

**PECO ENERGY COMPANY
STATEMENT NO. 2**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

DOCKET NO. M-2015-

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

WITNESS: NICHOLAS DEDOMINICIS

SUBJECT: THE PROGRAMS IN PECO'S PHASE III PLAN,
RESEARCH AND DEVELOPMENT EFFORTS,
SELECTION OF PHASE III CSPS

DATED: NOVEMBER 30, 2015

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**DIRECT TESTIMONY
OF
NICHOLAS DEDOMINICIS**

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

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

6 A. My name is Nicholas DeDominicis. I am the Manager of Evaluation, Measurement
7 and Verification (“EM&V”) for PECO Energy Company (“PECO” or the
8 “Company”). My business address is PECO Energy Company, 2301 Market Street,
9 Philadelphia, Pennsylvania 19103.

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

11 A. I am responsible for strategic planning, plan design and EM&V as they relate to
12 PECO’s Act 129 Energy Efficiency and Conservation (“EE&C”) initiatives. In
13 particular, I develop market-based programs and service offerings to meet PECO’s
14 Act 129 obligations and lead the Company’s EM&V of plan implementation to
15 ensure both compliance and continuous improvement. I also represent PECO in
16 interactions with the Pennsylvania Public Utility Commission’s (the “Commission’s”)
17 Statewide Evaluator, Commission working groups and stakeholders concerning the
18 Company’s EE&C programming.

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

20 A. I received a Bachelor of Science degree in nuclear engineering from the University of
21 Massachusetts. Since 1988, I have been involved in the design and implementation
22 of demand side management (“DSM”) programming for businesses and utilities. For

1 example, from 2000-2003, as Vice President of Energy Conservation and Load
2 Management for the New Hampshire Electric Cooperative, I managed a team of over
3 25 individuals to develop and implement successful DSM programming.

4 Immediately before joining PECO in 2010, I was the Director of Energy Strategies
5 and Solutions for Clean Energy Exchange, a clean energy consulting company. In
6 that role, I spearheaded efforts to develop new market-based products and service
7 offerings and create strategic partnerships with governmental entities, service
8 providers, manufacturers and equipment suppliers.

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

10 A. The purpose of my testimony is to describe the components of the Company's
11 proposed energy efficiency ("EE") and demand response ("DR") programs in its
12 Phase III EE&C Plan ("Phase III Plan" or "Plan") and to explain how those programs
13 will meet the requirements of Act 129 and the Commission's Phase III
14 Implementation Order.¹ In addition, I discuss PECO's research and development
15 plans and how the Company will select conservation service providers ("CSPs") to
16 implement the Phase III Plan.

¹ See Implementation Order, *Energy Efficiency and Conservation Program*, Docket No. M-2014-2424864 (Order entered June 19, 2015) ("*Phase III Implementation Order*").

1 **II. PECO’S EE PROGRAMS**

2 **5. Q. Please provide an overview of the EE programs in PECO’s Phase III Plan.**

3 A. PECO has made deliberate and significant changes to its Plan design to facilitate
4 energy savings across all electric end uses and improve customer experience. Key
5 elements of the EE programs that reflect these objectives are:

6 ***Comprehensive EE Programs.*** The Company is offering solutions and measures that
7 deliver savings across all electric end-uses under a comprehensive program for each
8 customer class, along with dedicated programs for residential low-income customers
9 and combined heat and power (“CHP”) projects. The resulting five EE programs are
10 as follows: Residential (excluding low-income), Low-Income, Small Commercial and
11 Industrial (“C&I”), Large C&I and CHP. As discussed in detail by Mrs. Lentini in
12 her testimony, the proposed program structure will increase customer access to
13 comprehensive solutions with flexibility to take advantage of, and participate in, the
14 programs in a manner that best fits their energy needs. This is a significant
15 improvement over Phase I and II plans which were more compliance-centric and
16 apparatus-based.

17 ***Customer Participation Pathways.*** Within each EE program, measures will be
18 implemented through one of four delivery pathways that reflect the various ways that
19 a customer may take advantage of EE opportunities: (1) retail (e.g., lighting rebates at
20 a hardware store); (2) participant-initiated (e.g., customers who pursue energy savings
21 directly and apply for rebates through PECO); (3) direct-action (e.g., a CSP picking
22 up an appliance for recycling); and (4) trade ally/contractor (e.g., a contractor

1 implementing measures during major renovations). The Company's focus on
2 pathways is intended to improve the delivery of EE programming opportunities to all
3 customers.

