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**E-FILE**

January 14, 2022

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, Pennsylvania 17120

**Re: Semi-Annual Report for the Period June 1, 2021 through May 31, 2022,  
Program Year Thirteen (13), of PPL Electric Utilities  
Corporation's Act 129 Plan  
Docket No. M-2015-2515642**

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Dear Ms. Chiavetta:

Enclosed on behalf of PPL Electric Utilities Corporation ("PPL Electric") is the Semi-Annual Report for Program Year Thirteen (13) of PPL Electric's Act 129 Plan.

Pursuant to 52 Pa. Code § 1.11, the enclosed documents are to be deemed filed on January 14, 2022, which is the date it was filed electronically using the Commission's E-filing system.

If you have any questions or need additional information, please do not hesitate to contact me.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Michael J. Shafer", is written over a light blue horizontal line.

Michael J. Shafer

Enclosures

cc via email: Greg Clendenning (GDS Associates, Inc. Act 129 Statewide Evaluator)  
Jesse Smith – Demand Side Analytics

# **Semi-Annual Report to the Pennsylvania Public Utility Commission**

**Phase IV of Act 129**

**Program Year PY13**

**(June 1, 2021 – May 31, 2022)**

For Pennsylvania Act 129 of 2008

Energy Efficiency and Conservation Plan

Prepared by Cadmus

For

PPL Electric Utilities

January 15, 2022

## Table of Contents

<b>ACRONYMS</b> .....	<b>III</b>
<b>TYPES OF SAVINGS</b> .....	<b>V</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
<b>2 SUMMARY OF ACHIEVEMENTS</b> .....	<b>2</b>
2.1 CARRYOVER SAVINGS FROM PHASE III OF ACT 129 .....	2
2.2 PHASE IV ENERGY EFFICIENCY ACHIEVEMENTS TO DATE .....	3
2.3 PHASE IV PERFORMANCE BY CUSTOMER SEGMENT .....	6
<b>3 UPDATES AND FINDINGS</b> .....	<b>6</b>
3.1 IMPLEMENTATION UPDATES AND FINDINGS.....	6
3.2 EVALUATION UPDATES AND FINDINGS .....	9
<b>4 SUMMARY OF PARTICIPATION BY PROGRAM</b> .....	<b>10</b>
<b>5 SUMMARY OF ENERGY IMPACTS BY PROGRAM COMPONENT</b> .....	<b>11</b>
<b>6 SUMMARY OF PEAK DEMAND IMPACTS BY PROGRAM</b> .....	<b>13</b>
<b>7 SUMMARY OF FINANCES</b> .....	<b>15</b>
7.1 PROGRAM AND PORTFOLIO FINANCIALS .....	15
7.2 COST RECOVERY .....	16

### Figures

FIGURE 1: CARRYOVER SAVINGS FROM PHASE III OF ACT 129 <sup>(1)</sup> .....	2
FIGURE 2: PERFORMANCE TOWARD PHASE IV PORTFOLIO ENERGY TARGET .....	4
FIGURE 3: PERFORMANCE TOWARD PHASE IV PORTFOLIO PEAK DEMAND TARGET <sup>(1)</sup> .....	4
FIGURE 4: EE&C PLAN PERFORMANCE TOWARD PHASE IV LOW-INCOME COMPLIANCE TARGET.....	5
FIGURE 5: PYTD AND PHASE IV REPORTED GROSS ENERGY SAVINGS BY PROGRAM COMPONENT.....	11
FIGURE 6: PYRTD AND PHASE IV GROSS PEAK DEMAND SAVINGS BY PROGRAM COMPONENT <sup>(1)</sup> .....	13

### Tables

TABLE 1: PY13 AND PHASE IV SUMMARY STATISTICS BY CUSTOMER SEGMENT .....	6
TABLE 2: EE&C PLAN PARTICIPATION BY PROGRAM .....	10
TABLE 3: ENERGY SAVINGS BY PROGRAM COMPONENT (MWH/YEAR).....	12
TABLE 4: PEAK DEMAND SAVINGS BY PROGRAM COMPONENT (MW/YEAR) .....	14
TABLE 5: PROGRAM YEAR TO DATE AND PHASE IV TO DATE FINANCIALS (\$1,000) .....	15
TABLE 6: EE&C PLAN EXPENDITURES BY COST-RECOVERY CATEGORY.....	17

