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

Manager of Customer Programs. In that position, I currently manage a staff of five professionals. Prior to my work with Duquesne Light, I was the Chief Finance/Operating Officer for Conservation Consultants, Inc. for ten years. Prior to working for Conservation Consultants, I was the Finance Director and Special Assistant to the Executive Director for the Housing Authority City of Pittsburgh. Prior to this position, I worked for National City Bank as an Operations Supervisor.

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is two-fold. First, I will briefly explain Duquesne Light's energy efficiency plan requirements pursuant to Act 129 of 2008 ("Act 129") and the Public Utility Commission ("Commission") Implementation Order issued June 18, 2025, at Docket No. M-2025-3057325. Second, I will explain the methodology used to design, develop, analyze, and implement Duquesne Light's Energy Efficiency and Conservation Phase V Plan ("EE&C Phase V Plan").

Q. Are you sponsoring any exhibits as part of your direct testimony?

A. Yes. Duquesne Light's Energy Efficiency and Conservation Phase V Plan is attached to the Company's Petition and has been marked as Exhibit 1.

Q. **Have you previously testified before the Pennsylvania Public Utility Commission?**

A. Yes. I provided direct testimony on behalf of Duquesne Light in *Petition of PECO Energy for an Evidentiary Hearing on the Energy Efficiency Benchmarks*, at Docket No. P-2012-2320334; in support of Duquesne Light's Energy Efficiency and Conservation Petition for

Approval of Modifications to its Demand Response Programs and at Docket No. M-2009-2093217; in support of Duquesne Light's Energy Efficiency and Conservation Phase II Plan at Docket Nos. M-2012-2334399, Phase III Plan at Docket No. M-2014-2424864 and Phase IV Plan at Docket No. M-2014-2424864; and on behalf of Duquesne Light in *Petition of Peoples Natural Gas Company, LLC for Approval of its Energy Efficiency and Conservation Plan,* Docket No. M-2017-2640306.

I. BACKGROUND

Q. Please explain the Company's energy efficiency conservation and demand response obligations under Act 129 of 2008 ("Act 129").

A. Pursuant to Act 129 of 2008 ("Act 129") Electric Distribution Companies ("EDCs") with at least 100,000 customers are required to achieve consumption reductions of at least one percent (1%) by May 31, 2011, and at least three percent (3%) by May 31, 2013. 66 Pa.C.S. § 2806.1(c)(1), (2). Additionally, pursuant to section § 2806.1(d), EDCs are required to achieve a four and one-half (4.5%) percent peak demand reduction of the one hundred (100) highest hours by May 31, 2013. The Phase I EEC&DR Program savings target was 422,565 MWh. Act 129 further required the Commission to evaluate the cost and benefits of the EE&C plans by November 30, 2013, and implement additional incremental consumption and peak demand reductions only if the benefits of the EE&C plans exceed the costs. 66 Pa.C.S. § 2806.1(c)(3). The energy consumption reduction target for the Phase II three-year energy efficiency consumption was 276,722 MWh. The Phase III five-year energy efficiency consumption target was 440,916 MWh and the demand reduction target 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

issued its Energy Efficiency and Conservation Phase IV Implementation Order ("*Phase IV Implementation Order*") on June 18, 2020. 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 V Implementation Order ("*Phase V Implementation Order*") on June 18, 2025.

Q. **Please summarize the Phase V consumption reduction and demand reductions that the Commission adopted for Duquesne Light.**

A. The Commission has adopted for Duquesne Light a consumption reduction for the five year Phase V period of 261,583 MWh and demand reduction target of 46.5 MW beginning June 1, 2026.

Q. Does Duquesne Light's Phase V EE&C Plan meet these targets?

A. The Company's Phase V EE&C Plan is designed to exceed these levels and includes a consumption reduction target of 274,663 MWh and a demand reduction target of 48.2 MW.

