI	633.36
202108	August	2021	RHM	CLI NON CAP	616.66
202108	August	2021	RHM	ALL RES ACCTS	592.05
202109	September	2021	RHM	ALL RES W/O CLI	600.65
202109	September	2021	RHM	CAP ACCTS	635.38
202109	September	2021	RHM	CLI	655.29
202109	September	2021	RHM	CLI NON CAP	625.44
202109	September	2021	RHM	ALL RES ACCTS	605.02
202110	October	2021	RHM	ALL RES W/O CLI	489.28
202110	October	2021	RHM	CAP ACCTS	543.87
202110	October	2021	RHM	CLI	535.11
202110	October	2021	RHM	CLI NON CAP	520.73
202110	October	2021	RHM	ALL RES ACCTS	495.51
202111	November	2021	RHM	ALL RES W/O CLI	555.55
202111	November	2021	RHM	CAP ACCTS	733.26
202111	November	2021	RHM	CLI	711.87
202111	November	2021	RHM	CLI NON CAP	694.71
202111	November	2021	RHM	ALL RES ACCTS	583.94
202112	December	2021	RHM	ALL RES W/O CLI	927.69
202112	December	2021	RHM	CAP ACCTS	1273.39
202112	December	2021	RHM	CLI	1224.77
202112	December	2021	RHM	CLI NON CAP	1220.78
202112	December	2021	RHM	ALL RES ACCTS	986.36
202201	January	2022	RHM	ALL RES W/O CLI	1128.88
202201	January	2022	RHM	CAP ACCTS	1519.03
202201	January	2022	RHM	CLI	1420.22
202201	January	2022	RHM	CLI NON CAP	1436.64
202201	January	2022	RHM	ALL RES ACCTS	1191.67
202202	February	2022	RHM	ALL RES W/O CLI	1455.88
202202	February	2022	RHM	CAP ACCTS	1905.73
202202	February	2022	RHM	CLI	1820.50
202202	February	2022	RHM	CLI NON CAP	1824.07
202202	February	2022	RHM	ALL RES ACCTS	1529.82
202203	March	2022	RHM	ALL RES W/O CLI	1034.42
202203	March	2022	RHM	CAP ACCTS	1425.66

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202203	March	2022	RHM	CLI	1323.07
202203	March	2022	RHM	CLI NON CAP	1348.42
202203	March	2022	RHM	ALL RES ACCTS	1097.48
202204	April	2022	RHM	ALL RES W/O CLI	779.38
202204	April	2022	RHM	CAP ACCTS	1119.48
202204	April	2022	RHM	CLI	1018.28
202204	April	2022	RHM	CLI NON CAP	1040.57
202204	April	2022	RHM	ALL RES ACCTS	833.10
202205	May	2022	RHM	ALL RES W/O CLI	570.15
202205	May	2022	RHM	CAP ACCTS	806.57
202205	May	2022	RHM	CLI	720.53
202205	May	2022	RHM	CLI NON CAP	743.51
202205	May	2022	RHM	ALL RES ACCTS	605.36
202206	June	2022	RHM	ALL RES W/O CLI	490.86
202206	June	2022	RHM	CAP ACCTS	589.33
202206	June	2022	RHM	CLI	545.33
202206	June	2022	RHM	CLI NON CAP	548.06
202206	June	2022	RHM	ALL RES ACCTS	502.89
202207	July	2022	RHM	ALL RES W/O CLI	590.22
202207	July	2022	RHM	CAP ACCTS	655.17
202207	July	2022	RHM	CLI	619.14
202207	July	2022	RHM	CLI NON CAP	620.10
202207	July	2022	RHM	ALL RES ACCTS	596.33
202208	August	2022	RHM	ALL RES W/O CLI	567.01
202208	August	2022	RHM	CAP ACCTS	639.66
202208	August	2022	RHM	CLI	613.91
202208	August	2022	RHM	CLI NON CAP	608.75
202208	August	2022	RHM	ALL RES ACCTS	575.13
202209	September	2022	RHM	ALL RES W/O CLI	563.90
202209	September	2022	RHM	CAP ACCTS	622.66
202209	September	2022	RHM	CLI	595.15
202209	September	2022	RHM	CLI NON CAP	591.41
202209	September	2022	RHM	ALL RES ACCTS	569.34
202210	October	2022	RHM	ALL RES W/O CLI	480.34
202210	October	2022	RHM	CAP ACCTS	608.94
202210	October	2022	RHM	CLI	562.71
202210	October	2022	RHM	CLI NON CAP	563.93
202210	October	2022	RHM	ALL RES ACCTS	497.20
202211	November	2022	RHM	ALL RES W/O CLI	556.71
202211	November	2022	RHM	CAP ACCTS	783.45
202211	November	2022	RHM	CLI	710.03
202211	November	2022	RHM	CLI NON CAP	722.65
202211	November	2022	RHM	ALL RES ACCTS	589.62
202212	December	2022	RHM	ALL RES W/O CLI	926.39
202212	December	2022	RHM	CAP ACCTS	1294.83
202212	December	2022	RHM	CLI	1218.00
202212	December	2022	RHM	CLI NON CAP	1218.52

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202212	December	2022	RHM	ALL RES ACCTS	984.25
202301	January	2023	RHM	ALL RES W/O CLI	1209.15
202301	January	2023	RHM	CAP ACCTS	1629.12
202301	January	2023	RHM	CLI	1594.81
202301	January	2023	RHM	CLI NON CAP	1577.43
202301	January	2023	RHM	ALL RES ACCTS	1278.61
202302	February	2023	RHM	ALL RES W/O CLI	1074.32
202302	February	2023	RHM	CAP ACCTS	1511.55
202302	February	2023	RHM	CLI	1441.59
202302	February	2023	RHM	CLI NON CAP	1431.78
202302	February	2023	RHM	ALL RES ACCTS	1143.18
202303	March	2023	RHM	ALL RES W/O CLI	845.96
202303	March	2023	RHM	CAP ACCTS	1226.43
202303	March	2023	RHM	CLI	1151.42
202303	March	2023	RHM	CLI NON CAP	1153.52
202303	March	2023	RHM	ALL RES ACCTS	905.24
202304	April	2023	RHM	ALL RES W/O CLI	736.65
202304	April	2023	RHM	CAP ACCTS	1066.80
202304	April	2023	RHM	CLI	1008.22
202304	April	2023	RHM	CLI NON CAP	1001.78
202304	April	2023	RHM	ALL RES ACCTS	787.24
202305	May	2023	RHM	ALL RES W/O CLI	509.27
202305	May	2023	RHM	CAP ACCTS	739.66
202305	May	2023	RHM	CLI	690.15
202305	May	2023	RHM	CLI NON CAP	681.98
202305	May	2023	RHM	ALL RES ACCTS	542.61
202306	June	2023	RHM	ALL RES W/O CLI	452.39
202306	June	2023	RHM	CAP ACCTS	561.13
202306	June	2023	RHM	CLI	551.33
202306	June	2023	RHM	CLI NON CAP	523.74
202306	June	2023	RHM	ALL RES ACCTS	466.15
202307	July	2023	RHM	ALL RES W/O CLI	493.18
202307	July	2023	RHM	CAP ACCTS	117.66
202307	July	2023	RHM	CLI	394.79
202307	July	2023	RHM	CLI NON CAP	209.22
202307	July	2023	RHM	ALL RES ACCTS	361.02
202308	August	2023	RHM	ALL RES W/O CLI	536.86
202308	August	2023	RHM	CAP ACCTS	568.40
202308	August	2023	RHM	CLI	592.60
202308	August	2023	RHM	CLI NON CAP	562.52
202308	August	2023	RHM	ALL RES ACCTS	540.52
202309	September	2023	RHM	ALL RES W/O CLI	531.22
202309	September	2023	RHM	CAP ACCTS	586.28
202309	September	2023	RHM	CLI	594.27
202309	September	2023	RHM	CLI NON CAP	563.48
202309	September	2023	RHM	ALL RES ACCTS	537.58
202310	October	2023	RHM	ALL RES W/O CLI	431.50

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202310	October	2023	RHM	CAP ACCTS	530.51
202310	October	2023	RHM	CLI	550.08
202310	October	2023	RHM	CLI NON CAP	506.12
202310	October	2023	RHM	ALL RES ACCTS	445.66
202311	November	2023	RHM	ALL RES W/O CLI	523.62
202311	November	2023	RHM	CAP ACCTS	741.32
202311	November	2023	RHM	CLI	722.42
202311	November	2023	RHM	CLI NON CAP	691.67
202311	November	2023	RHM	ALL RES ACCTS	555.52
202312	December	2023	RHM	ALL RES W/O CLI	821.85
202312	December	2023	RHM	CAP ACCTS	1182.84
202312	December	2023	RHM	CLI	1123.02
202312	December	2023	RHM	CLI NON CAP	1100.49
202312	December	2023	RHM	ALL RES ACCTS	876.24
202401	January	2024	RHM	ALL RES W/O CLI	1038.66
202401	January	2024	RHM	CAP ACCTS	1500.19
202401	January	2024	RHM	CLI	1406.89
202401	January	2024	RHM	CLI NON CAP	1408.42
202401	January	2024	RHM	ALL RES ACCTS	1109.37
202402	February	2024	RHM	ALL RES W/O CLI	1031.07
202402	February	2024	RHM	CAP ACCTS	1447.89
202402	February	2024	RHM	CLI	1413.40
202402	February	2024	RHM	CLI NON CAP	1371.64
202402	February	2024	RHM	ALL RES ACCTS	1094.68
202403	March	2024	RHM	ALL RES W/O CLI	763.66
202403	March	2024	RHM	CAP ACCTS	1106.01
202403	March	2024	RHM	CLI	1069.30
202403	March	2024	RHM	CLI NON CAP	1047.83
202403	March	2024	RHM	ALL RES ACCTS	816.29
202404	April	2024	RHM	ALL RES W/O CLI	648.76
202404	April	2024	RHM	CAP ACCTS	973.07
202404	April	2024	RHM	CLI	913.68
202404	April	2024	RHM	CLI NON CAP	897.72
202404	April	2024	RHM	ALL RES ACCTS	696.03
202405	May	2024	RHM	ALL RES W/O CLI	446.38
202405	May	2024	RHM	CAP ACCTS	607.02
202405	May	2024	RHM	CLI	578.24
202405	May	2024	RHM	CLI NON CAP	553.14
202405	May	2024	RHM	ALL RES ACCTS	467.72
202406	June	2024	RHM	ALL RES W/O CLI	474.63
202406	June	2024	RHM	CAP ACCTS	564.48
202406	June	2024	RHM	CLI	554.82
202406	June	2024	RHM	CLI NON CAP	530.88
202406	June	2024	RHM	ALL RES ACCTS	485.62
202407	July	2024	RHM	ALL RES W/O CLI	584.06
202407	July	2024	RHM	CAP ACCTS	672.24
202407	July	2024	RHM	CLI	664.77