## Acronyms

BDR	Behavioral Demand Response
C&I	Commercial and Industrial
CSP	Conservation Service Provider or Curtailment Service Provider
DLC	Direct Load Control
DR	Demand Response
EDC	Electric Distribution Company
EDT	Eastern Daylight Time
EE&C	Energy Efficiency and Conservation
EM&V	Evaluation, Measurement, and Verification
EUL	Effective Useful Life
GNI	Government, Non-Profit, Institutional
GNE	Government, Non-Profit, Educational
HVAC	Heating, Ventilating, and Air Conditioning
ICSP	Implementation Conservation Service Provider
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light-Emitting Diode
LIURP	Low-Income Usage Reduction Program
M&V	Measurement and Verification
MW	Megawatt
MWh	Megawatt-hour
NTG	Net-to-Gross
P4TD	Phase IV to Date
PA PUC	Pennsylvania Public Utility Commission
PSA	Phase IV to Date Preliminary Savings Achieved; equal to VTD + PYTD
PSA+CO	PSA savings plus Carryover from Phase III
PY	Program Year: e.g., PY13, from June 1, 2021 to May 31, 2022
PYRTD	Program Year Reported to Date

**SEMI-ANNUAL REPORT TO THE PA PUC – PROGRAM YEAR 13**

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PYVTD	Program Year Verified to Date
RTD	Phase IV to Date Reported Gross Savings
SWE	Statewide Evaluator
TRC	Total Resource Cost
TRM	Technical Reference Manual
VTD	Phase IV to Date Verified Gross Savings

## Types of Savings

**Gross Savings:** The change in energy consumption and/or peak demand that results directly from program-related actions taken by participants in an EE&C program, regardless of why they participated.

**Net Savings:** The total change in energy consumption and/or peak demand that is attributable to an EE&C program. Depending on the program delivery model and evaluation methodology, the net savings estimates may differ from the gross savings estimate due to adjustments for the effects of free riders, changes in codes and standards, market effects, participant and nonparticipant spillover, and other causes of changes in energy consumption or demand not directly attributable to the EE&C program.

**Reported Gross:** Also referred to as *ex ante* (Latin for “beforehand”) savings. The energy and peak demand savings values calculated by the EDC or its program Implementation Conservation Service Providers (ICSP) and stored in the program tracking system.

**Verified Gross:** Also referred to as *ex post* (Latin for “from something done afterward”) gross savings. The energy and peak demand savings estimates reported by the independent evaluation contractor after the gross impact evaluation and associated M&V efforts have been completed.

**Verified Net:** Also referred to as *ex post* net savings. The energy and peak demand savings estimates reported by the independent evaluation contractor after application of the results of the net impact evaluation. Typically calculated by multiplying the verified gross savings by a net-to-gross (NTG) ratio.

**Annual Savings:** Energy and demand savings expressed on an annual basis, or the amount of energy and/or peak demand an EE&C measure or program can be expected to save over the course of a typical year. Annualized savings are noted as MWh/year or MW/year. The Pennsylvania TRM provides algorithms and assumptions to calculate annual savings, and Act 129 compliance targets for consumption reduction are based on the sum of the annual savings estimates of installed measures.

**Lifetime Savings:** Energy and demand savings expressed in terms of the total expected savings over the useful life of the measure. Typically calculated by multiplying the annual savings of a measure by its effective useful life. The TRC Test uses savings from the full lifetime of a measure to calculate the cost-effectiveness of EE&C programs.

**Program Year Reported to Date (PYRTD):** The reported gross energy and peak demand savings achieved by an EE&C program or portfolio within the current program year. PYTD values for energy efficiency will always be reported gross savings in a semi-annual report.

**Program Year Verified to Date (PYVTD):** The verified gross energy and peak demand savings achieved by an EE&C program or portfolio within the current program year.

**Phase IV to Date (P4TD):** The energy and peak demand savings achieved by an EE&C program or portfolio within Phase IV of Act 129. Reported in several permutations described below.

**Phase IV to Date Reported (RTD):** The sum of the reported gross savings recorded to date in Phase IV of Act 129 for an EE&C program or portfolio.

**Phase IV to Date Verified (VTD):** The sum of the verified gross savings recorded to date in Phase IV of Act 129 for an EE&C program or portfolio, as determined by the impact evaluation finding of the independent evaluation contractor.

**Phase IV to Date Preliminary Savings Achieved (PSA):** The sum of the verified gross savings (VTD) from previous program years in Phase IV where the impact evaluation is complete plus the reported gross savings from the current program year (PYTD). For PY13, the PSA savings will always equal the PYTD savings because PY13 is the first program year of the phase (no savings will be verified until the PY13 final annual report even if the approved EM&V plan calls for a historic realization rate).

**Phase IV to Date Preliminary Savings Achieved + Carryover (PSA+CO):** The sum of the verified gross savings from previous program years in Phase IV plus the reported gross savings from the current program year plus any verified gross carryover savings from Phase III of Act 129. This is the best estimate of an EDC's progress toward the Phase IV compliance targets.



