

Richard G. Webster, Jr. Vice President

PECO Regulatory Policy and Strategy 2301 Market Street \$15 Philadelphia, PA 19103 Telephone 215.841.4000 Fax 215.841.6208 www.peco.com dick.webster@peco-energy.com

July 15, 2015

#### Via Federal Express

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RECEIVED

Rosemary Chiavetta, Secretary Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street Second Floor Harrisburg, Pennsylvania 17120 JUL 1 5 2015

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

#### Re: PUC Docket No. M-2012-2333992 Phase II Energy Efficiency and Conservation Program Quarterly Report for March 1, 2015 through May 31, 2015

Dear Secretary Chiavetta:

In accordance with the Commission's Secretarial Letter dated May 25, 2011 (Docket No. M-2008-2069887), enclosed is PECO's Phase II Quarterly Energy Efficiency & Conservation Report for the period March 1, 2015 through May 31, 2015.

PECO is providing a copy of the report to the Act 129 Statewide Evaluator (GDS Associates, Inc.) and is also posting the report on the PECO website.

Please acknowledge receipt of the foregoing on the enclosed copy of this letter.

If you have any further questions regarding this matter, please call me at 215-841-5777.

Rahand G. Welsster, Jr. / RAS Sincerely,

cc: C. Walker-Davis, Director, Office of Special Assistants
 P. T. Diskin, Director, Bureau of Technical Utility Services
 D. P. Hosler, Director, Bureau of Audits
 J. E. Simms, Director, Bureau of Investigation & Enforcement
 Office of Consumer Advocate
 Office of Small Business Advocate
 McNees, Wallace & Nurick

Enclosures

# Quarterly Report to the Pennsylvania Public Utility Commission

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For the Period March 2015 through May 2015 Program Year 6, Quarter 4

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PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

For Pennsylvania Act 129 of 2008 Energy Efficiency and Conservation Plan

Prepared by Navigant Consulting, Inc.

For

PECO Energy Company

July 15, 2015

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# Acronyms

ASHP	Air Source Heat Pump
C&I	Commercial and Industrial
CATI	Computer-Aided Telephone Interview
CDO	Commercial Date of Operation
CFL	Compact Fluorescent Lamp
СНР	Combined Heat and Power
CSP	Conservation Service Provider or Curtailment Service Provider
CVR	Conservation Voltage Reduction
CVRf	Conservation Voltage Reduction factor
DHW	Domestic Hot Water
DLC	Direct Load Control
DR	Demand Response
EDC	Electric Distribution Company
EDI	Electronic Data Interchange
EE&C	Energy Efficiency and Conservation
EM&V	Evaluation, Measurement, and Verification
GNI	Government, Nonprofit, Institutional
HER	Home Energy Reports
HVAC	Heating, Ventilating, and Air Conditioning
IC	Implementation Contractor
IQ	Incremental Quarter
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light-Emitting Diode
LEEP	Low-Income Energy Efficiency Program
LIURP	Low-Income Usage Reduction Program
M&V	Measurement and Verification
MW	Megawatt
MWh	Megawatt-hour
NTG	Net-to-Gross
PA PUC	Pennsylvania Public Utility Commission
PECO	PECO Energy Company
Phase II	June 1, 2013 to May 31, 2016

Phase II Savings	Cumulative Ex Ante Program/Portfolio Phase II Inception to
Phase II-CO Savings	Date Cumulative Ex Ante Program/Portfolio Phase II Inception to
-	Date including Carry-Over Savings from Phase I
Phase II-Q Savings	Phase II verified gross savings from the beginning of Phase II +
-	PYTD reported gross savings
Phase II-Q-CO Savings	Phase II verified gross savings from the beginning of Phase II +
	verified Carry-Over Savings from Phase I + PYTD reported
	gross savings
PY5	Program Year 2013, from June 1, 2013 to May 31, 2014
PY6	Program Year 2014, from June 1, 2010 to May 31, 2015
РҮ7	Program Year 2015, from June 1, 2011 to May 31, 2016
ΡΥΧ QΧ	Program Year X, Quarter X
PYTD	Program Year to Date
RAP	Resource Action Programs
RCT	Randomized Controlled Trial
SAR	Smart Appliance Recycling
SBR	Smart Builder Rebates
SBS	Smart Business Solutions
SCI	Smart Construction Incentives
SEER	Seasonal Energy Efficiency Rating
SEI	Smart Equipment Incentives
SES	Smart Energy Saver
SMFS	Smart Multifamily Solutions
SOS	Smart On-Site
SUP	Smart Usage Profile
SWE	Statewide Evaluator
TRC	Total Resource Cost
TRM	Technical Reference Manual

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# **1** Overview of Portfolio

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Pennsylvania Act 129, signed on October 15, 2008, mandated energy savings and demand reduction goals for the largest electric distribution companies (EDCs) in Pennsylvania for Phase I (2008 through 2013). In 2009, each EDC submitted energy efficiency and conservation (EE&C) plans—which the Pennsylvania Public Utility Commission (PA PUC) approved—pursuant to these goals. Each EDC filed new EE&C plans with the PA PUC in early 2013 for Phase II (June 2013 through May 2016) of the Act 129 programs. The PA PUC subsequently approved these plans in 2013.

Implementation of Phase II of the Act 129 programs began on June 1, 2013. This report documents the progress and effectiveness of the Phase II EE&C accomplishments for the PECO Energy Company (PECO) in the fourth quarter (Q4) of Program Year 6 (PY6), defined as March 1, 2015 through May 31, 2015, as well as the cumulative accomplishments of the programs since the inception of Phase II. Additionally, this report is structured to document the verified energy savings carried over from Phase I. The Phase I carry-over savings count toward EDC savings compliance targets for Phase II.

Navigant Consulting, Inc. (Navigant) is evaluating the programs, which includes measurement and verification (M&V) of savings. Navigant will report the verified savings for PY6 in the annual report, which PECO will file on November 15, 2015.

#### **1.1 Carry-Over Savings**

According to the Phase II Implementation Order, the PA PUC allows PECO to "carry over" megawatt-hour (MWh) savings in excess of its Phase I compliance target into Phase II of Act 129. The total, verified savings based on the technical reference manual (TRM) that PECO reported for Phase I was 1,399,242 MWh. The PA PUC tentatively accepted this value in its Act 129 Phase I Compliance Determination Order.<sup>[1]</sup> At the time PECO filed its Phase I Final Report, there were three combined heat and power (CHP) projects (one in the commercial and industrial [C&I] sector and two in the government, nonprofit, institutional [GNI] sector) that had commercial dates of operation (CDO) in Phase I, but these were completed too late in the program year for Navigant to fully verify them. Per the statewide evaluator's (SWE's) September 13, 2013 guidance memo on reporting unverified savings,<sup>[2]</sup> PECO presented reported (unverified) savings for these projects in the Phase I report. Navigant has since fully evaluated these three projects, and the verified savings total 25,101 MWh. In combination with the TRM-verified savings from Phase I, PECO's total, TRM-verified savings from Phase I are therefore 1,424,343 MWh. This amount exceeds PECO's Phase I compliance target of 1,181,550 MWh by 242,793 MWh, which is the amount that PECO is carrying over into Phase II. **Table 1-1** summarizes these savings.