4 ***Rebate Structure.*** In PECO's Phase I and II plans, measure rebates were based on a
5 simple percentage of the incremental cost of a measure. While this rebate structure
6 incentivized customers to install measures with low incremental cost and short
7 payback periods (1 to 3 years), it did not properly incentivize measures with a higher
8 incremental cost, longer payback period and longer life. To encourage customers to
9 pursue comprehensive projects and savings opportunities, some measure rebates have
10 been increased to better drive adoption and some measure rebates have been reduced
11 where a lower incentive would continue to drive adoption.

12 ***New Measures.*** PECO has added approximately 35 new EE measures for residential
13 customers and 40 for non-residential customers to broaden customer opportunities for
14 savings. The addition of these new measures reflects PECO's experience in Phase I
15 and II, where customers lost savings opportunities because those opportunities were
16 not recognized as measures in the plan.

17 ***Special Emphasis on Unique Buildings Types.*** PECO's EE programs provide
18 special emphasis for two building types: multifamily and data centers. Multifamily
19 housing is unique in that a building can be served under a small C&I or large C&I
20 account and can be master-metered as a commercial account in its entirety or have
21 common areas that are commercially metered and housing units that are individually
22 metered as residential accounts. PECO's EE programs will specifically target eligible

1 multifamily properties with direct install Whole Building and Whole Home Solutions
2 to make it easier for customers living in those properties to implement a diverse array
3 of measures and benefit from energy savings. As part of the Low-Income EE
4 Program, a CSP will be engaged whose sole focus will be implementing appropriate
5 EE measures for low-income customers in master-metered multifamily buildings.
6 PECO's Small C&I EE and Large C&I EE Programs will also specifically target data
7 centers because of their unique energy usage characteristics and growing presence in
8 PECO's service territory.

9 We project that the EE programs will produce a total of 2,100,875 MWh in energy
10 savings over the course of the Phase III Plan (PY 2016-2020), or 107% of PECO's
11 overall energy savings target. The budget for all EE programming over the five-year
12 Plan period is approximately \$260.7 million.

13 **6. Q. Please describe PECO's Residential EE Program.**

14 A. The Residential EE Program is designed to offer customers opportunities to save
15 energy across all their electric end-uses and to market those opportunities in a way
16 that minimizes lost savings opportunities. We project that this program will produce
17 a total of 727,195 MWh in energy savings over the course of the Phase III Plan. The
18 budget for the program over the five-year Plan period is approximately \$ 100.1M.

19 The Residential EE Program contains a comprehensive series of Solutions including:

20 ***Retail Pathway:*** PECO will use retail partners to implement its Lighting, Appliance
21 and HVAC solutions. These solutions will offer a combination of cash rebates,

1 upstream discounts and midstream discounts to reduce the financial barriers to
2 purchasing highly efficient products.

3 ***Trade Ally Pathway:*** This pathway encompasses solutions and measures where a
4 customer works through an independent trade ally or contractor. PECO depends on
5 the third party, with which PECO has no contract, to promote participation and
6 program uptake. For example, PECO will offer its Residential New Construction
7 solution through this pathway by collaborating with various architects, builders, and
8 contractors to design and promote ENERGY STAR homes or other new construction
9 standards that meet high EE performance standards.

10 ***PECO Direct-Action Pathway:*** Each of the remaining Solutions (Whole Home,
11 Appliance Recycling, and Behavioral) will be delivered through a direct-action
12 pathway. PECO's Whole Home solution will offer customer energy audits and
13 assessments and the direct installation of EE improvements in customer homes and
14 apartments at no cost or at a significantly reduced cost to the customer. Appliance
15 Recycling solution will help customers recycle energy wasting appliances. The
16 Behavioral solution involve the development and mailing of Home Energy Reports to
17 customers that compare their electric consumption to similar households and make
18 recommendations about ways to use energy more efficiently. Other behavioral
19 awareness tactics that may be utilized include real-time energy displays, social media
20 updates, and community energy competitions.

1 7. Q. Please describe PECO’s residential Low-Income EE Program.