## 1 Introduction

Pennsylvania Act 129 of 2008, signed on October 15, 2008, mandated energy savings and demand reduction goals for the largest electric distribution companies (EDCs) in Pennsylvania for Phases I (2008 through 2013), II (2013 through 2016) and III (2016 through 2021). In late 2020, each EDC filed a new energy efficiency and conservation (EE&C) plan with the PA PUC detailing the proposed design of its portfolio for Phase IV. These plans were updated based on stakeholder input and subsequently approved by the PUC in 2021.

Implementation of Phase IV of the Act 129 programs began on June 1, 2021. This report documents the progress and effectiveness of the Phase IV EE&C accomplishments for PPL Electric Utilities in Program Year 13 (PY13), as well as the cumulative accomplishments of the Phase IV programs since inception. This report additionally documents the energy savings carried over from Phase III. The Phase III carryover savings count towards EDC savings compliance targets for Phase IV.

This report details the participation, spending, and reported gross impacts of the energy efficiency programs during the first six months of PY13. Compliance with Act 129 savings goals are ultimately based on verified gross savings. PPL Electric Utilities has retained Cadmus as an independent evaluation contractor for Phase IV of Act 129. Cadmus is responsible for the measurement and verification of the savings and calculation of verified gross savings. The verified gross savings for PY13 energy efficiency programs will be reported in the final annual report, to be filed on September 30, 2022.

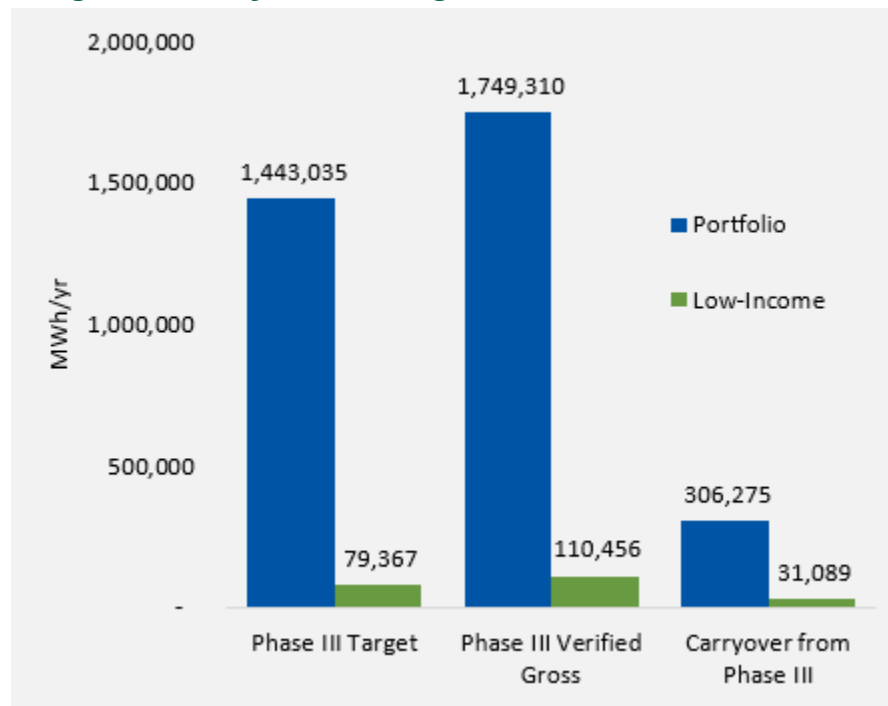
Phase IV of Act 129 includes a peak demand reduction goal for PPL Electric Utilities. Unlike previous phases of Act 129, Phase IV peak demand reduction targets must be met through coincident demand reductions from energy efficiency measures. The Act 129 peak demand reduction definition is non-holiday weekdays from 2:00 pm to 6:00 pm in June, July, and August. As in prior phases, compliance with Act 129 peak compliance goals is assessed at the system-level so all coincident peak demand impacts are adjusted for line losses.

## 2 Summary of Achievements

### 2.1 CARRYOVER SAVINGS FROM PHASE III OF ACT 129

The Commission's Phase IV Implementation Order<sup>1</sup> allowed EDCs to carry over verified savings above the Phase III portfolio and low-income savings goal and apply those savings toward Phase IV compliance targets. PPL Electric Utilities has a total of 306,275 MWh/year of portfolio carryover savings and 31,089 MWh/year of low-income carryover savings from Phase III towards its Phase IV energy reduction targets. Figure 1 compares PPL Electric Utilities' Phase III verified gross savings total to the Phase III compliance target to illustrate the carryover calculation.