	Savings (MWh)
Phase I TRM-Verified Savings Excluding CHP	1,399,242
Phase I CHP Verified Savings	25,101
Total Phase I Verified Savings	1,424,343
Phase I Energy Compliance Target	1,181,550
Verified Carry-Over Savings	242,793

Table 1-1. Savings from Phase I Carried into Phase II

<sup>&</sup>lt;sup>[1]</sup> Pennsylvania Public Utilities Commission, Act 129 Phase I Compliance Determination Order, March 20, 2014, p.6.

<sup>&</sup>lt;sup>121</sup> Statewide Evaluator, Guidance Memo GM-021, Reporting Unverified Energy and Peak Demand Savings for Phase I Projects in the Act 129 Phase I Final Report (September 13, 2013).

#### **1.2** Summary of Achievements

PECO has achieved 65 percent of the May 31, 2016 energy savings compliance target, based on cumulative program inception to date (Phase II-CO<sup>1</sup>) reported gross energy savings,<sup>2</sup> and 69 percent of the energy savings compliance target based on Phase II-Q-CO<sup>3</sup> gross energy savings achieved through Q4, as shown in **Figure 1-1**.

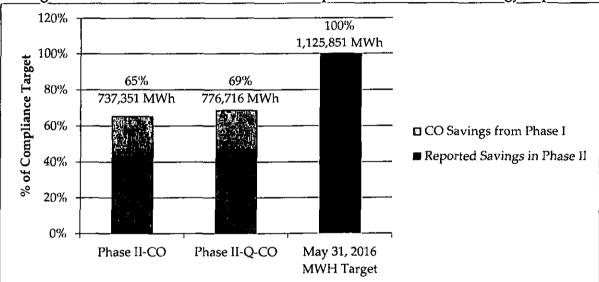


Figure 1-1. Cumulative Portfolio Phase II Inception to Date (Phase II) Energy Impacts

Source: PECO and Navigant Analysis

<sup>&</sup>lt;sup>1</sup> Phase II-CO is the cumulative ex ante program/portfolio savings from the inception of Phase II to date, including carry-over savings from Phase I.

<sup>&</sup>lt;sup>2</sup> Phase II reported gross savings are the reported gross savings from the beginning of Phase II through the end of the current quarter. All savings reported as Phase II reported gross savings are computed this way.

<sup>&</sup>lt;sup>3</sup> Phase II-Q-CO gross savings are the Phase II verified gross savings from the beginning of Phase II, including verified carry-over savings from Phase I, added to the PYTD reported gross savings.

PECO has achieved 141.0 MW of demand reduction through the end of PY6 Q4 based on cumulative reported gross demand savings and 154.5 MW of demand reduction based on Phase II-Q,<sup>4</sup> as shown in **Figure 1-2**.

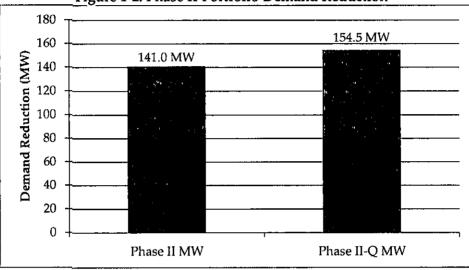


Figure 1-2. Phase II Portfolio Demand Reduction<sup>5,6</sup>

There are 18 measures available to the low-income sector at no cost to the customer. These measures make up 14 percent of the total measures offered. This exceeds the Phase II goal, which is the fraction of the electric consumption of the utility's low-income households divided by the total electricity consumption in the PECO territory (8.8 percent).<sup>7</sup> The Phase II reported gross energy savings achieved in the low-income sector are 33,098 MWh.

Source: PECO and Navigant Analysis

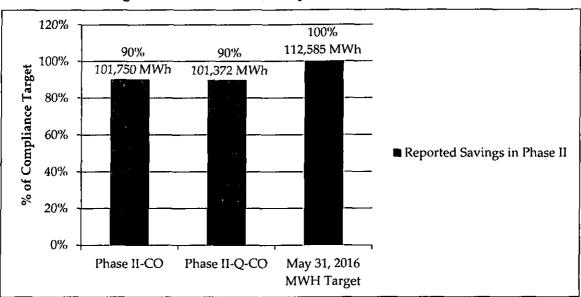
<sup>&</sup>lt;sup>4</sup> Unlike Phase I, there is no compliance target for demand reduction in Phase II.

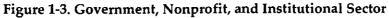
<sup>&</sup>lt;sup>5</sup> Phase II MW = Phase II demand savings to date.

<sup>&</sup>lt;sup>6</sup> Phase II-Q MW = Phase II verified gross demand savings from the beginning of Phase II + PYTD reported gross demand savings.

<sup>&</sup>lt;sup>7</sup> Act 129 includes a provision requiring electric distribution companies to offer a number of energy efficiency measures to low-income households that are "proportionate to those households' share of the total energy usage in the service territory." 66 Pa.C.S. §2806.1(b)(i)(G).

PECO achieved 90 percent of the May 31, 2016 energy reduction compliance target for the GNI sector based on Phase II reported gross energy savings, and 90 percent of the target based on Phase II-Q-CO gross energy savings achieved through Q4, as shown in **Figure 1-3**.





Source: PECO and Navigant Analysis

## **1.3** Program Updates and Findings

• Smart Appliance Recycling (SAR) Program: In PY6 Q4, the residential component of the SAR program experienced strong participation. PY6 Q4 had approximately 3,079 participants, with 3,243 units recycled. This is the highest number of appliances recycled in a single quarter since the inception of the program, and slightly more than the 2,982 units recycled in PY6 Q3. Similar to PY6 Q3, more units were recycled in PY6 Q4 than in any single quarter in PY5. Navigant attributes the continued strong participation to the incentive increasing from \$35 to \$50 during PY6 Q2. Refrigerators made up 83 percent of the PY6 Q4 recycled units. Additionally, new appliances replaced 23 percent of recycled units. This is a significant decrease in comparison to PY6 Q3, when customers replaced 49 percent of recycled units.