Q. Provide your rationale for developing savings targets above the mandatory amounts.

A. The Phase V EE&C Plan exceeds kWh and kW savings mandate by 5% to provide a minimum buffer. Projecting the impacts of voluntary energy efficiency programs necessarily carries with it a degree of uncertainty; there are many unknows. In Phase IV, for example, Duquesne's EE&C programs were impacted by a significant number of changes to the TRM, executed through a series of guidance memos, codes and standards memos, and interim measure protocols issued by SWE. Additionally, there is uncertainty

about the stability of measure costs and market availability as well as the availability of a skilled workforce. Planning to exceed the mandate by 5% represents a conservative "overshoot" of the mandate providing a margin for correction in the event that programs under or over perform.

Q. How will Duquesne Light's EE&C Phase V Plan achieve demand reduction targets?

A. 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 expecting it to be a challenge. This measurement scheme represents a novel requirement not seen or tested before, just as the design around the top 100 hours measurement impacts required in Phases I and II and the design around dispatch triggered by 96% for PJM forecast peaks imposed in Phase III 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 including but not limited to optimized ENERGY STAR Connected Thermostats, managed EV charging and C&I load shifting. Duquesne Light plans these impacts so as to render 5-years of averaged impacts to increase the probability of meeting the newly imposed requirement(s).

Q. Does Act 129 provide guidance on EDCs' allowable spending levels for their EE&C Plans?

A. Yes. Act 129 provides that "[t]he total cost of any plan required under this section shall not exceed 2% of the electric distribution company's total annual revenue as of December 31, 2006." An EDC's total annual revenue is defined as "[a]mounts paid to the electric distribution company for generation, transmission, distribution and surcharges by retail customers." The Commission has interpreted this to include amounts paid to the EDC for generation service, including generation revenues collected by an EDC for an electric generation supplier that uses consolidated billing.

Q. Has the Commission provided further guidance on the definition of "EDC total annual revenue?"

A. Yes. On January 16, 2009, the Commission issued its EEC&DR Phase I Implementation Order at Docket No. M-2008-2069887 ("*Phase I Order*"). On pages 34-35 of the *Phase I Order*, the Commission stated:

> "…[T]he 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**. This result will bring Duquesne's program budget closer to a level of parity with the other EDCs and ensure that it has a more meaningful opportunity to comply with the EE&C provisions of Act 129."

The Commission retained its interpretation of EDC total annual revenues provided in Phase I, Phase II, Phase III, Phase IV, and now Phase V.

Q. **What is Duquesne Light's budget for its Phase V EE&C Plan?**

A. Duquesne Light's total 2006 annual revenues were $723,299,451. EGS total generation and transmission revenues in Duquesne Light's service territory in December 2006 were

$253,998,128. Combined, Duquesne Light and EGS 2006 annual revenues totaled $977,297,579. Applying simple arithmetic, 2% of $977,297,579 equals $19,545,951.58. Therefore, Duquesne Light's annual budget is $19,545,951.58, and the total five year program spending cap is $97,729,760

II. EE&C PHASE V PLAN DEVELOPMENT

Q. How will Duquesne Light measure energy savings for the programs it proposes to implement?

A. Under Act 129, the Commission was required to implement an energy efficiency program that includes a process to monitor and verify data collection and plan results. In the Phase I Order, the Commission adopted the *Energy Efficiency and DSM Rules for Pennsylvania's Alternative Energy Portfolio Standard, Technical Reference Manual* ("TRM") as a component of the EE&C Program evaluation process. The Commission continued its use of the TRM for the Phase II, Phase III, Phase IV and will do the same for Phase V programs. The TRM in Phase I and Phase II was updated annually and used to measure and verify applicable energy efficiency measures used by EDCs to meet the Act 129 consumption reduction targets. For Phase III, the Commission applied the 2016 TRM, as periodically amended, for the entirety of Phase III. Similarly, for Phase IV, the Commission applied the 2021 TRM, as periodically amended through memos and IMPs, for the entirety of Phase IV. The Commission is following a similar approach in Phase V. For Phase V, the Implementation Order at page 209 states that the 2026 TRM will be applicable for the entirety of Phase V but may be subject to a mid-phase TRM updates if required by changes 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

EE Potential Study[1]). Measure deemed savings were updated consistently with the 2026 TRM. Measure costs were documented using the SWE incremental costs database, contractor values, EDC research and specific measure cost web research. Incentive amounts were established starting with baseline assumptions applied in the 2024 Statewide EE 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) Order and applied to render measure, program, portfolio, and Plan level cost-effectiveness as expressed by the TRC ratio. Programs were defined based upon delivery channels within each customer sector.