**Figure 1: Carryover Savings from Phase III of Act 129<sup>(1)</sup>**



<sup>(1)</sup> Total Phase III savings in the PY12 Annual Report were reduced by 0.986 MWh/yr following a review by the SWE. This adjustment did not impact Low-Income savings.

Phase III did not include a peak demand reduction target from energy efficiency, so there is no carryover savings toward the Phase IV peak demand reduction target.

<sup>1</sup> Pennsylvania Public Utility Commission, *Energy Efficiency and Conservation Program* Implementation Order, at Docket No. M-2020-3015228, (*Phase IV Implementation Order*), entered June 18, 2020.

## 2.2 PHASE IV ENERGY EFFICIENCY ACHIEVEMENTS TO DATE

Since the beginning of Program Year 13 on June 1, 2021, PPL Electric Utilities has claimed:

- 27,673 MWh/yr of reported gross electric energy savings (PYRTD)
- 5.5647 MW/yr of reported gross peak demand savings (PYRTD)

Since the beginning of Phase IV of Act 129 on June 1, 2021, PPL Electric Utilities has achieved:

- 27,673 MWh/yr of reported gross electric energy savings (RTD)
- 5.5647 MW/yr of reported gross peak demand savings (RTD) from energy efficiency programs
- 27,673 MWh/yr of gross electric energy savings (PSA). This total includes verified gross savings from previous Phase IV program years and the PYTD reported gross savings from PY13.
- 5.5647 MW/yr of gross peak demand savings (PSA) from energy efficiency programs

Note: All gross peak demand savings are reported at the system level so they reflect adjustments for transmission and distribution losses.

Including carryover savings from Phase III, PPL Electric Utilities has achieved:

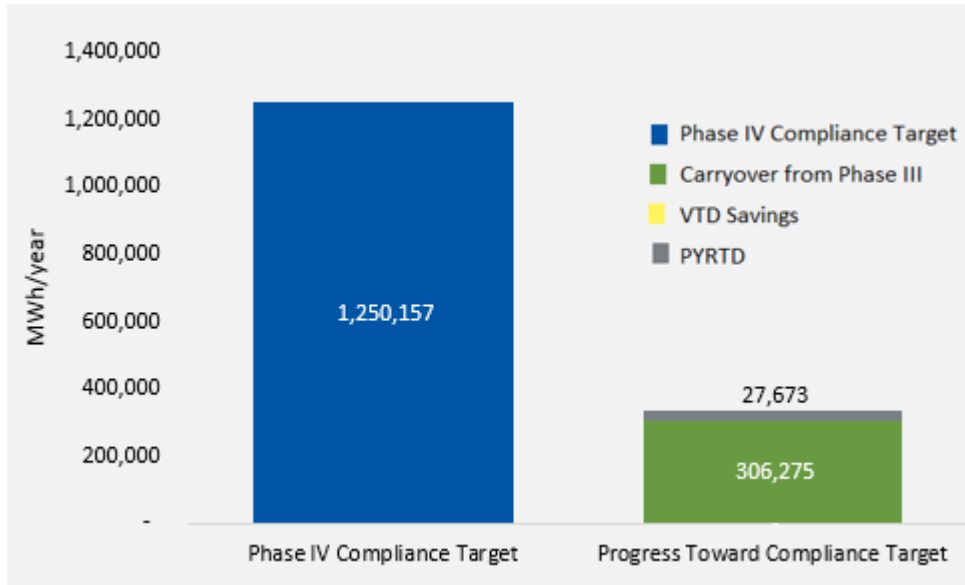
- 333,948 MWh/yr of PSA+CO energy savings recorded to date in Phase IV
  - This represents 27% of the May 31, 2026, energy savings compliance target of 1,250,157 MWh/yr.<sup>2</sup>

Figure 2 and Figure 3 show PPL Electric Utilities' EE&C Plan progress toward Phase IV energy conservation and peak demand reduction compliance targets.