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202407	July	2024	RHM	CLI NON CAP	639.55
202407	July	2024	RHM	ALL RES ACCTS	595.67
202408	August	2024	RHM	ALL RES W/O CLI	570.04
202408	August	2024	RHM	CAP ACCTS	646.75
202408	August	2024	RHM	CLI	645.71
202408	August	2024	RHM	CLI NON CAP	627.32
202408	August	2024	RHM	ALL RES ACCTS	580.54
202409	September	2024	RHM	ALL RES W/O CLI	531.36
202409	September	2024	RHM	CAP ACCTS	605.92
202409	September	2024	RHM	CLI	591.33
202409	September	2024	RHM	CLI NON CAP	581.53
202409	September	2024	RHM	ALL RES ACCTS	539.48
202410	October	2024	RHM	ALL RES W/O CLI	445.28
202410	October	2024	RHM	CAP ACCTS	532.22
202410	October	2024	RHM	CLI	509.63
202410	October	2024	RHM	CLI NON CAP	502.70
202410	October	2024	RHM	ALL RES ACCTS	456.62
202411	November	2024	RHM	ALL RES W/O CLI	478.70
202411	November	2024	RHM	CAP ACCTS	698.26
202411	November	2024	RHM	CLI	667.59
202411	November	2024	RHM	CLI NON CAP	635.03
202411	November	2024	RHM	ALL RES ACCTS	509.59
202412	December	2024	RHM	ALL RES W/O CLI	858.99
202412	December	2024	RHM	CAP ACCTS	1252.39
202412	December	2024	RHM	CLI	1232.66
202412	December	2024	RHM	CLI NON CAP	1167.98
202412	December	2024	RHM	ALL RES ACCTS	919.89
202501	January	2025	RHM	ALL RES W/O CLI	1221.16
202501	January	2025	RHM	CAP ACCTS	1697.27
202501	January	2025	RHM	CLI	1757.40
202501	January	2025	RHM	CLI NON CAP	1625.64
202501	January	2025	RHM	ALL RES ACCTS	1300.60
202502	February	2025	RHM	ALL RES W/O CLI	1269.10
202502	February	2025	RHM	CAP ACCTS	1732.44
202502	February	2025	RHM	CLI	1673.90
202502	February	2025	RHM	CLI NON CAP	1611.46
202502	February	2025	RHM	ALL RES ACCTS	1338.44
202503	March	2025	RHM	ALL RES W/O CLI	933.66
202503	March	2025	RHM	CAP ACCTS	1369.99
202503	March	2025	RHM	CLI	1343.09
202503	March	2025	RHM	CLI NON CAP	1282.75
202503	March	2025	RHM	ALL RES ACCTS	998.35
202504	April	2025	RHM	ALL RES W/O CLI	589.71
202504	April	2025	RHM	CAP ACCTS	885.64
202504	April	2025	RHM	CLI	854.47
202504	April	2025	RHM	CLI NON CAP	814.02
202504	April	2025	RHM	ALL RES ACCTS	632.95

REVENUE_MONTH	MONTH	YEAR	MASTER_SA_TYPE_CD	CUSTOMER_SEGMENT	AVERAGE_KWH
202505	May	2025	RHM	ALL RES W/O CLI	444.37
202505	May	2025	RHM	CAP ACCTS	621.19
202505	May	2025	RHM	CLI	592.44
202505	May	2025	RHM	CLI NON CAP	563.98
202505	May	2025	RHM	ALL RES ACCTS	467.73
202506	June	2025	RHM	ALL RES W/O CLI	433.45
202506	June	2025	RHM	CAP ACCTS	582.83
202506	June	2025	RHM	CLI	542.61
202506	June	2025	RHM	CLI NON CAP	540.43
202506	June	2025	RHM	ALL RES ACCTS	452.83
202507	July	2025	RHM	ALL RES W/O CLI	597.71
202507	July	2025	RHM	CAP ACCTS	710.26
202507	July	2025	RHM	CLI	643.06
202507	July	2025	RHM	CLI NON CAP	670.30
202507	July	2025	RHM	ALL RES ACCTS	611.57
202508	August	2025	RHM	ALL RES W/O CLI	583.41
202508	August	2025	RHM	CAP ACCTS	680.17
202508	August	2025	RHM	CLI	657.72
202508	August	2025	RHM	CLI NON CAP	659.04
202508	August	2025	RHM	ALL RES ACCTS	595.59
202509	September	2025	RHM	ALL RES W/O CLI	489.89
202509	September	2025	RHM	CAP ACCTS	574.48
202509	September	2025	RHM	CLI	562.52
202509	September	2025	RHM	CLI NON CAP	559.03
202509	September	2025	RHM	ALL RES ACCTS	501.13
202510	October	2025	RHM	ALL RES W/O CLI	422.01
202510	October	2025	RHM	CAP ACCTS	519.02
202510	October	2025	RHM	CLI	500.04
202510	October	2025	RHM	CLI NON CAP	495.64
202510	October	2025	RHM	ALL RES ACCTS	435.01
202511	November	2025	RHM	ALL RES W/O CLI	527.42
202511	November	2025	RHM	CAP ACCTS	782.71
202511	November	2025	RHM	CLI	745.21
202511	November	2025	RHM	CLI NON CAP	717.38
202511	November	2025	RHM	ALL RES ACCTS	561.72

Customer Segments	Definition
ALL RES W/O CLI	Residential customers, excluding confirmed low income customers and CAP customers
CAP ACCTS	CAP Customers
CLI	Confirmed Low Income Customers
CLI NON CAP	Confirmed Low Income Customers, excluding CAP
ALL RES ACCTS	All residential customers

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set I

Response by: Dave Defide

CAUSE-PA-I-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, the company addresses health and safety (H&S) issues that impair the delivery of comprehensive measures on a case-by-case basis. Some key factors considered include the savings potential of the home, the overall value of the property, and the cost of remediation.

The company does not set aside a specific dollar amount within the Phase IV EE&C Plan budget for H&S remediation. Our goal is to serve all customers to the best of our ability while ensuring

safety. For this reason, there is no maximum individual allowance or per-job spending cap for H&S remediation.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set I

Response by: Dave Defide

CAUSE-PA-I-22

For the customers identified in response to CAUSE-PA-1-21, please
identify the total number of each type of comprehensive measure
installed after an energy audit for each customer segment,
disaggregated by in-home versus virtual audits and by program year.

Please provide this data in a fully functional Excel spreadsheet.

Response:

Please see the supporting spreadsheet, CAUSE-PA-I-22, for the total number of each type of
comprehensive measure installed after an energy audit for each customer segment. Virtual audits
are designated at the scheduling stage; however, additional measures installed after the audit are
not flagged as being associated with a virtual audit.

We did not start tracking measures installed after audits, by renter and owner, until August 2023;
therefore, in the supporting documents you will see "Unknown" for PY 13, PY14 and part of PY
15.

Number Comprehensive Measures installed						Number Comprehensive Measures installed					Number Comprehensive Measures installed				
Owners						Renter					Unknown				
	PY13	PY14	PY15	PY16	PY17	PY13	PY14	PY15	PY16	PY17	PY13	PY14	PY15	PY16	PY17
Refrigerator			87	94	71			156	205	146	1309	784	435		
Freezer				28	27				25	35					
Air Source Heat Pump									12						
Airsealing											2				
Ceiling Insulation											3				
Room AC											10				
Ductless Mini Split												2			

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set I

Response by: Dave Defide

CAUSE-PA-I-24

Of the customers identified in CAUSE-PA-1-23, please identify the following for each customer segmentation, disaggregated by program year:

- a) The number of customers whose health and safety issues were remediated using EE&C funds;
- b) The number of customers whose health and safety issues were remediated using LIURP funds;
- c) The number of customers who received referrals to housing services providers for remediation of health and safety issues;
- d) The number of customers whose health and safety issues were remediated using EE&C funds and who subsequently received comprehensive EE&C measures;
- e) The number of customers whose health and safety issues were remediated using LIURP funds and who subsequently received comprehensive EE&C measures;
- f) The number of customers who received referrals to housing services providers for remediation of health and safety issues and who subsequently received comprehensive EE&C measures.

Please provide this data in a fully functional Excel spreadsheet.

Response:

When a job is deferred as referenced in CAUSE-PA 1-23, neither LIURP nor EE&C funds are used to remediate the health and safety issue. If the company uses program dollars to address a health and safety issue, we do not consider this a deferral, and this is not tracked in the same manner.

All customers who are deferred receive a comprehensive list of organizations that may assist with repairs. The company does not specifically track when a deferred customer reaches back out after completing health and safety repairs. In those cases, the job simply continues through the weatherization process and is counted as a completed project.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of
Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set I

Response by: Dave Defide

CAUSE-PA-I-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:

Customers are not referred to one specific program. The company utilizes a single Conservation Service Provider (CSP) that manages both LIURP and EE&C programs. Eligible customers are enrolled and proceed through the program that best fits their job needs.

All income-qualified customers are served through either LIURP or EE&C, ensuring that they receive appropriate services based on program criteria and project requirements.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set II

Response by: David Defide

CAUSE-PA-II-9

Please explain whether and how the company's proposed Phase V Plan provides for coordination of its low-income EE&C program with:

- a) The Home Efficiency Rebates (HER) and Home Electrification and Appliance Rebates (HEAR) programs managed by the Pennsylvania Department of Environmental Protection (DEP)
- b) The federal Weatherization Assistance Program (WAP)
- c) The LIURP and EE&C programs run by NGDCs with service territories that overlap with the company's service territory.

Response:

a) To the extent outside monetary resources are available to participating customers, such as the federal Inflation Reduction Act Home Electrification and Appliance Rebates (formerly HEEHRA / HEAR) or Whole-House Energy Efficiency Rebates (formerly HOMES / HER), implementation CSP statement(s) of work will require the CSP will assist customer and/or Duquesne Light to complete the necessary forms for submission to the PA Department of Environmental Protection and other agency programs.

b/c) The Company plans to continue its coordination efforts for the EE&C programs with NGDCs, WAP, and LIURP. The Company uses the same Conservation Service Provider (CSP) for both LIURP and EE&C programs, which allows coordination of jobs to provide

the best possible service to our customers. Additionally, the Company maintains an ongoing relationship with NGDC programs and WAP to collaborate regularly on joint audits and the implementation of weatherization measures.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V :
Energy Efficiency and Conservation Plan : Docket No. M-2025-3057325

Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set II

Response by: David Defide

CAUSE-PA-II-10

Please refer to the Company's Plan at Section 4.4.1: "Duquesne acknowledges the requirement for an ASHRAE Level 2 audit in order to qualify for these IRA-funded incentives. Noting the Commission's order that the EDCs only claim savings for installed measures that they incentivized or directly installed, Duquesne will evaluate contributing to the cost of these audits on a case-by-case basis. When evaluating whether, and to what extent, to offset the cost of the audit, Duquesne will take into consideration both the magnitude of savings, and likelihood of completion, of the specific project measures for which the Company could claim credit." Please provide:

- a) Any criteria the company plans to use to identify sites for which EE&C program funds will be used to co-fund ASHRAE Level 2 audits
- b) The projected average dollar amount and percentage of the total audit cost the company anticipates contributing per job to co-fund ASHRAE Level 2 audits
- c) The projected number of ASHRAE Level 2 audits the company anticipates co-funding during Phase V, disaggregated by program year

d) The projected total dollar amount the company anticipates spending to co-fund ASHRAE Level 2 audits during Phase V, disaggregated by program year

Response:

Duquesne Light Company's co-funding of audits under the Phase V EE&C Plan is intended to support projects that advance energy efficiency outcomes in coordination with community-based partners. Co-funding decisions will be made on a case-by-case basis, consistent with the Plan, Commission Orders, and program objectives.