For the non-residential component (under Smart Equipment Incentives [SEI]), there were 41 C&I participants in PY6 Q4 that recycled 55 units. Refrigerators made up 49 of the 55 units and new appliances replaced 17 of 55, or 31 percent. The replacement percentage is much lower in comparison to PY6 Q3, when PECO replaced 88 percent of units. This quarter's participation alone is equivalent to PY6 Q1–Q3 combined, which had 39 participants that recycled 56 units. Additionally, six GIN participants recycled seven appliances in PY6 Q4. The SEI-GIN participation in PY6 Q4 is exactly half of the total SEI-GIN participation in all of PY6. Review of the Q4 data found all financial reporting to be accurate and consistent.

 Smart Home Rebates (SHR) Program: In PY6, lighting measures produced 87 percent of the SHR program's energy savings and 71 percent of its demand savings, similar to the 90 percent of energy savings but higher than the 61 percent demand savings verified in PY5. Non-lighting measures produced the remaining 13 percent of energy savings and 29 percent of demand savings.

Bulb sales for PY6Q4 were 510,785, which is less than either PY6Q3 or PY6Q2. The combined sales for PY6 are 1,986,139 bulbs. For this quarter, the proportion of lightemitting diode (LED) sales increased from 65 percent to 89 percent. For PY6, PECO focused the program evenly among standard twist compact fluorescent lamps (CFLs) (27 percent), general service LEDs (34 percent), and specialty LEDs (32 percent), with minimal emphasis on specialty CFLs (7 percent).

Smart House Call (SHC) Program: PECO launched the SHC program in PY5 at the start
of Phase II for the residential sector. There were 1,774 new participants in PY6 Q4, 1,705
of whom had one or more program measures installed as of the end of PY6 Q4 (some
participants have an audit or assessment performed but do not choose to have any direct

install measures implemented at the time of the walkthrough). For comparison, there were 1,333 participants in PY6 Q3 and 3,847 total verified participants overall as of the end of PY6 Q3. Reported energy savings in PY6 Q4 are 1,270 MWh and peak demand savings are 0.2 MW. Out of the 1,774 new participants, 1,318 received assessments and 457 received audits (one participating premise received both an audit and assessment on separate units). In addition, 234 participants who had previously received an audit installed major measures (such as wall and ceiling insulation, insulation air sealing, and air source heat pump [ASHP] duct sealing and maintenance). Participating program contractors typically install these major measures and the measures go beyond the direct install measures, such as energy efficient light bulbs and smart power strips that install during assessments and audits. Overall, measures installed to date include electric water heater pipe insulation; ENERGY STAR® CFLs, LEDs, and LED nightlights; low-flow faucet aerators and showerheads; smart strip plug outlets; ASHP duct sealing; ASHP maintenance; attic and wall insulation; and air sealing.

- Smart Builder Rebates (SBR) Program: In PY6 Q4, the SBR program completed 68 new home projects, three times the participation experienced in Q1–Q3 combined (20 homes). This increase in participation is the result of a revision to the eligibility rules allowing electrically cooled (gas-heated) homes into the program. This resulted in a 70 percent reduction in the average savings per home, but an 18 percent increase in total savings for the quarter (compared to Q2). Roughly half (44 percent) of Q4 savings came from whole-house measures (heating, ventilation, and air-conditioning [HVAC], shell, and domestic hot water [DHW]), with the remainder achieved by lighting measures.
- Smart Energy Saver (SES) Program: In Q4 of PY6, the SES program implementer, Resource Action Programs (RAP), focused its efforts on collecting installation survey data from participating teachers and reconciling any returned kits. PECO did not distribute any new kits in Q4.

- Smart Usage Profile (SUP) Program: In Q4 of PY6, the implementer, Opower, continued sending home energy reports to two participant groups for a total of roughly 77,000 randomly selected households. Both participant waves will continue to receive reports through PY7, and an additional participant wave will launch in Q1 of PY7.
- Smart Multifamily Solutions (SMFS) Program: During Q4 3,152 total participants covering the residential sector (3,070 participants), C&I sector (80 participants), and GNI sector (2 participants) received cost-free direct installation (DI) measures. The program claimed a reported 2,091 MWh of total energy savings with 0.2 MW of demand reduction in PY6 Q4. During the entirety of PY6, the program completed cost-free DI measures for a total of 11,770 participants covering 11,308 residential, 454 C&I, and 8 GNI sector participants. The program claimed a reported 6,828 MWh of total energy savings with 0.7 MW of demand reduction during this program year and has incurred an expenditure of \$2.65 million from DI installation services. As of the end of PY6, the program has attained 75 percent of the Phase II EE&C MWh savings target for the residential sector and 51 percent of the non-residential sector target. Two years into Phase II, the program has still not seen any participation in its prescriptive channel.
- Low-Income Energy Efficiency Program (LEEP): Participation levels were slightly down from PY6 Q3 participation, with 2,957 participants receiving audits as part of Component 1. The large majority of the audits were electric baseload audits. As part of Component 2, PECO installed 6,066 bulbs through the Low-Income Usage Reduction Program, similar to PY6 Q3. As part of Component 3, PECO distributed 79,400 bulbs to low-income customers, up from PY6 Q3. As part of Component 4, PECO replaced 975 refrigerators, down from PY6 Q3. The majority of program savings accrue from DI measures from Components 1, 2, and 4. The remaining savings are broken out across the other components as follows:
  - Component 1 accounts for 28 percent of energy savings and 27 percent of demand savings.
  - Component 2 accounts for 4 percent of energy savings and 4 percent of demand savings.
  - Component 3 accounts for 59 percent of program energy savings and 58 percent of program demand savings.
  - Component 4 accounts for 10 percent of energy savings and 12 percent of demand savings.
- SEI C&I Program: 266 total retrofit projects received rebates from the SEI C&I program in PY6 Q4. Two hundred and sixty six total participants completed those projects; therefore, each participant completed one project. This brings the total number of projects completed in PY6 to 788. The total number of projects completed in PY5 was 329, so the

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number of projects completed in PY6 is about 240 percent of the total projects completed in the previous year. The energy savings reported in PY6 are about 287 percent of the total savings reported in PY5. Similarly, the demand savings reported in PY6 are about 238 percent of the PY5 reported savings. Overall, the data for PY6 shows that the SEI C&I program was more than twice as large for participation and savings in PY6 than it was in PY5.