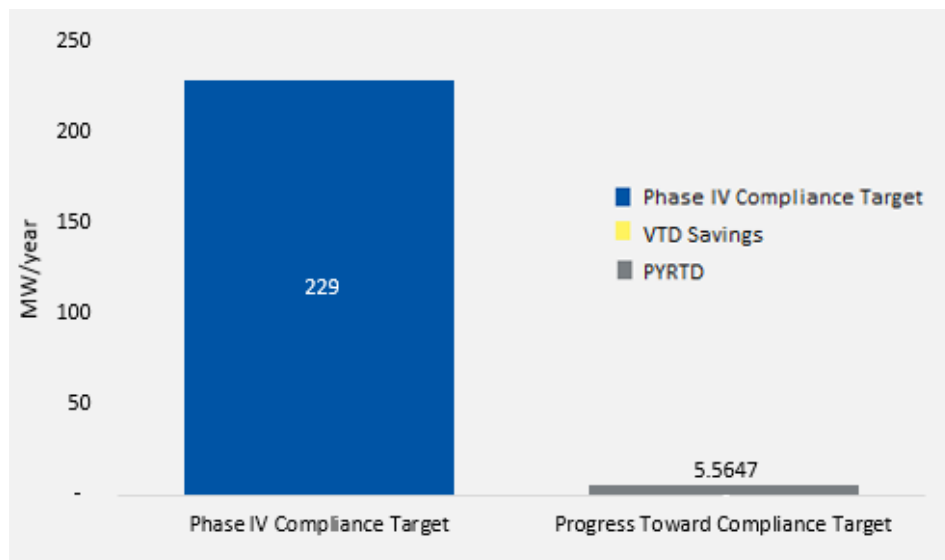
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<sup>2</sup> From PPL Electric Utilities Corporation. *Energy Efficiency and Conservation Plan Act 129 Phase IV*. Docket No. M-2020-3020824. Revised May 24, 2021.

**Figure 2: Performance Toward Phase IV Portfolio Energy Target**



**Figure 3: Performance Toward Phase IV Portfolio Peak Demand Target <sup>(1)</sup>**

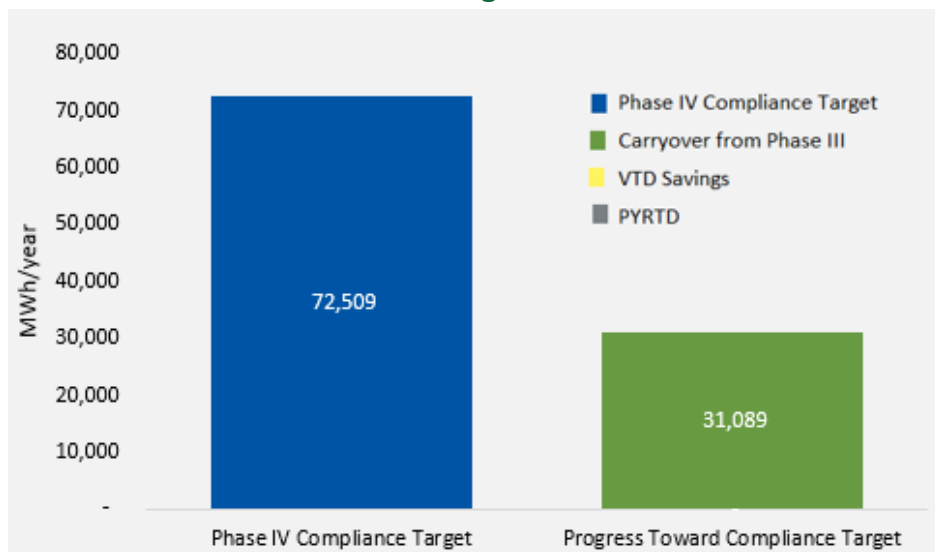


<sup>(1)</sup>Note: All gross peak demand savings are reported at the system level so they reflect adjustments for transmission and distribution losses.

The Phase IV Implementation Order directed EDCs to offer conservation measures to the low-income customer segment based on the proportion of electric sales attributable to low-income households. The proportionate number of measures target for PPL Electric Utilities is 9.50%.<sup>3</sup> Because PPL Electric Utilities has not claimed low-income savings in quarters 1 and 2 of PY13, the percentage of measures offered to Low-Income participants is not reported at this time and will be reported in the annual report when savings are claimed.

The PA PUC also established a low-income energy savings target of 5.8% of the portfolio savings goal. The low-income savings target for PPL Electric Utilities is 72,509 MWh/yr<sup>4</sup> and is based on verified gross savings. Figure 4 compares the PSA+CO performance to date for the low-income customer segment to the Phase IV savings target. Based on the latest available information, PPL Electric Utilities has achieved 43% of the Phase IV low-income energy savings target.

**Figure 4: EE&C Plan Performance Toward Phase IV Low-Income Compliance Target**



<sup>3</sup> Pennsylvania Public Utility Commission, *Energy Efficiency and Conservation Program Implementation Order*, at Docket No. M-2020-3015228, (*Phase IV Implementation Order*), entered June 18, 2020.

<sup>4</sup> From PPL Electric Utilities Corporation. *Energy Efficiency and Conservation Plan Act 129 Phase IV*. Docket No. M-2020-3020824. Revised May 24, 2021.