Duquesne Light worked with CSPs to establish program definitions. Residential sector programs retain the successful appliance recycling, and midstream rebate offerings. In addition, Duquesne Light is offering an on-line marketplace allowing eligible customers the chance to shop for energy saving products and apply instant utility incentives at checkout in Phase V. The Commercial and Industrial portfolios retain proven customer market segment engagement channels. The Small Medium Nonresidential Energy Efficiency Proigram (SNEEP) features a Direct-Install, Midstream, Downstream and Multifamily Housing Retrofit engagement channels that successful in Phase IV and are continued in Phase IV. Such programs demonstrate Duquesne Light's commitment to 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.

Q. Please describe the process used to gather external stakeholder input on the Company's EE&C Phase V Plan.

A. 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, Conservation Service Providers, EM&V contractor, and CAUSE PA.

Q. Did the external stakeholder meetings influence the Company's EE&C Phase V Plan development?

A. Yes. Based on stakeholder input, Duquesne's Phase V Plan proposes continuing with the Income Eligible Advisory Group meetings throughout the Phase. Members of this group include community based organizations, OCA, CAUSE-PA, and various non-profit social service agencies. At these meetings marketing material and outreach opportunities will be discussed. 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.

Moreover, during Phase V, the Company plans to continue to work with the IEAG on raising awareness, marketing and outreach opportunities. Duquesne Light and its non-residential CSP(s) also plan to hold additional meetings after plan approval to discuss the logistics around continued partnership with the NGDCs to increase awareness of CHP rebate opportunities under the Phase V plan.

Q. Were internal stakeholders engaged in the process during development of the Phase V EE&C Plan?

A. Yes, members of DLC's Load Management Group and Advanced Grid Technology were engaged in discussions. These groups plan and implement load management programs as part of ongoing distribution system operations to help its customers save money and improve operating efficiency of its distribution system.

Q. Please describe the strategic work Duquesne Light is undertaking to align customer assistance programs and load management initiatives with the Company's Act 129 planning efforts.

A. Duquesne Light is undertaking a coordinated strategic effort to better integrate its customer assistance portfolio with Act 129 energy efficiency and demand-response planning, with a particular focus on load management. Working with its consultants, the Company has evaluated how outreach, enrollment, and on-bill support tools can be more tightly linked to targeted measures that reduce both energy consumption and peak demand for the customers who need help the most. This includes using data-driven segmentation to identify vulnerable and hard-to-reach customers, aligning assistance offerings with cost-effective energy efficiency and load management opportunities. The testimony explains how these efforts are being formalized into a forward-looking strategy that coordinates customer engagement, program design, and system planning so that customer assistance 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?

A. These operational load management initiatives may serve to meet Act 129 Phase V objectives and assist Duquesne Light to meet onerous Phase V demand reduction mandates. Through Act 129, customers may be served by applying such resources and avoiding costly program ramp-up, delay and unproven performance risk.

III. EE&C PHASE V PLAN PROGRAMS

Q. What programs are proposed in the Company's EE&C Phase V Plan?

A., Duquesne Light's proposed EE&C Phase V Plan is designed to educate customers about energy efficiency and conservation and lower customer energy consumption. The Phase V Plan is largely composed of home energy audits, building retrofits, appliance recycling and rebates program that have been customized to meet the needs of specific customer segments within Duquesne Light's service territory. The programs are organized to facilitate participation by three broad customer sectors: residential, commercial, and industrial customers. Additionally, each of the three customer sectors offers additional programs or program components tailored to meet the specific needs of certain customer segments, such as income eligible customers, small to medium commercial and industrial customers, and large commercial, large industrial and GNI customers. In addition, Behavioral Energy Efficiency Program reports will be sent to residential and income eligible residential customers.