- SEI GNI Program: 59 total retrofit projects received rebates from the SEI GNI program in PY6 Q4. Fifty-eight total participants completed those 59 projects. This brings the total number of projects completed in PY6 to 228. The total number of projects completed in PY5 was 101, so the number of projects completed in PY6 is about 226 percent of the total projects completed in PY5. The energy savings reported in PY6 are about 252 percent of the total savings reported in PY5. Similarly, the demand savings reported in PY6 are about 151 percent of the PY5 reported savings. Overall, the data for PY6 shows that the SEI GNI program is more than twice as large for participation and energy savings in PY6 as it was in PY5, while demand savings are about 51 percent higher than PY5.
- Smart Construction Incentives (SCI) Program: 18 new construction projects received rebates from the SCI program in PY6 Q4. The total number of participants was also 18; therefore, each participant completed one project. This brings the total number of projects completed in PY6 to 74. The total number of projects completed in PY5 was 29, so the number of projects completed in PY6 is about 255 percent of the total projects completed in PY5. The energy savings reported in PY6 are about 230 percent of the total savings reported in PY5. Similarly, the demand savings reported in PY6 are about 245 percent of the PY5 reported savings. Overall, the data for PY6 shows that the SCI program was more than twice as large for participation and savings in PY6 as it was in PY5.
- Smart Business Solutions (SBS) Program: PECO chose to reduce SBS program activity
  significantly in Q4 as program spending approached the Phase II budget. A total of 68
  customers (all in the C&I sector) participated in the program in Q4, with annual savings
  estimated at 2,179 MWh. Projects replacing linear fluorescent fixtures with more efficient
  high-performance T8 and T5 fixtures accounted for 81 percent of program savings in Q4.

- Smart On-Site (SOS) Program: The program did not process any CHP projects in Q4. However, the program is tracking the progress of several projects and the program anticipates the completion of those projects prior to the end of Phase II. There are currently eight projects with estimated completion dates in Phase II that have reserved incentive funds.
- **Residential Smart Air Conditioning (A/C) Saver Program:** The Residential Smart A/C Saver program had 69,192 registered participants representing 80,575 devices at the end of PY6 Q4. The Residential Smart A/C Saver Program was active through September of Q2. The program has concluded for the PY6 cooling season, and PECO expects to resume in the first quarter of PY7.
- **Commercial Smart A/C Saver Program:** The Commercial Smart A/C Saver program had 1,824 registered participants representing 3,257 devices at the end of PY6 Q4. The Commercial Smart A/C Saver Program was active through September of Q2. The program has concluded for the PY6 cooling season, and PECO expects to resume in the first quarter of PY7.

## 1.4 Evaluation Updates and Findings

- **SAR Program:** Navigant continued implementing the PY6 evaluation plan, including completing the design of participant interview guides, which it is currently fielding. The surveys are expected to be complete by the end of June, and the evaluation team plans to calculate the net-to-gross and in-service rates by early July. The evaluation team also began conducting research on the secondary market for refrigerators and freezers in PECO territory.
- SHR Program: The M&V activities for Q4 of PY6 included the completion of mystery shopping activities; telephone interviews with HVAC installers and distributors; focus groups with HVAC program participants and contractors; and a telephone survey of participants who purchased qualifying HVAC and appliance measures. For lighting measures, the evaluation team completed a general population survey and an analysis of conjoint data from an online panel. The evaluation team also conducted a limited shelf survey to confirm the current market conditions. Additional evaluation activities included completing a review of non-lighting tracking data to confirm content and data quality.
- SHC Program: The M&V activities completed for the PY6 Q4 report consisted of reviewing the tracking data provided to the evaluation team by PECO program staff, as well as reviewing all invoices from the service provider (CSP) received and approved by PECO for labor and onsite audit and assessment costs through the end of May 2015. After

confirming consistency between the CSP invoices and the program tracking data, Navigant used the tracking data to verify the reported PY6 Q4, PYTD, and Phase II savings.

Other evaluation activities in this period included completion of Program Manager, Program Implementer, Contractor, and Energy Advisor Interviews; development of a data request for participant file review; and finalizing the survey instrument and sample for program participant installation verification telephone surveys.

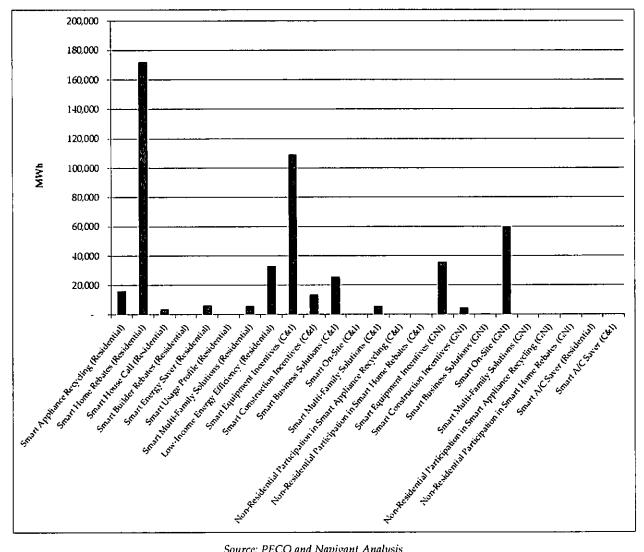
- SBR Program: Evaluation activities completed in PY6 Q4 consisted of reviewing the tracking data provided to the evaluation team by PECO program staff, as well as reviewing all invoices from the CSP received and approved by PECO for Q4. The evaluation team also prepared program staff interview guides and modeling files for the PY6 impact evaluation.
- SES Program: The M&V activities completed for PY6 Q4 consisted of fielding teacher interviews, reviewing the invoice and survey data provided to the evaluation team by PECO program staff, and correspondence with PECO regarding the student survey deadline for PY7.
- **SUP Program:** The M&V activities completed for PY6 Q4 included completion of a participant customer phone survey and verification that customers for the upcoming PY7 program wave were randomly assigned to the participant and control groups, consistent with a randomized controlled trial design.
- SMFS Program: Navigant conducted in-depth interviews with PECO/Franklin Energy
  personnel, designed to assess program effectiveness and identify barriers or potential
  improvements, in PY6 Q4. For PY6, the evaluation team has conducted participant
  telephone surveys of property owners and tenants to support net impact, gross impact,
  and process evaluation. As part of the gross impact evaluation activities for PY6, the team
  will also complete onsite visits and file reviews. Navigant expects onsite visits to be
  completed by the end of July 2015.