Criteria Used to Identify Sites for Co-Funding

Sites considered for audit co-funding will be evaluated using the following criteria:

- **Expected Energy Savings:** The anticipated magnitude and cost-effectiveness of achievable energy savings associated with the site;
- **Income and Community Need:** The income characteristics of customers served and the presence of eligible customers residing in the community; and
- **Eligibility and Program Alignment:** Whether the site and proposed project align with eligible customer classes and program requirements under the Phase V EE&C Plan.

Priority will be given to sites where audits are expected to lead to implementable projects that deliver measurable energy savings and align with broader customer assistance and community energy efficiency objectives.

Audit Cost-Sharing Structure

The Company anticipates contributing a portion of eligible audit costs, generally estimated to range between 15 and 20 percent of total audit cost, with the precise contribution determined on a case-by-case basis. The level of Company contribution will reflect the expected energy savings associated with the site and the likelihood that audit findings will result in completed energy efficiency projects. Duquesne Light will not fund audit costs for projects that do not proceed to implementation.

Projected Number of Audits and Dollar Amounts

At this stage of program development, Duquesne Light cannot reasonably project a specific number of audits or total audit expenditures. Co-funded audits will be initiated in coordination with partners and based on actual project opportunities rather than predetermined quotas. Accordingly, projections of audit counts or aggregate dollar amounts would be speculative and are not reflected in the Plan.

The Company intends to work collaboratively with partners up front, prior to audit initiation, to establish cost-sharing expectations and ensure alignment with savings potential and program objectives. In general, higher expected savings may justify a higher proportional Company contribution, subject to overall portfolio cost-effectiveness considerations.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

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Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set II

Response by: David Defide

CAUSE-PA-II-16

Please refer to Plan Section 3.1.6: “Duquesne Light makes provision for FTM measures within its listing of eligible measures. Whether conservation voltage reduction or other distribution system upgrades resulting in reduced system losses or delay system capacity upgrades, the size and type of these prospective measures is unknown at the time of this Plan filing, Duquesne Light will ensure that no more than 10% of its portfolio savings impacts derive from these types of measures.”

- a) Does the Company intend to pay for FTM measures using Act 129 funds? Please explain.
- b) If yes, please explain why Act 129 funds would better be used for distribution system improvements than for other energy efficiency measures.
- c) If yes, what is the estimated total amount of Act 129 funds the Company may use to pay for FTM measures?

Response:

Duquesne Light’s position is that *front-of-the-meter* (“FTM”) energy efficiency measures should be eligible for Act 129 credit and should not be excluded as a matter of policy. As discussed in the Company’s Phase V Tentative Implementation Order comments, in a period of potential generation shortfalls, saving every kilowatt-hour is valuable *regardless of whether savings occur in front of or behind the meter*, because all verified savings reduce marginal energy, capacity, transmission, and distribution costs and therefore benefit all customers—participants and non-participants alike.

a) Does the Company intend to pay for FTM measures using Act 129 funds? Please explain.

Yes. Duquesne Light intends to include front-of-the-meter energy efficiency measures in its Phase V Energy Efficiency and Conservation Plan, where such measures are cost-effective, produce verifiable savings, and are consistent with Act 129 and Commission requirements.

Act 129 is implemented as a system-level energy efficiency and peak demand reduction resource program and does not distinguish between savings achieved behind the meter and savings achieved in front of the meter. Consistent with the Commission's Total Resource Cost ("TRC") test, Duquesne Light evaluates potential measures based on their net benefits to the electric system and to all ratepayers, not solely to program participants.

Duquesne Light does not support the categorical exclusion of front-of-the-meter ("FTM") energy efficiency measures from eligibility under Act 129. Act 129 is structured as a system-level energy efficiency and peak demand reduction program, and neither the statute nor the Commission's cost-effectiveness framework distinguishes between savings achieved behind the meter and savings achieved in front of the meter.

Consistent with prior Commission practice, Act 129 programs are evaluated using the Total Resource Cost ("TRC") test, which assesses costs and benefits from a system and ratepayer perspective rather than a participant-only perspective. Under this framework, any measure that produces verifiable and cost-effective reductions in energy consumption or demand—regardless of physical location—may be an appropriate component of an Act 129 portfolio.

b) If yes, please explain why Act 129 funds would better be used for distribution system improvements than for other energy efficiency measures.

From an Act 129 perspective, behind-the-meter and front-of-the-meter measures are equivalent. A front-of-the-meter measure would only be considered "better" to the extent it is more cost-effective and within the Commission imposed limitations.

c) If yes, what is the estimated total amount of Act 129 funds the Company may use to pay for FTM measures?

At this time, the Company does not have a firm estimate on the spending on FTM measures. However, the Commission limits FTM measures to 10% of the total savings in the plan which will necessarily limit the spending on this measure category.

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Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set II

Response by: David Defide

CAUSE-PA-II-19

Please refer to p. 44 of 213 of the Company's Plan: "Specialized low-income home energy reports are provided...."

- a) Please explain, specifically, how the reports are specialized for low-income customers.
- b) Please provide examples of the referenced specialized home energy reports and the general residential home energy reports from the most recent 12 months of Phase IV implementation and explain how each specialized report is different than the home energy reports that were sent to non-low-income residential customers during the same time period.

Response:

a) The Company offers a separate Low-Income Home Energy Report ("HER") experience that is specifically tailored to the circumstances and needs of income-qualified customers. While both the general Residential HER and the Low-Income HER leverage household and usage data to provide personalized feedback, the Low-Income HER differs in its content, emphasis, and calls-to-action.

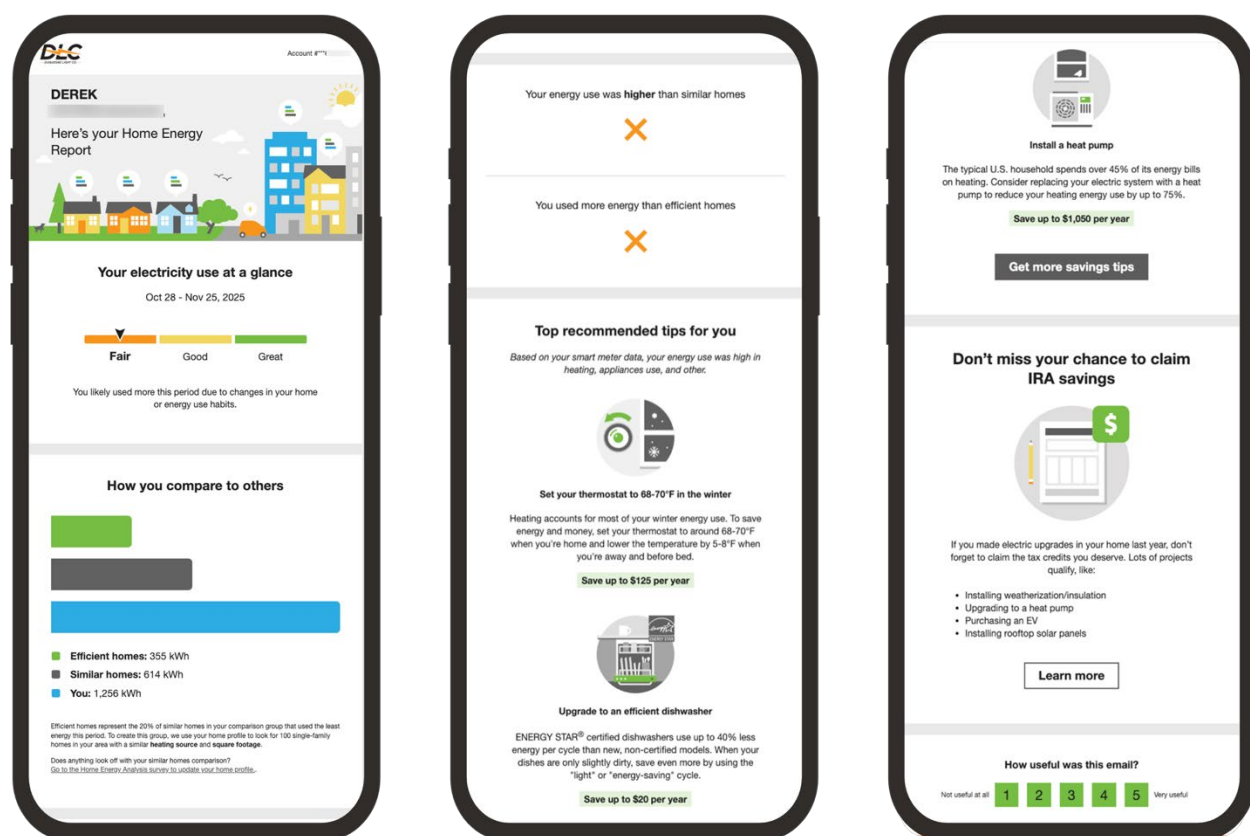
The Low-Income HER prioritizes actionable, low- and no-cost energy-saving actions that are feasible for customers facing financial constraints. Communications focus on behavioral changes, operational adjustments, and other measures that do not require significant upfront investment. Where appropriate, the reports also highlight available income-qualified energy efficiency programs and assistance resources, rather than promoting higher-cost measures.