## **2.3 PHASE IV PERFORMANCE BY CUSTOMER SEGMENT**

Table 1 presents the participation, savings, and spending by customer sector for PY13 and Phase IV. The residential, small C&I, large C&I sectors are defined by EDC tariff and the residential low-income and governmental/educational/non-profit sector were defined by statute (66 Pa. C.S. § 2806.1). The residential low-income segment is a subset of the residential customer class and the GNE segment may include customers who are part of the Residential, Small C&I, or Large C&I rate classes. The savings, spending, and participation values for the LI and GNE segments have been removed from the parent sectors in Table 1.

**Table 1: PY13 and Phase IV Summary Statistics by Customer Segment**

Parameter	Residential (Non-LI)	Residential LI	Small C&I (Non-GNE)	Large C&I (Non-GNE)	GNE	Total <sup>(1)</sup>
# Participants	299,962	0	24,190	302	518	324,972
PYRTD MWh/yr	7,016	0	15,779	3,312	1,566	27,673
PYRTD MW/yr	1.7607	0	2.8703	0.5239	0.4098	5.5647
Incentives (\$1,000) <sup>(2)</sup>	\$1,243	\$1,018	\$1,227	\$156	\$90	\$3,734
<sup>(1)</sup> Total may not sum due to rounding.						
<sup>(2)</sup> PPL Electric Utilities reports number of participants and PYRTD using their participant tracking database but uses the incentive amounts from a separate accounting system, since they are reported along with the other expenditures.						

## **3 Updates and Findings**

### **3.1 IMPLEMENTATION UPDATES AND FINDINGS**

This section contains implementation updates.

#### **3.1.1 Low-Income Program**

The Low-Income Program offers a broad selection of no-cost energy-saving improvements and education to qualifying low-income customers residing in single-family homes, individually metered multifamily units, and manufactured homes. Direct installation of energy efficiency measures for lighting, water aeration, and weatherization are offered through in-home and remote assessment delivery channels. Additionally, PPL Electric Utilities offers comprehensive measures, such as ductless mini-split heat pumps, heat pump maintenance, heat pump water heaters, building shell measures, and smart thermostats through the in-home assessment delivery channel. PPL Electric Utilities also provides the same measures available under the Low-Income Program inside the tenant units of low-income residents in master-metered multifamily buildings at no direct cost to the building owners or those tenants.

This program for income-eligible customers launched June 1, 2021 with a seamless transition for customers from Phase III to Phase IV. The program has completed nearly 4,000 jobs in the virtual environment and will start in-home assessments in 2022. Additionally, the program has dispersed almost 13,000 welcome kits to customers who are eligible for the assessment to encourage their enrollment. Since PPL Electric Utilities' tracking system was still in development during Q1-2, official reporting of this participation will begin in Q3.

### 3.1.2 Residential Program

This section outlines the program components offered in the Residential Program.

**Appliance Recycling:** PPL Electric Utilities offers free pick-up and recycling of refrigerators, freezers, dehumidifiers, room air conditioners, and consumer electronics (without savings or incentive). The Company offers customers a rebate for each recycled appliance, which must be plugged in and functioning when picked up. Room air conditioners, consumer electronics (if offered), and dehumidifiers are eligible for pick up with a refrigerator or freezer.

This component continues to offer both contactless and in-home pickups, with about half of the participants still preferring the contactless option. The rebate was increased from \$35 to \$50 in October and then extended through the end of PY13. A small appliance pick-up event was held in September. Customers pre-registered for the event to recycle their inefficient room air conditioners and dehumidifiers. The event gathered 67 units (54 room ACs and 13 dehumidifiers). PPL Electric Utilities plans to hold more of these events throughout the territory in the spring of 2022.

**Efficient Lighting – Specialty Bulbs:** In this program component, participating customers can purchase a variety of discounted specialty LED bulbs at local retail stores or purchase from the online marketplace.

The Efficient Lighting program component is off to a good start with over 314,000 bulbs sold. Big box stores such as Lowe's and The Home Depot are leading sales with specialty, reflector, and globe bulbs.

**Energy Efficient Homes:** PPL Electric Utilities provides comprehensive energy efficiency options for new and existing homes through these delivery channels:

- New homes
- Comprehensive in-home audit and weatherization channel
- Downstream and midstream energy efficiency equipment

PPL Electric Utilities continues to experience strong performance in efficient new home construction with 499 homes-to-date in PY13.

This summer, PPL Electric Utilities introduced the New Customer Energy Efficiency Welcome Kit. For this offer, PPL Electric Utilities reached out to all new customers via email and direct mail, encouraging them to start their energy savings journey with a free energy saving Welcome

Kit to help them use less electricity and save money. To date, 25,000 new customers have been reached.