- LEEP Program: Navigant continued implementing the PY6 evaluation plan, including conducting the on-site survey effort, where Navigant staff visited participant homes during the audit process and identified energy saving measures that may present areas for additional savings for the program. Navigant is summarizing the results of this effort in a memo. Navigant also completed the design of participant interview guides and subsequently began fielding them. The surveys are expected to be complete by the end of June, and the evaluation team plans to calculate the net-to-gross and in-service rates by early July.
- SEI C&I Program: The evaluation of the SEI C&I program will align closely with the PY5 evaluation in terms of approaches and tasks. The team completed a sample design based on Q1–Q4 completed projects to achieve an 85/15 or better level of confidence and relative precision at the program level. The team began completing pre-installation site visits where appropriate. The team began post-installation field verification in November 2014. Navigant has completed in-depth interviews with PECO and DNV GL personnel to assess the effectiveness of the program and to identify any barriers or potential improvements to the program implementation. Navigant has also completed the design of interview guides for market actors and is currently fielding them. Finally, Navigant has also completed the design of interview guides for program participants and plans to field them in the coming weeks. The team plans to complete these tasks by late June or early July 2015.
- SEI GNI Program: The evaluation of the SEI GNI program will align closely with the PY5 evaluation in terms of approaches and tasks. The team completed a sample design based on Q1–Q4 completed projects to achieve an 85/15 or better level of confidence and relative precision at the program level. The team began completing pre-installation site visits where appropriate. The team began post-installation field verification in November 2014. Navigant has completed in-depth interviews with PECO and DNV GL personnel to assess the effectiveness of the program and to identify any barriers or potential improvements to the program implementation. Navigant has also completed the design of interview guides for market actors and is currently fielding them. Finally, Navigant has also completed the design of interview guides for program participants and plans to field them in the coming weeks. The team plans to complete these tasks by late June or early July 2015.

- SCI Program: The evaluation of the SCI program will align closely with the PY5 evaluation in terms of approaches and tasks. The team has completed a sample design based on Q1–Q4 completed projects to achieve an 85/15 or better level of confidence and relative precision at the program level. The team began engineering reviews and field verification of the sampled projects in March 2015. The team had already begun post-installation field verification for large projects in November 2014. Navigant has completed in-depth interviews with PECO and DNV GL personnel to assess the effectiveness of the program and to identify any barriers or potential improvements to the program implementation. Navigant has also completed the design of decision maker and participant interview guides and plans to field them in the coming weeks. The team plans to complete these tasks by late June or early July 2015.
- SBS Program: Navigant conducted the following evaluation activities during Q4:
  - o Held monthly telephone conversations with the PECO program manager
  - o Conducted an in-depth interview with the PECO program manager
  - o Initiated the online surveys for nonparticipants and partial participants
  - o Reviewed completed online surveys for three partial participants
- SOS Program: Navigant's evaluation activities for this program during Q4 included:
  - o Conducted monthly telephone meetings with the PECO program manager
  - Developed and revised an interview guide for market research into financial metrics and thresholds for adoption of CHP among PECO customers in certain industries
  - o Conducted research to identify targets for the above interviews
- Residential and Commercial Smart A/C Saver Programs: The Residential and Commercial Smart A/C Saver programs were inactive during PY6 Q3 cooling season. Both the Residential and Commercial Smart A/C Saver programs continue to have reductions in their respective participant counts. Navigant attributes these reductions to normal attrition due to, for example, moves and business closures. However, both programs continued to enroll new participants in PY6 Q4 to offset some of this attrition. The PY6 control season is over; however, PECO plans to resume the Smart A/C Saver program again in PY7 Q1.

#### Summary of Energy Impacts by Program 2

Figure 2-1 presents a summary of the reported energy savings by program through Q4 of Phase II.





Source: PECO and Navigant Analysis

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**Table 2-1** presents a summary of energy impacts by program through Q4 of PY6.

# Table 2-1. EDC Reported Participation and Gross Energy Savings by Program (MWh/Year)

		Participar	nts	F	Reported Gross Impa (MWh/Year)		
Program	IQ	PYTD	Phase II	τQ	PYTD	Phase 11	Phase 1I-Q
Residential Total	90,036	145,212	107,643	28,036	105,892	204,559	205,801
Smart Appliance Recycling (Residential)	3,079	11,615	18,724	2,973	10,034	16,370	16,302
Smart Home Rebates (Residential) <sup>2</sup>	5,045	27,843	39,952	22,529	87,309	172,022	175,735
Smart House Call (Residential)	1,774	4,439	5,621	1,270	2,870	3,825	3,857
Smart Builder Rebates (Residential)	68	88	90	110	219	225	225
Smart Energy Saver (Residential)	0	12,919	25,503	0	1,932	6,232	3,780
Smart Usage Profile (Residential)	77,000	77,000	0	17	17	0	17
Smart Multi-Family Solutions (Residential)*	3,070	11,308	17,753	1,138	3,512	5,886	5,886
Low-Income Energy Efficiency Total <sup>3</sup>	2,957	10,572	19,539	6,407	18,971	33,098	35,735
Low-Income Energy Efficiency (Residential)	2,957	10,572	19,539	6,407	18,971	33,098	35,735
Non-Residential Total	604	2,270	3,425	54,540	138,761	256,901	292,387
Commercial and Industrial Total	531	1,995	3,016	47,830	109,857	155,150	191,015
Smart Equipment Incentives (C&I)	266	788	1,117	42,340	81,048	109,273	112,552
Smart Construction Incentives (C&I)	16	56	78	2,314	10,338	13,876	14,078
Smart Business Solutions (C&I)	68	559	967	2,179	15,178	25,866	25,378
Smart On-Site (C&I)	0	0	0	0	0	0	0
Smart Multi-Family Solutions (C&I)4	80	454	673	941	3,199	6,000	6,000
Non-Residential Participation in Smart							
Appliance Recycling (C&I)	41	78	121	49	87	130	130
Non-Residential Participation in Smart	60	60	60	7	7	7	32,877
Home Rebates (C&I) <sup>5</sup>		40-					
Government / Nonprofit Total	73	275	409	6,711	28,905	101,750	101,372
Smart Equipment Incentives (GNI)	58	226	327	5,709	25,645	35,818	34,819
Smart Construction Incentives (GNI)	2	17	24	982	2,705	4,833	4,991
Smart Business Solutions (GNI)	0	7	16	0	425	864	844
Smart On-Site (GNI)	0	0	2	0	0	59,945	60,427
Smart Multifamily Solutions (GNI) <sup>4</sup>	2	8	23	12	118	278	278
Non-Residential Participation in Smart	6	12	12	6	12	12	12
Appliance Recycling (GNI) Non-Residential Participation in Smart						<u> </u>	
Home Rebates (GNI) <sup>5</sup>	5	5	5	1	1	1	1
Demand Reduction Total	-781	-3,715	71,008	0	0	0	0
Smart A/C Saver (Residential) <sup>6</sup>	-730	-3,546	69,184	0	0	0	0
Smart A/C Saver (C&I) <sup>6</sup>	-51	-169	1,824	0	0	0	0
Total Portfolio	92,816	154,339	201,615	88,984	263,624	494,558	533,923
Carry-Over Savings from Phase I				<u> </u>			242,793
Total Phase II-Q-CO	<u> </u>						776,716
NOTES:				·			

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<sup>1</sup> Preliminary Realization Rates are based on evaluation activities and findings conducted on a partial sample set. These realization rates are not based on a statistically significant sample and are subject to change until the full evaluation is complete at the end of the program year.