Q. Please describe the Residential Program Offerings.

A. Phase V Residential programs include the following: 1) Appliance Recycling; 2) On-Line 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")

LIEEP is an income-qualified program providing services designed to assist low-income households to conserve energy and reduce electricity costs. LIEEP relies on several, low income segment-specific, contributing programs to achieve projected savings impacts and program cost-effectiveness. The Company intends to achieve the mandated 7.2% of its energy consumption reduction savings from this program and LI-BEEP.

Q. What are the projected energy consumption savings and demand reductions for the residential programs?

A. The Company expects to achieve 6,126 MWh in energy savings and 1.145 MW in demand reduction from the Residential Appliance Recycling program; 20,000 MWh in energy savings and 1.086 MW in demand reduction from the Residential Midstream EE Program; 6,500 MWh and 3.015 MW of demand reduction from the Residential On-Line Marketplace; 34,400 MWh in energy savings and 7.940 MW in demand reductions from the Residential Market Rate Behavioral and Residential Low Income Behavioral Energy Efficiency programs; 16,932 MWh in energy savings and 6.265 MW in demand reductions from LIEEP. The Residential Sector total projected energy savings is 83,958 MWh and 19.451 MW in demand reduction.

Q. Are the residential energy efficiency programs described herein cost effective?

A. Yes. The residential programs offered are collectively cost-effective. Except for Residential Midstream Incentives Program, each program achieved a TRC score at or above 1. Specifically, the Residential Appliance Recycling Program TRC score is 2.92; the Residential On-Line Marketplace Program TRC score is 2.21; the Residential Midstream Incentives Program TRC score is 0.50; the Residential Behavioral Efficiency Program TRC score is 1.41; and the Low Income Behavioral Efficiency Program TRC score is 1.15.

The LIEEP TRC score is 2.01. The overall residential energy efficiency TRC score in aggregate is 1.03.

Q. Are any of the residential customer programs currently in operation as part of Duquesne Light's Phase IV programs?

A. Yes. Programs currently in place as part of Duquesne Light's Phase IV program include Residential Marketplace; Residential Midstream; Residential Behavioral Energy Efficiency and Low Income Behavioral Energy Efficiency; Residential Appliance Recycling Program; and the Residential LIEEP.

Q. Are there any midstream and on-line marketplace measures that you would like to describe in more detail?

A. Yes. The Residential Midstream EE Program measures include heat pumps, air conditioners, min-split heat pumps, heat pump water heaters, ENERGY STAR Level 2 EV chargers and smart energy service panels. The Residential On-Line Marketplace will incentivize room air conditioners, ENERGY STAR certified smart thermostats,, ENERGY Star bathroom exhaust fans, water heater pipe insulation, low-flow faucet aerators and showerheads, thermostatic shower restriction values; ENERGY STAR refrigerators, freezers, clothes washers, clothes dryers, dishwashers, dehumidifiers, air purifiers; advanced powers trips, weather stripping, caulking, outlet gaskets, optimized ENERGY 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?**

A. Yes. The SNEEP is cost-effective with a TRC cost test ratio of ratio of 2.63:1.

Q. Are any of the commercial programs currently in operation, part of Duquesne Light's Phase V programs?

A. Yes. The Small Business Direct-Install Program and Small-Medium Midstream Program were successfully operated in Phase IV.