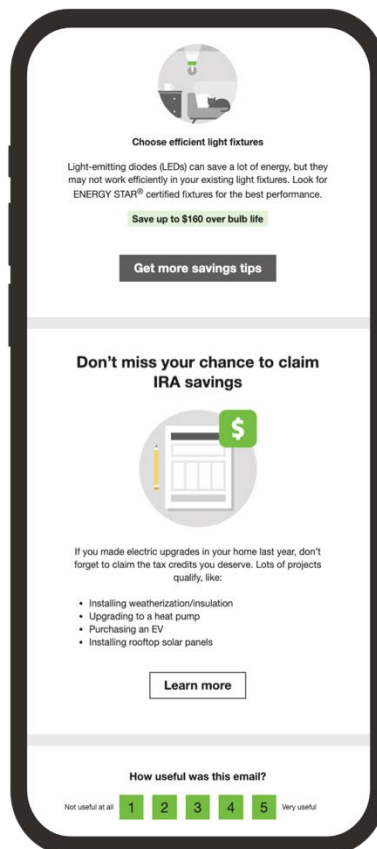
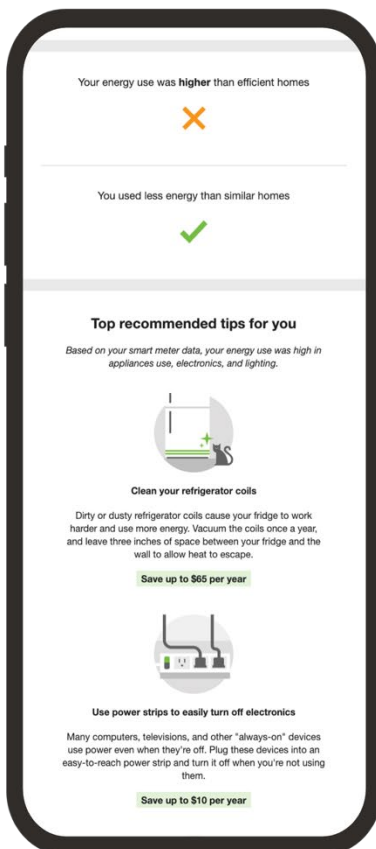
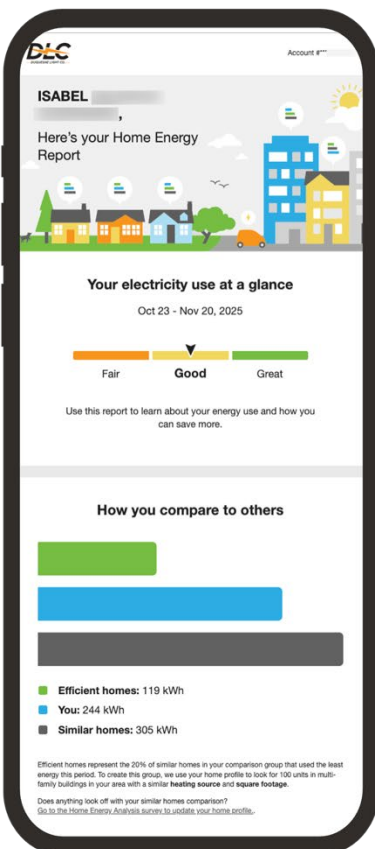
In contrast, the general Residential HER is designed for a broader customer population and includes a wider range of personalized recommendations, which may reference measures that involve customer investment, such as equipment upgrades, in addition to behavioral actions.

The Low-Income HER also employs empathetic and supportive messaging, with simplified language and accessible calls-to-action intended to encourage engagement without creating confusion or undue burden. Customer targeting for the Low-Income HER is based on a combination of utility program eligibility indicators and other available data sources used to identify income-qualified households.

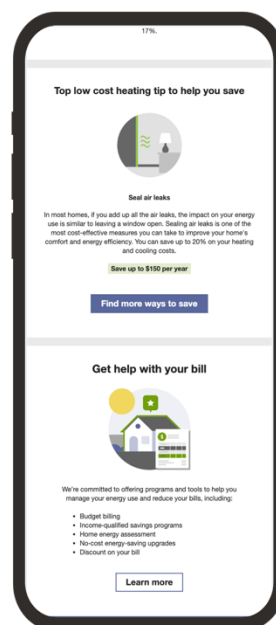
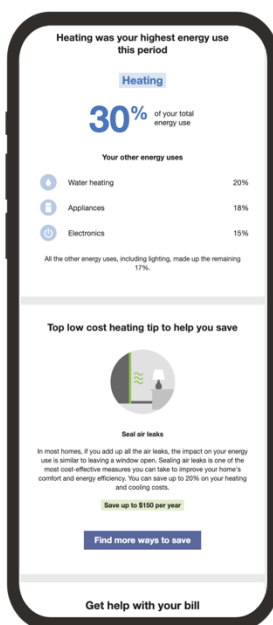
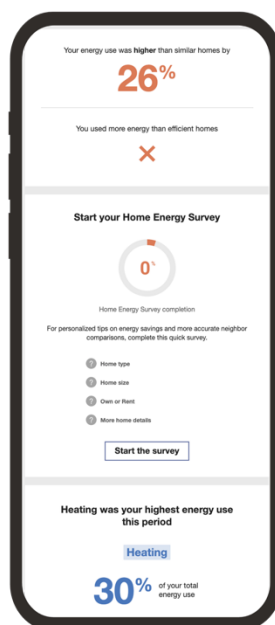
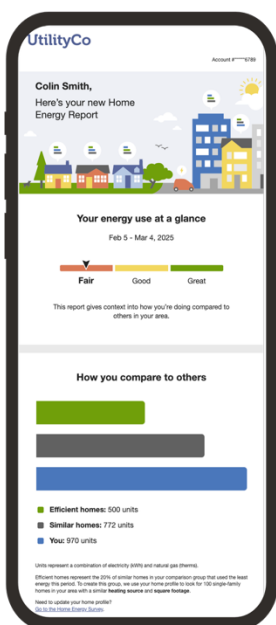
Overall, the Low-Income HER is specialized through its focused messaging, measure emphasis, and engagement strategy, reflecting the distinct needs and participation barriers of income-qualified customers, while remaining consistent with Commission guidance and Act 129 objectives.

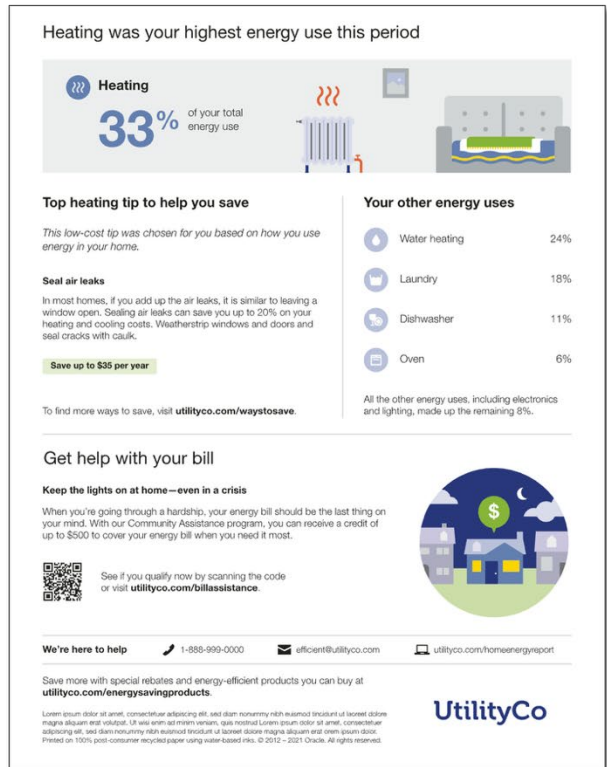
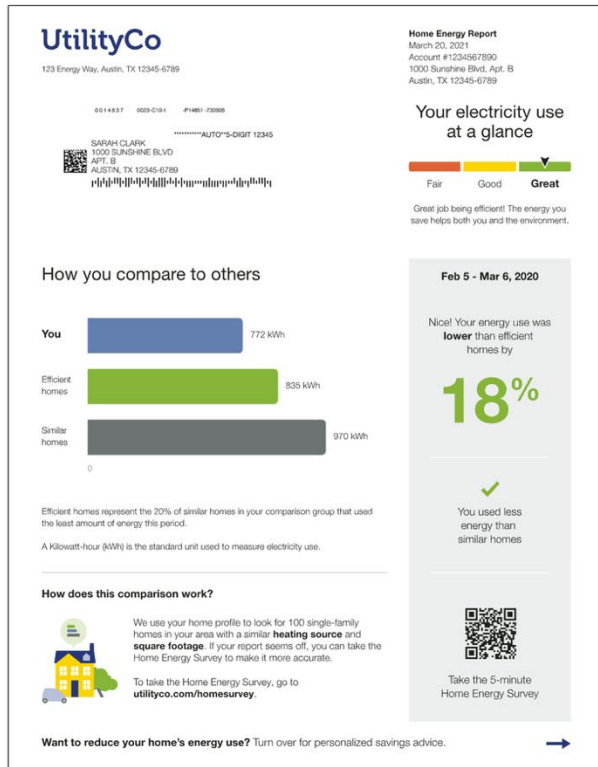
b) Examples of email HERs sent to Duquesne customers:





Sample HERs with empathetic messaging, accessible calls-to-action, and targeted support:





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Duquesne Light Company's Responses to Interrogatories and Requests for Production of Documents
Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA)

Set II

Response by: David Defide

CAUSE-PA-II-20

Refer to Table 9: Estimated Savings and Participation on pages 144-184 of 213. Please reproduce Table 9 including only those measures that will be provided to low-income customers through the Company's targeted low-income programs. Provide measure name, 2026 TRM Measure Number, and the following metrics values for only low-income customers: Energy Savings (MWh), Summer Demand Reduction (MW), Winter Demand Reduction (MW) and Projected Participation. Provide these by year for Py18, PY19, PY20, PY21, PY22, and PY18-PY22 Total.

Response:

See the Excel workbook entitled "CAUSE-PA_Interrogs-II-20.xlsx" for the Company's response to CAUSE-PA-II-20. The response provides a version of Table 9 with measures solely from the Company's low-income programs.