A Black Friday email was sent to all customers with the goal of encouraging them to purchase smart thermostats during the best pricing of the year. An additional email was sent to all PPL Electric Utilities customers on Cyber Monday for collaboration with the ENERGY STAR Gifts That Do a World of Good campaign. This promotion was the best promotion ever for the Online Marketplace. In November 2021, 2,300 total products were sold - 1,012 smart thermostats were sold during this year's promotion compared with 286 last November. These sales will be reflected in Q3 reporting.

**Student Energy Efficient Education:** PPL Electric Utilities offers energy efficiency kits and education to students and teachers in grades 2 through 12.

The Student Energy Efficient Education program is in full swing. The bulk of the presentations have taken place in November and December. All three student cohorts, Bright Kids, Take Action and Innovation, are fully subscribed. Both the poster contest and Innovation Challenge are underway. As in previous years, the focus is on low-income schools.

### 3.1.3 Non-Residential Program

This section outlines the program components offered in the Non-Residential Program.

**Efficient Equipment:** PPL Electric Utilities promotes the purchase and installation of a wide range of high-efficiency measures, including lighting, HVAC, refrigeration, motors/drives, commercial kitchen equipment, agricultural equipment, equipment controls, and new construction projects. The component has four delivery channels:

- Customers, contractors, or trade allies submit applications for rebates in the **downstream** channel.
- The **direct discount** channel engages small C&I customers by providing higher incentives to contractors to encourage projects that may not receive attention otherwise.
- Small C&I customers can receive a no-cost assessment to identify improvements through the **direct install** delivery channel.
- The **midstream** channel delivers immediate rebates at the point of purchase for lighting and other commercial and industrial equipment.

New in Phase IV, efficient equipment incentives are paid on both the kWh savings and kW savings. The Small Business Direct Install channel was launched in the fall of 2021. The Midstream Lighting channel continues to ramp up in Phase IV with 28 participating distributors. Midstream continued to see product delays and sourcing issues during the first six months of the Phase. Effective January 1, 2022 incentives were increased from the initial Phase IV launch. The decision to remove pre-approval for downstream applications also has been announced for



February 14, 2022. Both changes are an effort to energize the market and increase project submittals.

**Custom:** Customers can receive incentives to support completion of complex and comprehensive projects that involve measures not covered by the Efficient Equipment component.

PPL Electric Utilities returned to the field in Phase IV, after ending Phase III using a virtual approach. Outreach has been geared toward identifying projects that produce kW savings to focus on the demand reduction targets. New in Phase IV, custom incentives are paid on both the kWh savings and kW savings, except for CHP and solar projects which are incentivized only on the kW saved. Incentives for the custom component have also been increased effective January 1, 2022 from the initial launch date. Pre-approval for all custom projects is still required.

### 3.2 EVALUATION UPDATES AND FINDINGS

This section summarizes evaluation activities that have occurred so far in PY13.

- For each program component offered in PY13, Cadmus updated the evaluation plans, and submitted them to PPL Electric Utilities and the SWE.
- Cadmus received Q1 and Q2 participation data for many of the program components and confirmed that it contained the necessary data for evaluation activities.
- Cadmus has started designing stakeholder interview guides and plans to conduct these interviews in January and February for all program components.
- For the Appliance Recycling, Energy Efficient Home, Low-Income, Custom, and Efficient Equipment downstream delivery channels, Cadmus has started outlining sampling plans and designing participant survey instruments.
- For the Efficient Equipment program component, Cadmus selected an evaluation sample from PY13 Q1 and Q2 records, requested and received supporting data from the ICSP, and began conducting desk reviews.
- For the Custom component, Cadmus verified three PY13 projects in the large stratum in Q1 and Q2. Ongoing evaluation activities, including review of project documentation, creation of site-specific measurement and verification plans, deployment of evaluator installed metering equipment, determination of project savings using a high-rigor approach, and presenting finalized savings in a verification report, are currently underway for one project in the small stratum sample and approximately 19 large stratum projects.

## 4 Summary of Participation by Program

Participation is defined differently for each program component depending on the program delivery channel and data tracking practices. The nuances of the participant definition vary by program component and are summarized by program in Table 2. The table provides the current participation totals for PY13 and Phase IV.