<sup>2</sup>Participant values exclude sales of CFLs, ENERGYSTAR lighting fixtures, and LED lamps for which upstream rebates are provided.

<sup>3</sup>Act 129 includes a provision requiring EDCs to offer a number of energy efficiency measures to low-income households that are "proportionate to those households' share of the total energy usage in the service territory." 66 Pa.C.S. §2806.1(b)(i)(G). The legislation contains no provisions regarding targets for participation, or energy or demand savings. Participation includes only those receiving the Weatherization Audit.

\*The participation values shown here reflect the number of project IDs reported in the tracking data, rather than the number of billing account IDs. The values reported here better reflect the number of participating households, rather than the number of multifamily buildings in which the participants live.

<sup>3</sup>PECO has split out the (C&I) and (GNI) portions of the Smart Home Rebate program savings to more clearly and accurately present the energy, peak demand savings, and participation of this program.

\*Reductions in the participant rate for both the Residential and Commercial Smart A/C Saver programs can be attributed to normal participant attrition due to moves, business closures, etc. in the absence of concerted recruitment of new participants by PECO.

# 3 Summary of Demand Impacts by Program

**Figure 3-1** presents a summary of the reported demand reduction by program through PY6 Q4 of Phase II.

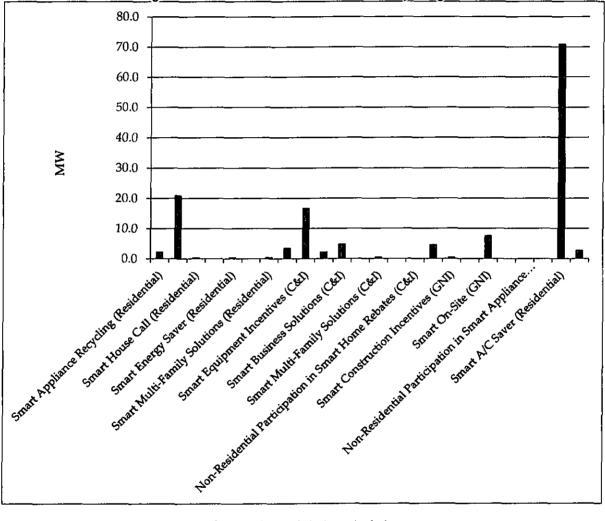


Figure 3-1. Phase II Demand Reduction by Program

Source: PECO and Navigant Analysis

**Table 3-1** presents a summary of total demand reduction impacts by program through PY6Q4. Note that all demand reduction values have been adjusted to account for line losses.

		Participan	ts	Re	-	Gross Im AW)	pact
Program	IQ	PYTD	Phase II	IQ	PYT D	Phase II	Phase II-Q
Residential Total	90,036	145,212	107,643	4.3	16.5	25.3	35.3
Smart Appliance Recycling (Residential)	3,079	11,615	18,724	0.5	1.5	2.4	2.5
Smart Home Rebates (Residential) <sup>2</sup>	5,045	27,843	39,952	3.5	13.8	21.1	31.1
Smart House Call (Residential)	1,774	4,439	5,621.	0.2	0.4	0.6	0.6
Smart Builder Rebates (Residential)	68	88	90	0.1	0.1	0.1	0.1
Smart Energy Saver (Residential)	0	12,919	25,503	0.0	0.2	0.5	0.3
Smart Usage Profile (Residential)	77,000	77,000	0	0.0	0.0	0.0	0.0
Smart Multi-Family Solutions (Residential)	3,070	11,308	17,753	0.1	0.4	0.6	0.7
Low-Income Energy Efficiency Total <sup>3</sup>	2,957	10,572	19,539	0.8	2.5	3.6	4.1
Low-Income Energy Efficiency (Residential)	2,957	10,572	19,539	0.8	2.5	3.6	4.1
Non-Residential Total	604	2,270	3,425	8.0	20.0	38.0	41.0
Commercial and Industrial Total	531	1,995	3,016	7.0	16.8	24.8	27.3
Smart Equipment Incentives (C&I)	266	788	1,117	6.0	11.8	16.8	17.7
Smart Construction Incentives (C&I)	16	56	78	0.4	1.8	2.4	1.8
Smart Business Solutions (C&I)	68	559	967	0.4	2.8	4.9	3.4
Smart On-Site (C&I)	0	0	0	0.0	0.0	0.0	3.0
Smart Multi-Family Solutions (C&I)	80	454	673	0.1	0.4	0.6	0.4
Non-Residential Participation in Smart Appliance Recycling (C&I)	41	78	121	0.0	0.0	0.0	0.3
Non-Residential Participation in Smart Home Rebates (C&I) <sup>4</sup>	60	60	60	0.0	0.0	0.0	0.8
Government / Nonprofit Total	73	275	409	1.0	3.2	13.2	13.7
Smart Equipment Incentives (GNI)	58	226	327	0.9	2.8	4.7	4.3
Smart Construction Incentives (GNI)	2	17	24	0.1	0.3	0.5	0.6
Smart Business Solutions (GNI)	0	7	16	0.0	0.1	0.1	0.2
Smart On-Site (GNI)	0	0	2	0.0	0.0	7.8	8.6
Smart Multifamily Solutions (GNI) <sup>5</sup>	2	8	23	0.0	0.0	0.0	0.0
Non-Residential Participation in Smart Appliance Recycling (GNI)	6	12	12	0.0	0.0	0.0	0.0
Non-Residential Participation in Smart Home Rebates (GNI) <sup>4</sup>	5	5	5	0.0	0.0	0.0	0.0
Demand Reduction Total	-781	-3,715	71,008	0.0	0.0	74.0	74.0
Smart A/C Saver (Residential)	-730	-3,546	69,184	0.0	0.0	71.1	71.1
Smart A/C Saver (C&I)	-51	-169	1,824	0.0	0.0	2.9	2.9
Total Portfolio	92,816	154,339	201,615	13.1	39.0	140.9	154.5

Table 3-1. Participation and Reported Gross Demand Reduction by Program

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#### NOTES:

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<sup>1</sup> Preliminary Realization Rates are based on evaluation activities and findings conducted on a partial sample set. These realization rates are not based on a statistically significant sample and are subject to change until the full evaluation is complete at the end of the program year.