2 A. The Low-Income Program is an evolution and an enhancement of PECO’s successful
3 Phase I and II Low-Income Energy Efficiency Program (“LEEP”). Eligible low-
4 income customers will be able to apply for a broader list of measures when PECO
5 identifies savings opportunities during those customers’ in-home treatment visits. The
6 comprehensive list of measures for the Low-Income EE Program is provided in
7 Appendix E of the Phase III Plan. Further, there will be a dedicated focus on the
8 high-usage Customer Assistance Plan (“CAP”) population with incomes in the range
9 of 0-50% of the Federal Poverty Income Guidelines. The Low-Income EE Program
10 will exceed the Phase III Implementation Order requirement that 5.5% of PECO’s
11 overall energy savings target come from the low-income sector.² Specifically, PECO
12 is forecasting that 6.0% of its overall energy savings target (or 123,991 MWh in
13 energy savings for PY 2016-2020) will be generated by this program. The budget for
14 the program over the five-year Plan period is approximately \$ 36.1M.³

15 Similar to the residential program, the low-income program utilizes a variety of
16 pathways to reach out to customers:

17 ***PECO Direct-Action Pathway:*** The foundational element of the program is the
18 Whole Home Solution, which provides in-home audits and education as well as the

² *Phase III Implementation Order*, pp. 69-70.

³ PECO estimates that it could achieve its 5.5% usage reduction target for low-income programs with a Phase III budget of \$31 million. PECO’s proposed low-income budget of \$36.1 million is consistent with the Company’s recent settlement of its Three-Year Plan proceeding in which it agreed to propose a budget with an additional \$1 million annually to target the portion of the CAP population that has an income in the 0-50% of the federal poverty level and which has high usage. *See PECO Energy Company Universal Service and Energy Conservation Plan for 2013-2015 Submitted in Compliance with 52 Pa.Code §§ 54.74 and 62.4*, Docket No. M-2012-2290911 (Order entered July 8, 2015) (approving the Joint Petition for Settlement).

1 direct installation of EE measures at no charge to the participant. There is also an
2 Appliance Recycling Solution offered through this pathway to help customers recycle
3 energy wasting appliances and replace them with new ENERGY STAR appliances at
4 no cost to the customer.

5 ***Retail Pathway:*** PECO will use retailers located in zip codes with primarily low-
6 income customers and will offer higher incentives for Lighting solution to encourage
7 the purchase and use of highly efficient products than those offered in non-low-
8 income retail locations. Low-income residential customers can also take advantage of
9 the solutions in the Residential EE Program, but only the savings generated from the
10 dedicated Low-Income EE Program will be used to meet the carve out mandate. In
11 addition, as noted earlier, PECO will engage a CSP that is dedicated to implementing
12 appropriate EE measures for low-income customers in master-metered multifamily
13 buildings.

14 **8. Q. Please describe PECO’s Small C&I EE Program.**

15 A. The program is designed to provide small C&I customers, including customers in the
16 governmental, educational and non-profit (“G/E/NP”) sector, a diverse array of
17 savings opportunities. We project that this program will produce a total of 405,280
18 MWh in energy savings over the course of the Phase III Plan. The budget for the
19 program over the five-year Plan period is approximately \$ 44.5 million.

20 Solutions for small C&I customers will be delivered through the following pathways:

1 ***Participant-Initiated Pathway:*** PECO will use retail partners along with trade allies
2 and contractors to implement its Equipment and Systems solution. This solution
3 offers cash rebates, upstream discounts and midstream discounts to address the
4 financial barriers to purchasing highly efficient equipment such as lighting and
5 HVAC. Custom incentives and technical support will be available for larger
6 installation projects. This pathway is designed mainly for small C&I customers to
7 directly pursue energy savings. They will be able to take advantage of the HVAC,
8 lighting and appliance offerings through a PECO rebate application process.

9 ***Trade Ally Pathway:*** Similar to the Residential EE Program, PECO will offer the
10 New Construction solution to small C&I customers through a trade ally pathway to
11 incentivize the use of high energy efficiency performance standards in the design and
12 construction of new buildings. Additionally, the trade ally pathway will be used to
13 stimulate participation in the lighting, HVAC, refrigeration and compressed air end-
14 uses when small C&I customers are working through with the trade allies and
15 contractors to replace equipment and systems.

16 ***PECO Direct-Action Pathway:*** Each of the remaining Solutions (Whole Building and
17 Behavioral) will be delivered through a direct-action pathway. PECO's Whole
18 Building solution will offer energy audits and assessments and the direct installation
19 of EE improvements in businesses and apartments at no cost, or at a significantly
20 reduced cost, to the customer. The Behavioral solution involve the development and
21 mailing of Energy Reports to customers that compare their electric consumption
22 relative to similar businesses and make recommendations about how to use energy
23 more efficiently.

1 9. Q. Please describe PECO's Large C&I EE Program.