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
LED Parking Garage and Canopy Fixtures and Retrofit Kits	2.1.1	Energy Savings (MWh)	32.82	32.82	32.82	32.82	32.82	164.10
		Summer Demand Reduction (MW)	0.0015	0.0015	0.0015	0.0015	0.0015	0.0073
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	60	60	60	60	60	301
LED Replacement Lamps (Tubes)-2' & 4'	2.1.1	Energy Savings (MWh)	507.33	507.33	507.33	507.33	507.33	2,536.66
		Summer Demand Reduction (MW)	0.0693	0.0693	0.0693	0.0693	0.0693	0.3464
		Winter Demand Reduction (MW)	0.0668	0.0668	0.0668	0.0668	0.0668	0.3341
		Projected Participation	6,356	6,356	6,356	6,356	6,356	31,782
Lighting - LED A-Line	2.1.1	Energy Savings (MWh)	384.90	384.90	384.90	384.90	384.90	1,924.50
		Summer Demand Reduction (MW)	0.3620	0.3620	0.3620	0.3620	0.3620	1.8099
		Winter Demand Reduction (MW)	0.4336	0.4336	0.4336	0.4336	0.4336	2.1682
		Projected Participation	16,731	16,731	16,731	16,731	16,731	83,654
Lighting - LED Globe/Specialty	2.1.1	Energy Savings (MWh)	171.30	171.30	171.30	171.30	171.30	856.49
		Summer Demand Reduction (MW)	0.1609	0.1609	0.1609	0.1609	0.1609	0.8046
		Winter Demand Reduction (MW)	0.1928	0.1928	0.1928	0.1928	0.1928	0.9639
		Projected Participation	4,958	4,958	4,958	4,958	4,958	24,788
Lighting - LED Other	2.1.1	Energy Savings (MWh)	484.76	484.76	484.76	484.76	484.76	2,423.78
		Summer Demand Reduction (MW)	0.4018	0.4018	0.4018	0.4018	0.4018	2.0088
		Winter Demand Reduction (MW)	0.2975	0.2975	0.2975	0.2975	0.2975	1.4873
		Projected Participation	3,427	3,427	3,427	3,427	3,427	17,137
Lighting - LED Reflector	2.1.1	Energy Savings (MWh)	98.94	98.94	98.94	98.94	98.94	494.70
		Summer Demand Reduction (MW)	0.0935	0.0935	0.0935	0.0935	0.0935	0.4677
		Winter Demand Reduction (MW)	0.1121	0.1121	0.1121	0.1121	0.1121	0.5604
		Projected Participation	4,338	4,338	4,338	4,338	4,338	21,688
Residential Occupancy Sensors	2.1.2	Energy Savings (MWh)	0.04	0.00	0.00	0.00	0.00	0.04
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
LED Nightlight	2.1.3	Energy Savings (MWh)	42.58	42.58	42.58	42.58	42.58	212.88
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	2,065	2,065	2,065	2,065	2,065	10,326
Holiday Lights	2.1.4	Energy Savings (MWh)	0.00	0.00	0.00	0.00	0.00	0.00
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Air Source Heat Pump - SEER 17.5 / SEER2 16.3 HSPF 9.7 / HSPF2 8.2 +	2.2.1	Energy Savings (MWh)	65.73	65.73	65.73	65.73	65.73	328.66
		Summer Demand Reduction (MW)	0.0101	0.0101	0.0101	0.0101	0.0101	0.0506
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	115	115	115	115	115	575
Central Air Conditioner SEER 17.5 / SEER2 16.3	2.2.1	Energy Savings (MWh)	20.86	20.86	20.86	20.86	20.86	104.28
		Summer Demand Reduction (MW)	0.0145	0.0145	0.0145	0.0145	0.0145	0.0724
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	90	90	90	90	90	448
Ductless Mini-Split ENERGY STAR Cold Climate rated	2.2.1	Energy Savings (MWh)	203.58	203.58	203.58	203.58	203.58	1,017.88
		Summer Demand Reduction (MW)	0.0145	0.0145	0.0145	0.0145	0.0145	0.0725
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	85	85	85	85	85	424

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Duct Sealing & Duct Insulation	2.2.10	Energy Savings (MWh)	1.11	0.00	0.00	0.00	0.00	1.11
		Summer Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0003	0.0000	0.0000	0.0000	0.0000	0.0003
		Projected Participation	1	0	0	0	0	1
Air Handler Filter Whistles	2.2.11	Energy Savings (MWh)	0.01	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Energy Star Certified Smart Thermostat	2.2.12	Energy Savings (MWh)	177.38	177.38	177.38	177.38	177.38	886.90
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	310	310	310	310	310	1,551
Furnace Maintenance	2.2.13	Energy Savings (MWh)	0.01	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Furnace Circulation Fan - High Efficiency (ECM - Variable Speed)	2.2.4	Energy Savings (MWh)	4.48	4.48	4.48	4.48	4.48	22.38
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	24	24	24	24	24	120
GSHP Desuperheaters	2.2.5	Energy Savings (MWh)	0.50	0.00	0.00	0.00	0.00	0.50
		Summer Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Air Conditioner & Heat Pump Maintenance	2.2.6	Energy Savings (MWh)	0.49	0.00	0.00	0.00	0.00	0.49
		Summer Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Projected Participation	2	0	0	0	0	2
Room A/C – Recycling	2.2.8	Energy Savings (MWh)	0.81	0.81	0.81	0.81	0.81	4.03
		Summer Demand Reduction (MW)	0.0022	0.0022	0.0022	0.0022	0.0022	0.0109
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	37	37	37	37	37	185
Window Heat Pump	2.2.9	Energy Savings (MWh)	1.96	0.00	0.00	0.00	0.00	1.96
		Summer Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0006	0.0000	0.0000	0.0000	0.0000	0.0006
		Projected Participation	1	0	0	0	0	1
Heat Pump Water Heater	2.3.1	Energy Savings (MWh)	312.43	312.43	312.43	312.43	312.43	1,562.17
		Summer Demand Reduction (MW)	0.0282	0.0282	0.0282	0.0282	0.0282	0.1409
		Winter Demand Reduction (MW)	0.0520	0.0520	0.0520	0.0520	0.0520	0.2600
		Projected Participation	176	176	176	176	176	879
Smart Water Heater Controls	2.3.10	Energy Savings (MWh)	0.03	0.00	0.00	0.00	0.00	0.03
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Solar Water Heaters	2.3.2	Energy Savings (MWh)	1.88	0.00	0.00	0.00	0.00	1.88
		Summer Demand Reduction (MW)	0.0002	0.0000	0.0000	0.0000	0.0000	0.0002
		Winter Demand Reduction (MW)	0.0003	0.0000	0.0000	0.0000	0.0000	0.0003
		Projected Participation	1	0	0	0	0	1

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Water Heater Tank Wrap	2.3.3	Energy Savings (MWh)	0.09	0.00	0.00	0.00	0.00	0.09
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Water Heater Temperature Setback	2.3.4	Energy Savings (MWh)	0.06	0.00	0.00	0.00	0.00	0.06
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Water Heater Pipe Insulation	2.3.5	Energy Savings (MWh)	17.57	17.57	17.57	17.57	17.57	87.86
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	207	207	207	207	207	1,034
Low-Flow Faucet Aerator	2.3.6	Energy Savings (MWh)	5.15	5.15	5.15	5.15	5.15	25.73
		Summer Demand Reduction (MW)	0.0008	0.0008	0.0008	0.0008	0.0008	0.0042
		Winter Demand Reduction (MW)	0.0015	0.0015	0.0015	0.0015	0.0015	0.0077
		Projected Participation	413	413	413	413	413	2,066
Low-Flow Showerhead	2.3.7	Energy Savings (MWh)	7.79	7.79	7.79	7.79	7.79	38.96
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0034
		Winter Demand Reduction (MW)	0.0013	0.0013	0.0013	0.0013	0.0013	0.0063
		Projected Participation	207	207	207	207	207	1,034
Thermostatic Showerhead	2.3.8	Energy Savings (MWh)	2.99	2.99	2.99	2.99	2.99	14.94
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	104	104	104	104	104	519
Drain Water Heat Recovery Units	2.3.9	Energy Savings (MWh)	0.23	0.00	0.00	0.00	0.00	0.23
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
ENERGY STAR Ceiling Fans	2.4.13	Energy Savings (MWh)	0.03	0.00	0.00	0.00	0.00	0.03
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Refrigerator / Freezer Recycling with and without Replacement	2.4.3	Energy Savings (MWh)	121.55	121.55	121.55	121.55	121.55	607.76
		Summer Demand Reduction (MW)	0.0202	0.0202	0.0202	0.0202	0.0202	0.1011
		Winter Demand Reduction (MW)	0.0179	0.0179	0.0179	0.0179	0.0179	0.0893
		Projected Participation	285	285	285	285	285	1,423
Low-Capacity Refrigerator / Freezer Recycling without Replacement	2.4.4	Energy Savings (MWh)	0.45	0.00	0.00	0.00	0.00	0.45
		Summer Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	2	0	0	0	0	2
ENERGY STAR Coolers	2.4.5	Energy Savings (MWh)	0.04	0.00	0.00	0.00	0.00	0.04
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Cooler Recycling with and without Replacement	2.4.6	Energy Savings (MWh)	0.31	0.00	0.00	0.00	0.00	0.31
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	2	0	0	0	0	2

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Residential Induction Cooktop	2.4.7	Energy Savings (MWh)	0.01	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Advanced Power Strips	2.5.1	Energy Savings (MWh)	223.93	223.93	223.93	223.93	223.93	1,119.66
		Summer Demand Reduction (MW)	0.0313	0.0313	0.0313	0.0313	0.0313	0.1563
		Winter Demand Reduction (MW)	0.0403	0.0403	0.0403	0.0403	0.0403	0.2013
		Projected Participation	1,859	1,859	1,859	1,859	1,859	9,295
Air Sealing	2.6.1	Energy Savings (MWh)	36.94	36.94	36.94	36.94	36.94	184.70
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	35	35	35	35	35	174
Weather Stripping	2.6.2	Energy Savings (MWh)	17.16	17.16	17.16	17.16	17.16	85.80
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	207	207	207	207	207	1,034
Insulation, Basement Wall	2.6.3	Energy Savings (MWh)	54.61	54.61	54.61	54.61	54.61	273.05
		Summer Demand Reduction (MW)	0.0015	0.0015	0.0015	0.0015	0.0015	0.0073
		Winter Demand Reduction (MW)	0.0017	0.0017	0.0017	0.0017	0.0017	0.0087
		Projected Participation	40	40	40	40	40	200
Insulation, Ceiling	2.6.3	Energy Savings (MWh)	165.51	165.51	165.51	165.51	165.51	827.55
		Summer Demand Reduction (MW)	0.0072	0.0072	0.0072	0.0072	0.0072	0.0361
		Winter Demand Reduction (MW)	0.0086	0.0086	0.0086	0.0086	0.0086	0.0432
		Projected Participation	168	168	168	168	168	840
Insulation, Exterior Wall	2.6.3	Energy Savings (MWh)	24.71	24.71	24.71	24.71	24.71	123.57
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0045
		Projected Participation	16	16	16	16	16	79
Insulation, Floor	2.6.3	Energy Savings (MWh)	12.51	12.51	12.51	12.51	12.51	62.56
		Summer Demand Reduction (MW)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0037
		Winter Demand Reduction (MW)	0.0009	0.0009	0.0009	0.0009	0.0009	0.0044
		Projected Participation	8	8	8	8	8	40
Basement or Crawl Space Wall Insulation	2.6.4	Energy Savings (MWh)	0.00	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	20	20	20	20	20	100
ENERGY STAR Windows	2.6.5	Energy Savings (MWh)	0.00	0.00	0.00	0.00	0.00	0.01
		Summer Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0051
		Winter Demand Reduction (MW)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0052
		Projected Participation	1	1	1	1	1	6
Residential New Construction	2.7.1	Energy Savings (MWh)	4.47	0.00	0.00	0.00	0.00	4.47
		Summer Demand Reduction (MW)	0.0006	0.0000	0.0000	0.0000	0.0000	0.0006
		Winter Demand Reduction (MW)	0.0009	0.0000	0.0000	0.0000	0.0000	0.0009
		Projected Participation	1	0	0	0	0	1
ENERGY STAR Manufactured Homes	2.7.2	Energy Savings (MWh)	18.86	0.00	0.00	0.00	0.00	18.86
		Summer Demand Reduction (MW)	0.0026	0.0000	0.0000	0.0000	0.0000	0.0026
		Winter Demand Reduction (MW)	0.0037	0.0000	0.0000	0.0000	0.0000	0.0037
		Projected Participation	1	0	0	0	0	1