<sup>2</sup>Participant values exclude sales of CFLs, ENERGY STAR lighting fixtures, and LED lamps for which upstream rebates are provided.

<sup>1</sup>Act 129 includes a provision requiring EDCs to offer a number of energy efficiency measures to low-income households that are "proportionate to those households' share of the total energy usage in the service territory." 66 Pa.C.S. §2806.1(b)(i)(C). The legislation contains no provisions regarding targets for participation, or energy or demand savings. Participation includes only those receiving the Weatherization Audit.

\*PECO has split out the (C&I) and (GNI) portions of the Smart Home Rebate program savings to more clearly and accurately present the energy, peak demand savings, and participation of this program.

<sup>s</sup>The participation values shown here reflect the number of project IDs reported in the tracking data, rather than the number of billing account IDs. The values reported here better reflect the number of participating households, rather than the number of multifamily buildings in which the participants live.

# 4 Summary of Finances

# 4.1 Portfolio-Level Expenditures

Table 4-1 presents a breakdown of the portfolio finances.

	Quarter (\$000)	PYTD (\$000)	Phase 11 (\$000)
EDC Incentives to Participants	\$8,255	\$32,177	\$55,526
EDC Incentives to Trade Allies	\$64	\$246	\$311
Subtotal EDC Incentive Costs	\$8,319	\$32,423	\$55,837
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$9,446	\$36,040	\$63,970
Marketing	\$1,530	\$6,704	\$10,825
Subtotal EDC Implementation Costs	\$10,976	\$42,744	\$74,795
EDC Evaluation Costs	\$939	\$5,658	\$8,068
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>121</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
NOTES Per PA PUC direction, TRC inputs and calculations are required in the Annual Report Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general a management, CSP program management, general management oversight major <sup>2</sup> Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to ED Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Eval <sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.	dministration and or accounts, and tech of incurred expense luation Costs + SWI	clerical costs, El nical assistance es only. Total E E Audit Costs.	DC program e. DC Costs =

#### **Table 4-1. Summary of Portfolio Finances**

Source: PECO and Navigant Analysis

# 4.2 Program-Level Expenditures

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The following tables show program-specific finances.

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$162	\$535	\$796
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$162	\$535	\$796
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$279	\$1,046	\$1,708
Marketing	\$106	\$177	\$201
Subtotal EDC Implementation Costs	\$386	\$1,224	\$1,909
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>13]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
<b>NOTES</b> Per PA PUC direction, TRC inputs and calculations are required in the Annual Report of Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general admanagement, CSP program management, general management oversight major Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation	lministration and clea accounts, and technic C incurred expenses c	rical costs, ED ral assistance. only. Total ED	C program

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer. <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$3,686	\$13,725	\$20,618
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$3,686	\$13,725	\$20,618
Design & Development	\$0	\$0	\$0
Administration, Management and Technical Assistance <sup>11</sup>	\$793	\$3,432	\$6,918
Marketing	\$41	\$358	\$387
Subtotal EDC Implementation Costs	\$834	\$3,790	\$7,305
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>(3)</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

Table 4-3. Summary of Program Finances – Smart Home Rebates Program

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer.

+ Total TRC Costs = Total EDC Costs + Participant Costs.

Source: PECO and Navigant Analysis

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	Quarter	PYTD	Phase II
	(\$000)	(\$000)	(\$000)
EDC Incentives to Participants	\$136	\$249	\$321
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$136	\$249	\$321
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$964	\$2,710	\$4,449
Marketing	\$335	\$1,262	\$1,412
Subtotal EDC Implementation Costs	\$1,299	\$3,972	\$5,861
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
	N/A	N/A	N/A

#### Table 4-4. Summary of Program Finances – Smart House Call

Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs. <sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer.

+ Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$38	\$57	\$59
Subtotal EDC Incentive Costs	\$38	\$57	\$59
Design & Development	<b>\$</b> 0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$86	\$282	\$529
Marketing	\$18	\$85	\$122
Subtotal EDC Implementation Costs	\$104	\$367	\$651
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

#### **Table 4-5. Summary of Program Finances – Smart Builder Rebates**

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs =

Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order - Net participant costs; in PA, refer to the costs of the end-use customer.

<sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

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\$0 \$0 \$0 \$0 \$0 \$104	\$0 \$0 \$0 \$0 \$0 \$483	\$0 \$0 \$0 \$0 \$0 \$901
\$0 \$0 \$104	\$0 \$0 \$483	\$0 \$0
\$0 \$104	\$0 \$483	\$0
\$104	\$483	<u> </u>
	<u> </u>	\$901
¢0		
\$0	\$0	\$0
\$104	\$483	\$901
\$0	\$0	\$0
N/A	N/A	N/A
51	N/A N/A N/A N/A	N/A         N/A           N/A         N/A           N/A         N/A

## Table 4-6. Summary of Program Finances – Smart Energy Saver

Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs =

Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order - Net participant costs; in PA, refer to the costs of the end-use customer.

4 Total TRC Costs = Total EDC Costs + Participant Costs.

Source: PECO and Navigant Analysis

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0	\$0
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$859	\$1,779	\$2,362
Marketing	\$0	\$1	\$1
Subtotal EDC Implementation Costs	\$859	\$1,779	\$2,362
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>(3)</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

Table 4-7. Summary of Program Finances – Smart Usage Profile

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs =

Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer.

+ Total TRC Costs = Total EDC Costs + Participant Costs.

Source: PECO and Navigant Analysis

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	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0	\$0
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>111</sup>	\$2,773	\$9,158	\$15,054
Marketing	\$177	\$235	\$310
Subtotal EDC Implementation Costs	\$2,950	\$9,394	\$15,365
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A_
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
NOTES Per PA PUC direction, TRC inputs and calculations are required in the Annual Report Resource Cost Test Order approved August 30, 2012. Includes the tracking system, general administration and clerical costs, EDC pro- management, and technical assistance. <sup>2</sup> Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to ED Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Eval	ogram management, C incurred expenses	CSP program	

#### Table 4-8. Summary of Program Finances – Low-Income Energy Efficiency Program

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer. + Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase 11 (\$000)
EDC Incentives to Participants	\$3,312	\$6,342	\$8,521
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$3,312	\$6,342	\$8,521
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$1,093	\$4,948	\$9,195
Marketing	\$7	\$7	\$9
Subtotal EDC Implementation Costs	\$1,099	\$4,954	\$9,204
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>14</sup>	N/A	N/A	N/A

#### Table 4-9. Summary of Program Finances - Smart Equipment Incentives C&I

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 To Resource Cost Test Order approved August 30, 2012.

Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance for the SEI retrofit and appliance recycling programs.

<sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer. <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

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	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$270	\$1,465	\$2,017
EDC Incentives to Trade Allies	\$26	\$189	\$252
Subtotal EDC Incentive Costs	\$296	\$1,654	\$2,269
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$275	\$1,317	\$2,335
Marketing	\$0	\$0	\$0
Subtotal EDC Implementation Costs	\$275	\$1,317	\$2,335
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
<b>NOTES</b> Per PA PUC direction, TRC inputs and calculations are required in the Annual Report Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general ac management, CSP program management, general management oversight major	iministration and clei	rical costs, ED	

#### Table 4-10. Summary of Program Finances – Smart Construction Incentives C&I

<sup>ancludes the administrative CSP (repair processing), tracking system, general administration and clerical costs, EDC program management, general management oversight major accounts, and technical assistance.
 <sup>a</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.
</sup>

<sup>3</sup> Per the 2013 Total Resource Cost Test Order - Net participant costs; in PA, refer to the costs of the end-use customer.

+ Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase 11 (\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0 ·	\$0
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>[1]</sup>	\$391	\$2,613	\$4,531
Marketing	\$2	\$2	\$5
Subtotal EDC Implementation Costs	\$393	\$2,615	\$4,536
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

#### Table 4-11: Summary of Program Finances – Smart Business Solutions C&I and GNI

Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance for both the SBS C&I and GNI programs.

<sup>3</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer. <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

Source: PECO and Navigant Analysis

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	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$0	\$4,993
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0	\$4,993
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>10</sup>	\$94	\$423	\$765
Marketing	\$0	<b>\$</b> 0	\$0
Subtotal EDC Implementation Costs	\$94	\$423	\$765
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

Table 4-12.	Summary of	f Program	Finances	Smart On-Site
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Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance for both the SOS C&I and GNI programs.

<sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer.

+ Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter	PYTD	Phase II
	(\$000)	(\$000)	(\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0	\$0
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	<b>\$2</b> 61	\$1,185	\$2,122
Marketing	\$0	\$0	\$0
Subtotal EDC Implementation Costs	\$261	\$1,185	\$2,122
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

## Table 4-13. Summary of Program Finances –Smart Multifamily Solutions C&I and GNI

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance for both the Smart Multifamily Solutions C&I and GNI programs.

<sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer.
 Total TRC Costs = Total EDC Costs + Participant Costs.

Source: PECO and Navigant Analysis

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	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$0	\$0
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$0	\$0
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$354	\$1,405	\$2,363
Marketing	\$33	\$56	\$74
Subtotal EDC Implementation Costs	\$387	\$1,461	\$2,437
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
<b>NOTES</b> Per PA PUC direction, TRC inputs and calculations are required in the Annual Report Resource Cost Test Order approved August 30, 2012. Includes the administrative CSP (rebate processing), DI services, tracking system	n, general administra	tion and cleric	

#### Table 4-14. Summary of Program Finances –Smart Multifamily Solutions Residential

EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs =

Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order –Net participant costs; in PA, refer to the costs of the end-use customer. <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$679	\$2,833	\$3,863
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$679	\$2,833	\$3,863
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$632	\$3,046	\$5,580
Marketing	\$0	\$0	\$0
Subtotal EDC Implementation Costs	\$632	\$3,046	\$5,580
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A

#### Table 4-15. Summary of Program Finances – Smart Equipment Incentives GNI

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

Includes the administrative CSP (rebate processing), DI services, tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance for the SEI GNI – Retrofit, SEI GNI – Appliance Recycling, and SCI GNI programs.

<sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order – Net participant costs; in PA, refer to the costs of the end-use customer. <sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

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	Quarter (\$000)	PYTD (\$000)	Phase 11 (\$000)
EDC Incentives to Participants	\$1	\$6,721	\$13,776
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$1	\$6,721	\$13,776
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	-\$62	\$185	\$54
Marketing	\$0	\$15	\$15
Subtotal EDC Implementation Costs	-\$62	\$201	\$69
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>141</sup>	N/A	N/A	N/A

#### Table 4-16. Summary of Program Finances – Residential A/C Saver Program

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management CSP capacity payments, general management oversight major accounts, and technical assistance. Negative values are the result of capacity payments from PJM in excess of program administrative costs. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs =

Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs. <sup>3</sup> Per the 2013 Total Resource Cost Test Order - Net participant costs; in PA, refer to the costs of the end-use customer.

\* Total TRC Costs = Total EDC Costs + Participant Costs.

	Quarter (\$000)	PYTD (\$000)	Phase II (\$000)
EDC Incentives to Participants	\$0	\$297	\$610
EDC Incentives to Trade Allies	\$0	\$0	\$0
Subtotal EDC Incentive Costs	\$0	\$297	\$610
Design & Development	\$0	\$0	\$0
Administration, Management, and Technical Assistance <sup>11</sup>	\$8	\$8	\$8
Marketing	\$0	\$0	\$0
Subtotal EDC Implementation Costs	\$8	\$8	\$8
EDC Evaluation Costs	\$0	\$0	\$0
SWE Audit Costs	N/A	N/A	N/A
Total EDC Costs <sup>[2]</sup>	N/A	N/A	N/A
Participant Costs <sup>[3]</sup>	N/A	N/A	N/A
Total TRC Costs <sup>[4]</sup>	N/A	N/A	N/A
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#### Table 4-17. Summary of Program Finances – Commercial A/C Saver Program

Per PA PUC direction, TRC inputs and calculations are required in the Annual Report only and should comply with the 2013 Total Resource Cost Test Order approved August 30, 2012.

<sup>1</sup>Includes the administrative CSP (rebate processing), tracking system, general administration and clerical costs, EDC program management, CSP program management, general management oversight major accounts, and technical assistance. <sup>2</sup>Per the 2013 Total Resource Cost Test Order – Total EDC Costs here refer to EDC incurred expenses only. Total EDC Costs = Subtotal EDC Incentive Costs + Subtotal EDC Implementation Costs + EDC Evaluation Costs + SWE Audit Costs.

<sup>3</sup> Per the 2013 Total Resource Cost Test Order - Net participant costs; in PA, refer to the costs of the end-use customer.

<sup>4</sup> Total TRC Costs = Total EDC Costs + Participant Costs.

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Source: PECO and Navigant Analysis

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