2 A. The program is designed to provide large C&I customers, including customers in the
3 G/E/NP sector, meaningful savings opportunities across a variety of electric end-uses.
4 We project that this program will produce a total of 480,875 MWh in energy savings
5 over the course of the Phase III Plan. The budget for the program over the five-year
6 Plan period is approximately \$ 55.1 million.

7 The solutions for large C&I customers are similar to those offered in the small C&I
8 customer program, and will be delivered through the following pathways:

9 *Participant-Initiated Pathway:* The Equipment and Systems Solution will use the
10 participant-initiated pathway along with trade allies and contractors to offer cash
11 rebates, upstream discounts and midstream discounts to reduce the financial barriers
12 to purchasing highly efficient equipment such as lighting and water heating
13 equipment. Custom incentives and technical support will be available for larger
14 installation projects.

15 *Trade Ally Pathway:* PECO will work with architects, builders and contractors to
16 implement the New Construction solution which incentivize the use of high energy
17 efficiency performance standards in the design and construction of new buildings.

18 10. Q. Please describe PECO's CHP Program.

19 A. The CHP Program is designed to facilitate the installation of energy-saving CHP
20 systems by addressing financial and technical barriers associated with this
21 technology. The program is open to both large C&I and small C&I customers

1 (including customers in the G/E/NP sector and master-metered multifamily
2 buildings). We project that this program will produce a total of 363,535 MWh in
3 energy savings over the course of the Phase III Plan. The budget for the program
4 over the five-year Plan period is approximately \$ 25.0 million.

5 Because of the technical complexity and large capital investment inherent in CHP
6 systems, PECO will utilize its own contacts with key account customers and
7 collaborate with project developers to recruit participants. The program has three
8 types of incentives that are distributed at key milestones in the life of a CHP project:
9 (1) design incentives; (2) capacity incentives; and (3) performance incentives. The
10 maximum total incentive will be 50% of the project cost up to \$1,000,000. The
11 program requires participants to install equipment that meets certain minimum
12 efficiency levels and also take steps to minimize the degradation of savings in future
13 operation of the CHP system.

14 **11. Q. Is the Plan designed to obtain at least 3.5% of the Company's overall energy**
15 **savings target from the G/E/NP sector as required by the Phase III**
16 **Implementation Order (p. 76)?**

17 A. Yes. The Company is projecting that 13% of its overall energy savings target will be
18 generated by the G/E/NP sector through participation in the Small C&I Program,
19 Large C&I Program and CHP Program.

1 **12. Q. Does the Company’s Plan provide at least one comprehensive program for**
2 **residential customers and one for non-residential customers as required by the**
3 **Phase III Implementation Order (p. 61)?**

4 A. Absolutely. The Residential, Low-Income, Small C&I and Large C&I Programs each
5 provide customers with comprehensive opportunities to save energy across all electric
6 end-uses. In addition, the CHP Program provides opportunities for deeper savings by
7 facilitating the installation of CHP technology, which was identified by the
8 Commission as an example of comprehensive programming in the Phase III
9 Implementation Order (p. 61).

10 **13. Q. Is the Company’s Plan designed to achieve at least 15% of the overall energy**
11 **savings target each program year as required by the Phase III Implementation**
12 **Order (p. 59)?**

13 A. Yes. As shown in Table 7 in the Company’s Plan, the Plan is designed to achieve
14 over 15% of the total savings target in each of the five program years (PY 2016-
15 2020).

16 **III. PECO’S DR PROGRAMS**

17 **14. Q. Please provide an overview of the Company’s Phase III DR programs.**

18 A. PECO will provide a separate DR program for each of the residential, small C&I and
19 large C&I customer classes. Each DR program will require participants to reduce
20 load during discrete DR events in June through September and will provide incentives
21 to customers who participate in such events. In accordance with the Phase III

1 Implementation Order (p. 44), DR events will be called for the first six days that the
2 peak hour of PJM’s day-ahead forecast for the PJM RTO is greater than 96% of the
3 PJM RTO summer peak demand forecast for the months of June through September
4 each year of the program.

5 Although PECO does not have a peak demand reduction target for PY 2016, the
6 Company proposes to implement residential and small C&I Direct Load Control
7 (“DLC”) solution during that program year to prevent its existing Phase II DLC
8 programs from “going dark” for a year and losing participants.

9 We project that the DR programs will produce an annual average potential peak
10 demand savings of 171 MW for PY 2017-2020 or 106% of PECO’s peak demand
11 reduction target. The budget for all DR programming over the five-year Plan period
12 is approximately \$ 41.8M.