Q. Please describe the energy consumption reduction programs available to large commercial and industrial customers.

A. Customers served under these sectors are commercial and industrial customers with demands equal to or greater than 300 kW. They will have the opportunity to participate in three (3) programs: Large Commercial Energy Efficiency Program (CEEP), Public Agency Partnership Program (PAPP), and Large Industrial Energy Efficiency Program (IEEP). 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:

Serving Large Commercial customers with maximum annual demand ≥300 kW

Large Commercial Energy Efficiency Program
Provides on-site efficiency surveys and incentives to implement EE measures offering prescriptive incentives ($/widget) as well as engineering-based projects tailored to site-specific opportunities and requirements ($/kWh saved and/or $ per kW reduced). Program promotes a full range of building efficiency equipment and controls; retro-commissioning, virtual commissioning and strategic energy management, whole building approaches.

Public Agency Partnership Program
The target market is state and local government, including municipalities, school districts, institutions of higher education and nonprofit entities. PAPP was implemented in Phases I, II and III and is brought back for Phase V to address unique barriers to participation and focuses on governmental infrastructure, such as

water and wastewater operations, centrally located district plants and the region's expansive primary, secondary and higher education institutions.

Serving Large Industrial customers with maximum annual demand ≥300 kW.

Large Industrial Energy Efficiency Program

In Phase V IEEP 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 customized, engineering-based energy efficiency incentives.

Q. What are the projected energy consumption reductions and demand reductions expected from the large commercial and industrial efficiency program?

A. The Large Commercial Energy Efficiency Program is projected to save 50,000 MWh with a demand reduction of 8.504 MW. The Large Industrial Energy Efficiency Program is projected to save 40,000 MWh and reduce peak load by 5.329 MW. The Public Agency Partnership is projected to save 24,704 MWh and reduce the system peak by 3.155 MW.

Q. Are the energy efficiency programs proposed under the large commercial and industrial sectors cost effective?

A. Yes. The Large Commercial and Industrial programs offered are collectively cost-effective. The CEEP TRC score is 2.56; the PAPP TRC score is 2.31; and the IEEP TRC score is 4.40. In total, the programs in these sectors have a TRC score of 2.92.

Q. Are any of the large commercial and industrial programs currently in operation, part of Duquesne Light's Phase V programs?

A. Yes. Large commercial and industrial sector programs have been operating in every phase since Phase I. The current Large Commercial Energy Efficiency Program and the Large Industrial Energy Efficiency Program are an evolution of the Phase IV Large Business Solutions programs serving nonresidential customers with billing demand equal to or greater than 300 kW.

IV. PROGRAM COST

Q. **What is the Company's Phase V spending cap?**

A. As I discussed previously, Duquesne Light's Phase V annual budget is $19,545,951.58, and the total five year program spending cap is $97,729,760.

Q. What is the cumulative cost of the Company's proposed EE&C Phase V Plan and what is the implementation strategy to acquire at least 15% of the consumption reduction target in each program year as directed by the Commission?

A. The Company's EE&C Phase V Plan has a budget cap of $97,729,760. This Plan includes programs that are being continued as previously implemented, modified based on previous years' experiences, plus newly added programs. The forecast ramp-rates by projected saving impacts across the five–year period are found in the proposed plan in Figure 1, which provides for acquiring at least 15% of the consumption target in each of the Phase V program years.

Q. Please provide an overview of the EE&C Phase V Plan cost by customer sector.

A. As provided in Table 13 of Section 11 of the EE&C Phase V Plan, residential energy efficiency programs comprise 36.5% of the plan cost, or $35,690,239. Small Commercial/Industrial energy efficiency programs comprise 26.8% of the plan cost, or $26,166,519. Finally, Large Commercial/Industrial energy efficiency programs comprise 36.7% of the plan cost, or $35,873,001. In his direct testimony, Duquesne St. No. 2, Mr. Ogden describes how the Company will ensure that the programs are funded by the customer sector that benefits from the programs and measures offered in the Plan.

Q. What is your recommendation with respect to approval to this Plan as filed?

A. I recommend approval of the Plan as filed. It is in the best interest of our customers by empowering them to reduce energy use, save on their energy bills and manage their energy loads to the benefit of all customers.

Q. Does this conclude your testimony?

A. Yes.