CAUSE-PA St. 1, Appendix B
Cited Discovery Responses

Measure	2026 TRM Measure Number	Metric	PY18	PY19	PY20	PY21	PY22	Total
Home Energy Reports	2.7.3	Energy Savings (MWh)	4,200.00	0.00	0.00	0.00	0.00	4,200.00
		Summer Demand Reduction (MW)	0.8900	0.0000	0.0000	0.0000	0.0000	0.8900
		Winter Demand Reduction (MW)	0.8900	0.0000	0.0000	0.0000	0.0000	0.8900
		Projected Participation	1	0	0	0	0	1
ENERGY STAR Pool Pumps	2.8.1	Energy Savings (MWh)	0.11	0.00	0.00	0.00	0.00	0.11
		Summer Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Winter Demand Reduction (MW)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		Projected Participation	1	0	0	0	0	1
Single Speed Pool Pump Replacement	2.8.2	Energy Savings (MWh)	1.17	0.00	0.00	0.00	0.00	1.17
		Summer Demand Reduction (MW)	0.0005	0.0000	0.0000	0.0000	0.0000	0.0005
		Winter Demand Reduction (MW)	0.0006	0.0000	0.0000	0.0000	0.0000	0.0006
		Projected Participation	1	0	0	0	0	1
Photovoltaic (PV) Solar Generation	2.8.3	Energy Savings (MWh)	7.33	0.00	0.00	0.00	0.00	7.33
		Summer Demand Reduction (MW)	0.0023	0.0000	0.0000	0.0000	0.0000	0.0023
		Winter Demand Reduction (MW)	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001
		Projected Participation	1	0	0	0	0	1
Kit - Electric Hot Water Kit (SF or MF)	multiple	Energy Savings (MWh)	96.77	96.77	96.77	96.77	96.77	483.86
		Summer Demand Reduction (MW)	0.0101	0.0101	0.0101	0.0101	0.0101	0.0504
		Winter Demand Reduction (MW)	0.0186	0.0186	0.0186	0.0186	0.0186	0.0931
		Projected Participation	598	598	598	598	598	2,992
Kit - Gas Hot Water Kit (SF or MF)	multiple	Energy Savings (MWh)	83.48	83.48	83.48	83.48	83.48	417.40
		Summer Demand Reduction (MW)	0.0079	0.0079	0.0079	0.0079	0.0079	0.0396
		Winter Demand Reduction (MW)	0.0146	0.0146	0.0146	0.0146	0.0146	0.0731
		Projected Participation	908	908	908	908	908	4,540

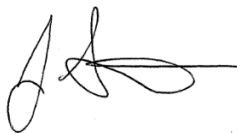
BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

**THE COALITION FOR AFFORDABLE UTILITY SERVICE AND ENERGY
EFFICIENCY IN PENNSYLVANIA (CAUSE-PA)
TESTIMONY VERIFICATION OF JIM GREVATT**

VERIFICATION

I, Jim Grevatt, hereby state that the facts set forth in CAUSE-PA St. 1, Direct Testimony of Jim Grevatt, 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).



February 03, 2026

Date

Jim Grevatt
Witness for CAUSE-PA

Aron Beatty, Esquire
Regulatory Counsel IV,
Regulatory Law

Duquesne Light Company
800 N. Third Street, Suite 203
Harrisburg, PA 17102



Tel: 412-393-6563
abeatty@duqlight.com

December 12, 2025

Via Electronic Filing

John W. Sweet, Esquire
118 Locust Street
Harrisburg, PA 17101

**RE: Petition of Duquesne Light Company for Approval of its Phase V
Energy Efficiency and Conservation Plan
Docket No. M-2025-3057325**

Dear Mr. Sweet:

In response to the compressed timeframe for this proceeding, please find enclosed the Answers of Duquesne Light Company ("Duquesne Light") to the following specific Interrogatories from Set I Interrogatories and Request for Production of Documents of CAUSE-PA in the above-captioned matter:

- CAUSE-PA I-1 through CAUSE-PA I-34;
- CAUSE-PA I-36; and
- CAUSE-PA I-37

Duquesne Light will continue to respond to the rest of the Interrogatories in a timely manner and provide them to you when ready. Copies of these Answers are also being sent in accordance with the attached Certificate of Service.

Thank you, and if you have any questions, please feel free to contact me.

Respectfully Submitted,

Aron J. Beatty, Esq.
Regulatory Counsel IV
Regulatory

Enclosures

CC: Certificate of Service
Secretary Homsher (with Certificate of Service only)

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David Defide, Senior Manager of Customer Programs for Duquesne Light Company, verify that the foregoing Answers of Duquesne Light Company to the following Interrogatories from Set I Interrogatories and Request for Production of Documents of CAUSE-PA are true and correct to the best of my knowledge, information and belief. I understand that false statements herein are made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsifications to authorities.

Date: December 12, 2025



David Defide

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant):

ELECTRONIC MAIL

Allison Kaster, Esquire
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Date: December 12, 2025



Aron J. Beatty, Esq.
Duquesne Light Company
800 N. Third Street
Suite 203
Harrisburg, PA 17102
Phone: 412-393-6563
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Aron Beatty, Esquire
Regulatory Counsel IV,
Regulatory Law

Duquesne Light Company
800 N. Third Street, Suite 203
Harrisburg, PA 17102



December 18, 2025

Via Electronic Filing

John W. Sweet, Esquire
118 Locust Street
Harrisburg, PA 17101

**RE: Petition of Duquesne Light Company for Approval of its Phase V
Energy Efficiency and Conservation Plan
Docket No. M-2025-3057325**

Dear Mr. Sweet:

In response to the compressed timeframe for this proceeding, please find enclosed the Answers of Duquesne Light Company ("Duquesne Light") to the following specific Interrogatories from Set II Interrogatories and Request for Production of Documents of CAUSE-PA in the above-captioned matter:

- CAUSE-PA II-1 through CAUSE-PA II-5;
- CAUSE-PA II-7 through CAUSE-PA II-21

Duquesne Light will continue to respond to the rest of the Interrogatories in a timely manner and provide them to you when ready. Copies of these Answers are also being sent in accordance with the attached Certificate of Service.

Thank you, and if you have any questions, please feel free to contact me.

Respectfully Submitted,

Aron J. Beatty, Esq.
Regulatory Counsel IV
Regulatory

Enclosures

CC: Certificate of Service
Secretary Homsher (with Certificate of Service only)

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Phase V : Docket No. M-2025-3057325
Energy Efficiency and Conservation Plan :

VERIFICATION

I, David Defide, Senior Manager of Customer Programs for Duquesne Light Company, verify that the foregoing Answers of Duquesne Light Company to the following Interrogatories from Set II Interrogatories and Request for Production of Documents of CAUSE-PA are true and correct to the best of my knowledge, information and belief. I understand that false statements herein are made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsifications to authorities.

Date: December 18, 2025



David Defide

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant):

ELECTRONIC MAIL

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Burke Vullo Reilly Roberts
1460 Wyoming Avenue
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jvullo@bvrrlaw.com

Date: December 18, 2025



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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for :
Approval of its Phase V Energy Efficiency : Docket No. M-2025-3057325
and Conservation Plan :
:
:
:
:
:

**TESTIMONY
OF
JEANEEN A. ZAPPA**

**On Behalf of
Keystone Energy Efficiency Alliance**

Topics Addressed:
5

January 20, 2025

1
2

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12

I. IDENTIFICATION**Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS?**

A. My name is Jeaneen Ann Zappa, and I am the Executive Director at the Keystone Energy Efficiency Alliance (“KEEA”), a 501(c)(6) trade association of 81 energy efficiency organizations who do business in the Commonwealth of Pennsylvania. Our mailing address is 614 S. 4th Street, Suite #307, Philadelphia, PA 19147. I also serve as the Executive Director of the affiliated 501(c)(3) nonprofit organization, the Energy Efficiency Alliance (“EEA”), which is dedicated to advancing energy efficiency in the Mid-Atlantic through education and awareness.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

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.

1Q. 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 Duquesne Light Company’s (“Duquesne Light” 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 Jeaneen 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 Duquesne Light 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 Duquesne Light 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 Duquesne Light 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 Duquesne Light 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, Duquesne Light should:

1. Set aside funding of up to \$800,000 (5%) of its low income program for health and safety barrier mitigations;
2. 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;
3. 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;
4. Include in their annual report to the PUC a summary of their outreach activities to each sector (small business, commercial and industrial, residential, and low income);
5. 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;
6. 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;
7. 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;
8. Continue exploration of 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. Provide training and technical assistance to contractors on how to effectively braid measure incentives with PA DEP and other program funding sources;
11. Cover any costs for ASHRAE Level 2 audits not covered by the HER program for participants in both programs;
12. 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.

13. 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 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.

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/>.

³ *Id.*

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 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

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.*

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.

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 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

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/>

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/>.

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 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

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.

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 still have a much higher average energy burden (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 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.

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>.

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 DUQUESNE LIGHT PROPOSE REGARDING HEALTH AND SAFETY BARRIER MITIGATION IN THEIR PHASE V PLAN?

A. Duquesne Light explains that they “closely coordinate Act 129 Low-Income Energy Efficiency Program (LIEEP) and its Universal Services Low-Income Usage Reduction Program (LIURP) Smart Comfort. Where LIEEP falls short of implementing health and safety measures, per se, Smart Comfort can and does install such measures.” (Duquesne Light Plan, p. 77) Duquesne Light further explains that they “use a common contractor for LIEEP and LIURP, the visits and assessments are implemented by the same crews and coordinated with regional natural gas distribution utilities. In this way Duquesne Light ensures no customer lacks consideration and attention to health and safety measures,” (Duquesne Light Plan, p. 77) but falls short of committing any specific Act 129 funds or establishing a pilot project that addresses health and safety barriers.