13 **15. Q. Please describe the Residential DR Program.**

14 A. The Residential DR Program will provide customers with a variety of opportunities to
15 receive a credit on their distribution bill for reducing their energy usage during times
16 of peak demand. The DLC Solution (which is similar to the Company’s Phase II
17 residential Smart AC Saver program) provides a bill credit in exchange for allowing
18 PECO to remotely cycle or shut down a customer’s central air conditioning (“CAC”)
19 unit on short notice during DR events. The Smart Thermostat Solution provides a bill
20 credit in exchange for allowing PECO to utilize Wi-Fi-enabled thermostats in
21 customers’ homes to reduce CAC usage by increasing the set temperature during DR
22 events. The final Solution is Behavioral and will be available to all residential

1 customers with an Advanced Metering Infrastructure (“AMI”) meter. PECO will
2 alert participating customers the day before a DR event and suggest actions the
3 customer may take to reduce energy usage during the event. The customer will
4 receive a bill credit for actual demand reductions during the event.

5 We project that this program will produce an annual average potential peak demand
6 savings of 44 MW for PY 2017-2020. The budget for the program over the five-year
7 Plan period is approximately \$ 13.7M.

8 **16. Q. Please describe the small C&I DR program.**

9 A. The small C&I DR program will offer customers a DLC solution which is similar to
10 the Company’s Phase II small C&I Smart AC Saver program. During a DR event,
11 PECO will remotely cycle or shut off a customer’s CAC unit on short notice to
12 reduce demand. Participants receive a bill credit for allowing PECO to control their
13 equipment.

14 We project that this program will produce an annual average potential peak demand
15 savings of 1 MW for PY 2017-2020. The budget for the program over the five-year
16 Plan period is approximately \$ 0.9 million.

17 **17. Q. Please describe the Large C&I DR Program.**

18 A. The Large C&I DR Program will use DR aggregators to engage customers in demand
19 reduction activities. When PECO calls a DR event, the aggregators will relay the
20 information directly to their enrolled large C&I customers. Those customers will
21 then reduce their electric load by a specified amount for the duration of the event in

1 exchange for financial incentives. Customers already participating in the PJM
2 program will receive no more than 50% of the incentives that non-PJM participating
3 customers receive.

4 We project that this program will produce an annual average potential peak demand
5 savings of 125MW for PY 2017-2020. The budget for the program over the five-year
6 Plan period is approximately \$ 27.1 million.

7 **18. Q. Does PECO intend to bid any DR resources from these programs into the PJM**
8 **market?**

9 A. PECO intends to evaluate the feasibility and risks associated with bidding resources
10 from this program into the PJM market. All net proceeds from any such bidding
11 would be returned to customers.

12 **IV. RESEARCH AND DEVELOPMENT EFFORTS**

13 **19. Q. Is PECO taking any steps to stay current with emerging technologies and**
14 **implementation strategies during plan implementation?**

15 A. Yes. The Company expects that over the course of the Phase III Plan, new
16 technologies and market engagement strategies will emerge. PECO has therefore
17 dedicated 5% of its annual its Phase III Plan budget towards “Research and
18 Development” to: (1) investigate and possibly pilot new and promising technologies ;
19 and (2) perform market research to identify and respond to market transformations
20 over the course of the five-year Plan term. In accordance with Act 129, the Company

1 will not use more than 2% of its Plan budget to investigate and/or pilot experimental
2 equipment or devices.⁴

3 **V. SELECTION OF PHASE III CSPS**

4 **20. Q. Please describe the Commission’s requirements regarding the selection of CSPs**
5 **for Phase III of the EE&C program.**

6 A. In the Phase III Implementation Order (p. 124), the Commission states that all CSP
7 contracts for Phase III must be competitively bid. In particular, EDCs must solicit
8 bids from CSPs that are qualified to perform the scope of work contained in the
9 specific contract.

10 **21. Q. Will PECO competitively bid all CSP contracts for Phase III?**

11 A. Yes. However, the Company proposes to retain its existing, competitively-procured
12 data tracking CSP for the first program year of Phase III (PY 2016) to ensure that it
13 can properly complete Phase II data collection and analysis. PECO intends to use PY
14 2016 to select a new data tracking CSP through a competitive solicitation process and
15 “debug” the new tracking platform so that all Phase III implementation CSPs can be
16 transitioned over smoothly at the beginning of PY 2017.

17 **VI. CONCLUSION**

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

19 A. Yes.

⁴ See 66 Pa.C.S. § 2806.1(b)(1)(iii).