Q. WHAT DO YOU RECOMMEND THAT DUQUESNE LIGHT DOES TO ADDRESS HEALTH AND SAFETY BARRIER MITIGATION?

A. While coordination with LIURP, LIEEP and other external programs is valuable and important and we applaud the efforts of Duquesne Light for their use of a common contractor to better coordinate program resources, Duquesne Light needs to do more to

address the barriers, avoid customer deferrals and achieve deeper savings. It is not enough to rely on other programs to address barriers, as those program's budgets are designed to maximally serve their participants. To maximize the customer benefit of the Act 129 program and achieve as much savings as possible in each home served by the program, dedicated funding for health and safety barrier mitigation is necessary within Duquesne Light's Act 129 programs. This is further evidenced by the existing \$200 per customer allowance for health and safety measures in Duquesne Light's LIURP.

(Duquesne Light Universal Service Plan pg. 34) This allowance provided is not a significant enough amount to serve customers in need of barrier mitigation.

I recommend that Duquesne Light follow in the footsteps of their EDC peers, PECO and PPL, and allocate funding from within their Act 129 portfolio to address these barriers.

As shown in Table 1, PECO and PPL both established Health and Safety budgets, with PECO's representing 6.4% and PPL's representing 3.0% of their respective low income program budgets. I recommend that Duquesne Light set aside up to 5% of their Phase V low income program budget to be used to address health and safety barriers. This would be a five-year budget of \$800,000, or \$160,000 per year, which would put it within the range of PECO and PPL budgets.

Table. 1 - Comparison of Health and Safety Budget Allocations

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
DLC (Proposed)	\$800	5.0%	\$16,033

Q. HAVE YOU ANALYZED THE IMPACT OF YOUR RECOMMENDATION ON THE COST EFFECTIVENESS OF DUQUESNE LIGHT'S PORTFOLIO?

A. Yes. First, as currently stated in Appendix B Table 1 of their Phase V Plan projections, Duquesne Light's low income program has a benefit-cost-ratio ("BCR") of 2.01 is more cost-effective than the market rate residential program sector BCR of 0.79, which helps with maintaining cost-effectiveness at the program and portfolio level. If Duquesne Light accepts the proposed H&S budget allocation of \$800,000, I project that net benefits would drop by approximately \$1.61 million using the TRC Benefit-Cost-Ratio ("BCR") for the low income program of 2.01 (ibid). This would make net benefits for the low income program \$8.09 million and the TRC BCR for the program would be 1.84, which is still higher than the 0.79 BCR for the market rate residential program. The overall portfolio would also remain cost-effective, with a TRC BCR largely unchanged at 2.03.

Q. WHAT HEALTH AND SAFETY MEASURES SHOULD BE COVERED BY THE HEALTH AND SAFETY FUNDS?

A. 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 DUQUESNE LIGHT IDENTIFY HEALTH AND SAFETY ISSUES THAT NEED TO BE REMEDIATED?

A. With standardized training and certification now well established, Duquesne Light 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.

Q. HOW WILL DUQUESNE LIGHT'S PHASE V PLAN BE IMPROVED BY YOUR RECOMMENDATION TO MAKE FUNDS AVAILABLE FOR HEALTH AND SAFETY BARRIER REMEDIATION?

A. Duquesne Light has the opportunity to increase program participation rates, achieve greater energy reductions and potentially reduce the need for additional assistance and services by delivering deep energy retrofit improvements to residential units that are regularly deferred from weatherization and energy efficiency programs. Delivering increased services and deeper retrofits typically means spending more money per unit served and also reducing the total count of units that are served annually, but this comprehensive approach delivers lasting savings – both to the individual ratepayer and to the entire rate base, which ultimately supports programs to provide emergency repairs

and subsidizes the bills of underperforming housing stock. The benefit adder for low to moderate income (“LMI”) households in the Phase V Total Resource Cost Test confirms this fact.²⁰

Existing health and safety programs offered by utilities to test for natural gas leaks and carbon monoxide issues tied to combustion appliances are valuable and commendable. I commend DLC’s efforts to coordinate its Act 129 visits with natural gas companies and to leverage these health and safety benefits. However, these are not directly tied to Act 129 electric programming. Limiting health and safety to these matters misses a bigger opportunity for health and safety impact in households served under Act 129.

While health and safety spending may not directly reduce energy usage, they do provide a range of non-energy benefits, such as environmental, habitability, and comfort improvements realized once homes are weatherized. Habitability of homes significantly improved following these upgrades, and as a result, contributes to an average annual savings of \$514 per household in out-of-pocket medical expenses.²¹ Similarly, these health improvements kept residents at work, saving workers an average of \$538 annually due to missing fewer days of work from illness.²² Cumulatively, the total annual health and household-related benefits for a weatherized unit averages \$14,148.²³ In addition, the

²⁰ Final Order, Docket No. M-2024-3048998 (Nov. 7, 2024) <https://www.puc.pa.gov/pdocs/1855583.pdf>.

²¹ National Association for State Community Service Programs. (2022). *Weatherization Assistance Program Funding Report Program Year 2022*. <https://nascsp.org/wp-content/uploads/2023/12/PY22-WAP-Annual-Funding-Report-1.pdf>

²² *Id.*

²³ Tonn, B., Rose, E., Hawkins, B., Conlon, B., Oak Ridge National Laboratory, & Oak Ridge Institute for Science and Education. (2014). *Health and Household-Related Benefits attributable to the Weatherization Assistance Program*. https://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEvalFinalReports/ORNL_TM-2014_345.pdf.

direct reduction of energy usage is prevented in households where health and safety barriers exist.

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 DUQUESNE LIGHT DESCRIBE IN THEIR PHASE V PLAN?

A. Duquesne Light does not specifically address the coordination of marketing efforts with other EDC's to leverage program outcomes in their Phase V Plan. Marketing is referenced throughout each component of the Plan, and on page 12 Duquesne Light describes their overall marketing approach within their own portfolio of EE&C offerings which can be summarized as follows: Duquesne Light plans to engage customers through advertising, events, and direct contact in three main channels 1.) direct marketing to its own customers, 2.) coordinated outreach with CSPs to secure customer participation, and 3.) information shared with trade allies like builders and contractors to encourage them and their clients to join the programs.

Q. DOES DUQUESNE LIGHT ADEQUATELY ADDRESS MARKETING COORDINATION IN THEIR PHASE V PLAN?

A. No. While Duquesne Light's plan details their internal marketing efforts, they need 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 Duquesne Light, 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 DUQUESNE LIGHT INCLUDE THESE MEASURES IN THEIR PLANS?

A. Yes. On page 23 of their Phase V Plan and subsequently in Table 8: Eligible Measures, they confirmed that high efficiency heat pumps and HPWHs will be available across all customer sectors and that, via contracted statements of work, Duquesne Light has instructed their CSPs to assist customers in incentive stacking. Duquesne Light also mentions that, “a data sharing partnership is being explored between the PA DEP, Resource Innovations, EDCs and others to streamline data flow and expedite braided incentive processing,” (DLC Plan at 23.) I recommend Duquesne Light follow through on the partnership exploration referenced above by formally coordinating with the PA DEP

and other EDCs 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.

Additionally, I want to ensure that Duquesne Light 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.

In addition, I recommend and encourage DLC to provide training and technical assistance to its contractor base on their project installation needs and alignment with equipment that will qualify for the braided incentives. This will help ensure that project comprehensiveness is addressed when braiding these program incentives effectively.

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 DUQUESNE LIGHT FOLLOW THIS DIRECTIVE?

A. Duquesne Light follows the directive in a limited manner as their plan, “acknowledges the requirement for an ASHRAE Level 2 audit in order to qualify for these IRA-funded incentives. Noting the Commission’s order that the EDCs only claim savings for installed measures that they incentivized or directly installed, Duquesne will evaluate contributing to the cost of these audits on a case-by-case basis.” (DLC Plan at 76.)

This is an important first step, and I recommend that Duquesne Light formally commit to cover any costs for the ASHRAE Level 2 audit that are not covered by the HER Program as a standard practice for all IRA-qualifying properties, rather than case-by-case.

Q. WHY IS IT IMPORTANT TO COVER THE ENTIRE ASHRAE LEVEL 2 AUDIT COST?

A. 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 DUQUESNE LIGHT INCLUDE WORKFORCE DEVELOPMENT IN THEIR PHASE V PLAN?

1 A. Duquesne Light addresses workforce development in their plan by identifying a potential
2 broader issue of the “long-term availability of qualified technicians and professionals
3 with skills such as energy auditing, energy savings analysis, project engineering and
4 measures installation”. They then go on to say that they “cooperate with educational
5 institutions and training organizations to increase the supply of qualified personnel in the
6 Pittsburgh job market”. Duquesne further elaborates on a potential strategy to address this
7 potential long-term issue by “stimulat(ing) interest in the field for energy efficiency via
8 programs targeted to achieve energy savings in educations facilities and in the homes of
9 student and staff at those facilities”. (Duquesne Light Phase V Plan at 70).

10 In addition to the above mentioned workforce development references, Duquesne
11 Light references training for CSP(s), distributors, and trade allies as part of each
12 individual program component of their Plan. (Duquesne Light Phase V Plan at 33, 49,
13 55).

14 **Q. DOES THIS ADEQUATELY ADDRESS WORKFORCE DEVELOPMENT IN THE DUQUESNE**
15 **LIGHT PHASE V PLAN?**

16 A. No. While I applaud Duquesne Light’s acknowledgement of a “potential” long-term issue
17 with the availability of qualified workers in the energy efficiency field, simply
18 cooperating with educational institutions and training organizations is not enough to
19 address the issue. In addition, Duquesne Light’s inclusion of a “potential” strategy to
20 stimulate interest in the field of energy efficiency is a good start. More needs to be done
21 at this stage beyond merely thinking about an idea that might work in order to ensure the
22 workforce is properly equipped to meet the needs of the ratepayers. Furthermore, the
23 training referenced in several sections of the Plan is vague and appears to be focused on
24 programmatic training to ensure that CSP(s), distributors, and trade allies are equipped to

promote and participate in Duquesne Light's Act 129 programs. It does not appear to be geared toward the type of specific training and education that is necessary for the workforce.

Q. WHAT WORKFORCE DEVELOPMENT TRAINING NEEDS TO BE INCLUDED IN THE PLAN FOR IT TO BE CONSIDERED ADEQUATE?

A. I recommend that Duquesne Light 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 Duquesne Light'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 Duquesne Light 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 Duquesne Light'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, Jeaneen Zappa, 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/ Jeaneen Zappa

Jeaneen Zappa

Executive Director

jzappa@keealliance.org

January 16, 2026

Jeaneen A. Zappa

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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.

continued...

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

	H&S Budget as a % of				LI Budget				Total Res (LI + RES)			
	H&S Budget	LI Budget	Res Budget	Total Budget	LI Budget	LI Budget	Res Budget	Total Budget	Total Res	LI Budget	Res Budget	Total Budget
EDC	\$3,000	3.35%	2.20%	0.70%	\$47,147	34.50%	11.03%	\$136,660	31.98%	\$47,147	\$427,386	\$474,533
PECO	\$2,500	5.07%	2.17%	0.81%	\$49,352	42.80%	16.05%	\$115,319	37.50%	\$49,352	\$307,507	\$356,859
PPL	\$2,600	4.99%	1.59%	0.67%	\$52,154	31.91%	13.36%	\$163,459	41.88%	\$52,154	\$390,320	\$442,474
FE PA	\$800	4.99%	2.33%	0.82%	\$16,033	46.68%	16.41%	\$34,343	35.14%	\$16,033	\$97,229.76	\$113,262.76

Actual H&S Allocation

	H&S Budget as a % of				LI Budget				Total Res (LI + RES)			
	H&S Budget	LI Budget	Res Budget	Total Budget	LI Budget	LI Budget	Res Budget	Total Budget	Total Res	LI Budget	Res Budget	Total Budget
EDC	\$3,000	6.36%	2.20%	0.70%	\$47,147	34.50%	11.03%	\$136,660	31.98%	\$47,147	\$427,386	\$474,533
PECO	\$1,500	3.04%	1.30%	0.49%	\$49,352	42.80%	16.05%	\$115,319	37.50%	\$49,352	\$307,507	\$356,859
PPL	0	0.00%	0.00%	0.00%	\$52,154	31.91%	13.36%	\$163,459	41.88%	\$52,154	\$390,320	\$442,474
FE PA	0	0.00%	0.00%	0.00%	\$16,033	46.68%	16.41%	\$34,343	35.14%	\$16,033	\$97,229.76	\$113,262.76

PECO

Table 5: Summary of Portfolio Costs

Sector	PY18		PY19		PY20		PY21		PY22		Phase V	
	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%
Residential Market Rate	\$16,888	22%	\$18,461	22%	\$17,756	20%	\$18,161	19%	\$18,247	22%	\$89,513	20.90%
Residential Low-Income	\$9,358	12%	\$9,401	11%	\$9,712	11%	\$10,002	11%	\$8,675	11%	\$47,147	11.00%
Small C&I	\$18,521	24%	\$21,852	26%	\$23,545	26%	\$24,620	26%	\$18,775	23%	\$107,323	25.10%
Large C&I	\$17,537	23%	\$21,963	26%	\$25,626	28%	\$28,414	30%	\$22,588	28%	\$116,127	27.20%
Common Costs	\$13,455	18%	\$13,455	16%	\$13,455	15%	\$13,455	14%	\$13,455	16%	\$67,275	15.70%
Total Portfolio Budget 1	\$75,759	100%	\$85,132	100%	\$90,094	100%	\$94,661	100%	\$81,740	100%	\$427,386	100%
SWE Cost	\$0		\$0		\$0		\$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 cells should be green once filled out to ensure correct cell values.

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 5: PA PUC Table 5 - Summary of Portfolio Costs

Sector	PY18		PY19		PY20		PY21		PY22		Phase V	
	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%
Residential Market Rate	\$12,928	22%	\$13,290	21%	\$13,571	21%	\$12,963	21%	\$13,215	24%	\$65,967	21.50%
Residential Low-Income	\$10,952	18%	\$10,267	16%	\$10,235	16%	\$9,580	15%	\$8,318	15%	\$49,352	16.00%
Small C&I	\$17,718	30%	\$20,507	32%	\$20,176	31%	\$18,092	29%	\$14,997	27%	\$91,489	29.80%
Large C&I	\$9,796	16%	\$12,028	19%	\$13,423	20%	\$12,856	21%	\$10,495	19%	\$58,598	19.10%
Common Costs	\$8,420	14%	\$8,420	13%	\$8,420	13%	\$8,420	13%	\$8,420	14%	\$42,100	13.70%
Total Portfolio Budget2	\$69,814	100%	\$84,991	100%	\$86,511	100%	\$81,975	100%	\$64,483	100%	\$307,507	100.00%
SWE Cost	\$1,000		\$1,000		\$1,000		\$1,000		\$1,000		\$5,000	

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		PY20		PY21		PY22		Phase V	
	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%
Residential Market Rate	\$23,305	29%	\$23,384	30%	\$23,038	29%	\$20,692	27%	\$20,885	27%	\$111,305	28.50%
Residential Low-Income	\$10,618	13%	\$10,408	13%	\$10,458	13%	\$10,383	14%	\$10,287	13%	\$52,154	13.40%
Small C&I	\$22,916	28%	\$22,306	28%	\$22,320	29%	\$22,346	29%	\$22,366	29%	\$112,254	28.80%
Large C&I	\$19,272	24%	\$18,843	24%	\$18,846	24%	\$18,863	25%	\$18,871	25%	\$94,694	24.30%
Common Costs	\$4,814	6%	\$4,047	5%	\$3,601	5%	\$3,610	5%	\$3,843	5%	\$19,913	5.10%
Total Portfolio Budget 1	\$80,924	100%	\$78,988	100%	\$78,262	100%	\$75,694	100%	\$76,251	100%	\$390,320	100%
SWE Cost2	\$800		\$800		\$800		\$800		\$800		\$4,000	

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 cells should be green once filled out to ensure correct cell values. 2 Company Assumption Based on PH IV Allocated

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		PY20		PY21		PY22		Phase V	
	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%	\$0	%
Residential Portfolio Budget	3,393	20.00%	3,703	19.80%	3,811	18.20%	3,725	18.60%	3,678	18.60%	18,310	18.70%
Residential Low-Income Portfolio I	3,237	20.00%	3,149	16.80%	3,178	15.20%	3,207	14.50%	3,261	16.50%	16,033	16.40%
Commercial/Industrial Small Port	4,102	25.30%	4,594	24.60%	5,327	25.50%	6,025	27.20%	4,899	24.80%	24,947	25.50%
Commercial/Industrial Large Port	4,608	28.40%	6,378	34.10%	7,698	36.80%	8,343	37.60%	7,006	35.50%	34,032	34.80%
Common Costs	881	5.40%	881	4.70%	881	4.20%	881	4.00%	881	4.50%	4,407	4.50%
Total Portfolio Budget	16,222	100.00%	18,706	100.00%	20,696	100.00%	22,181	100.00%	19,726	100.00%	97,729.76	100.00%
SWE Cost	\$0		\$0		\$0		\$0		\$0		\$0	

Source: DLC Phase V Plan, p. 130

Health and Safety Budget \$0 Source: DLC Phase V Plan, pg. 68
Part of the Residential Low Income Program

Table 1: Portfolio Summary of Lifetime Costs

Sector	Net	Lifetime	Benefit	Cost Ratio	(TR)	Updated Analysis			
						Costs	Benefits	Net	BCR
Market Rate Residential (exclus	\$344,312	\$314,199	\$30,113	0.9	0.913	\$344,312	\$314,199	-\$30,113	0.913
Residential Low-Income	\$62,503	\$78,938	\$16,435	1.3	1.263	\$62,503	\$78,938	\$16,435	1.263
Small Commercial & Industrial	\$316,367	\$449,338	\$132,972	1.4	1.426	\$316,367	\$449,338	\$132,971	1.426
Large Commercial & Industrial	\$375,196	\$534,973	\$159,777	1.4	1.426	\$375,196	\$534,973	\$159,777	1.426
Total Portfolio	\$1,098,378	\$1,377,448	\$279,070	1.3	1.294	\$1,098,378	\$1,377,448	\$279,070	1.294

Source: PECO Phase V Plan, pg. 6

Table 1: Portfolio Summary of Lifetime Costs

Sector	Net	Lifetime	Benefit	Cost Ratio	(TR)	Updated Analysis			
						Costs	Benefits	Net	BCR
Market Rate Residential (exclus	\$124,095	\$156,458	\$32,364	1.26	1.261	\$124,095	\$156,458	\$32,363	1.261
Residential Low-Income	\$51,075	\$107,547	\$56,472	2.11	2.106	\$51,075	\$105,441	-\$4,634	2.064
Small Commercial & Industrial	\$431,459	\$711,778	\$280,319	1.65	1.650	\$431,459	\$711,778	\$280,319	1.650
Large Commercial & Industrial	\$239,514	\$441,497	\$201,983	1.843	1.843	\$239,514	\$441,497	\$201,983	1.843
Total Portfolio	\$846,143	\$1,417,280	\$571,137	1.67	1.675	\$846,143	\$1,415,174	\$569,031	1.673

Source: PPL Phase V Plan, pg. 5

Table 1: Portfolio Summary of Lifetime Costs

Sector	Net	Lifetime	Benefit	Cost Ratio	(TR)	Updated Analysis			
						Costs	Benefits	Net	BCR
Market Rate Residential (exclus	\$236,618	\$255,609	\$18,991	1.1	1.080	\$236,618	\$255,609	\$18,991	1.080
Residential Low-Income	\$69,638	\$80,373	\$10,735	1.2	1.154	\$69,638	\$77,372	\$7,734	1.111
Small Commercial & Industrial	\$366,833	\$427,391	\$60,558	1.2	1.166	\$366,833	\$427,391	\$60,558	1.166
Large Commercial & Industrial	\$381,610	\$401,116	\$19,507	1.1	1.051	\$381,610	\$401,116	\$19,506	1.051
Total Portfolio	\$1,054,699	\$1,164,489	\$109,790	1.1	1.104	\$1,054,699	\$1,161,488	\$106,789	1.101

1 "Net" refers to the arithmetic difference between the previous two columns. It does not refer to net verified savings.

Source: FE PA Phase V Plan, Appendix B, Table 1

Table 1: Portfolio Summary of Lifetime Costs

Sector	Net	Lifetime	Benefit	Cost Ratio	(TR)	Updated Analysis			
						Costs	Benefits	Net	BCR
Residential	\$48,523	\$38,392	-\$10,131	0.79	0.791	\$48,523	\$38,392	-\$10,131	0.791
Residential Low-Income	\$9,590	\$19,288	\$9,698	2.01	2.011	\$9,590	\$17,679	\$8,089	1.843
Residential Behavioral	\$5,009	\$7,049	\$2,039	1.41	1.407	\$5,009	\$7,049	\$2,040	1.407
Low Income Behavioral	\$836	\$958	\$122	1.15	1.146	\$836	\$958	\$122	1.146
Large Commercial C	\$36,173	\$89,288	\$53,115	2.47	2.468	\$36,173	\$89,288	\$53,115	2.468
Large Industrial (I	\$11,168	\$49,146	\$37,977	4.4	4.401	\$11,168	\$49,146	\$37,978	4.401
Small C&I	\$39,951	\$105,021	\$65,070	2.63	2.629	\$39,951	\$105,021	\$65,070	2.629
Total Portfolio	\$151,251	\$309,141	\$157,890	2.04	2.044	\$151,251	\$309,141	\$157,890	2.044

Source: DLC Phase V Plan, pg. 126

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	7123461.5%	\$0
PPL	\$17,537	6263214.3%	\$0
FE PA (Proposed	\$0	0.0%	\$0