**Table 2: EE&C Plan Participation by Program**

Program	Participant Definition	PY13TD Participation	P4TD Participation
<b>Low-Income</b>			
Low-Income Assessment	Unique bill account number; corresponds to an income-eligible household that receives an audit and program services or receives a welcome kit.	0	0
<b>Residential Program</b>			
Appliance Recycling	Unique job number; corresponds with each unique appliance decommissioned through the program during the program year.	4,881	4,881
Efficient Lighting	Number of discounted bulbs sold.	314,377	314,377
Energy Efficient Home New Homes	Unique job number; corresponds to a rebated project.	499	499
Energy Efficient Homes Audit and Weatherization	Unique job number; corresponds to a rebated project. Households could have more than one rebated project.	0	0
Energy Efficient Homes Online Marketplace	Unique job number; corresponds to a rebated project.	1,051	1,051
Energy Efficient Homes Equipment (downstream)	Unique job number; corresponds to a rebated project. Households could have more than one rebated project.	2,447	2,447
Energy Efficient Homes Equipment (midstream)	Unique job number; corresponds to each purchase of discounted products.	0	0
Student Energy Efficient Education	Number of participants is counted as the number of energy conservation kits delivered.	0	0
<b>Non-Residential Program</b>			
Custom	Unique job number; commercially operable job that received an incentive payment during the reporting period.	5	5
Efficient Equipment (downstream)	Unique job number; corresponds to each unique job that received a rebate.	146	146

Program	Participant Definition	PY13TD Participation	P4TD Participation
Efficient Equipment (midstream)	Unique job number; corresponds to each purchase of discounted products.	1,566	1,566
<b>Portfolio Total</b>		<b>324,972</b>	<b>324,972</b>

## 5 Summary of Energy Impacts by Program Component

Figure 5 presents a summary of the PYTD reported gross energy savings by program component for Program Year 13. The energy impacts in this report are presented at the meter level and do not reflect adjustments for transmission and distribution losses. Because this is the first report of Phase IV, the PSA gross savings for Phase IV of Act 129 are the same as the PYTD savings from the current program year so a separate chart is not included.

**Figure 5: PYTD and Phase IV Reported Gross Energy Savings by Program Component**

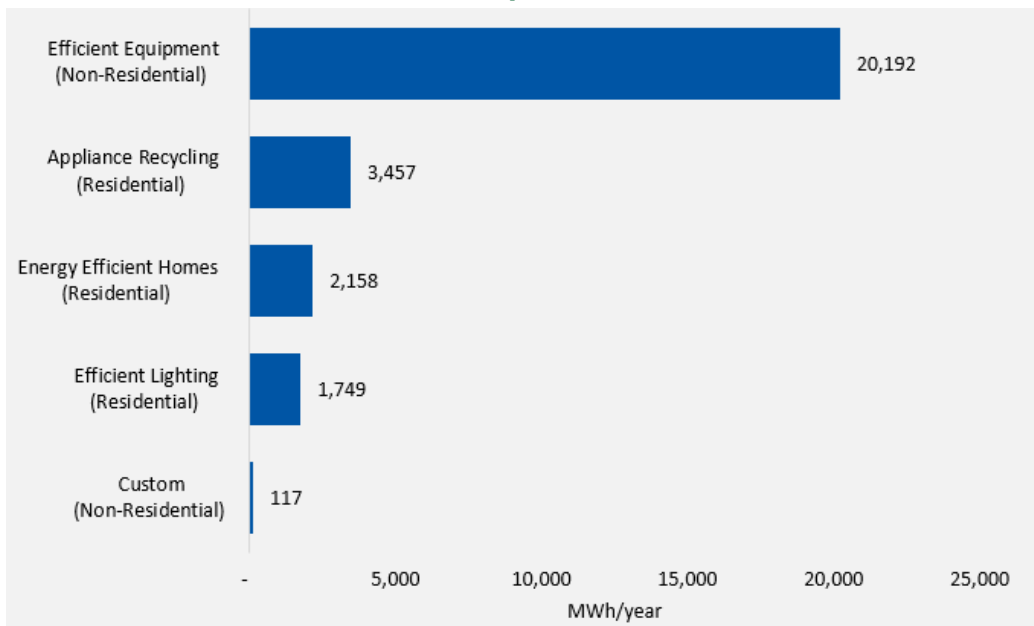


Table 3 presents a summary of energy impacts by program component through the current reporting period.

**Table 3: Energy Savings by Program Component (MWh/Year)**

Program	PYRTD	RTD	VTD	PSA
<b>Low-Income</b>				
Low-Income	-	-	-	-
<b>Residential</b>				
Appliance Recycling	3,457	3,457	-	3,457
Efficient Lighting	1,749	1,749	-	1,749
Energy Efficient Homes	2,158	2,158	-	2,158
Student Energy Efficient Education	-	-	-	-
<b>Non-Residential</b>				
Custom	117	117	-	117
Efficient Equipment	20,192	20,192	-	20,192
<b>Portfolio Total</b>	<b>27,673</b>	<b>27,673</b>	<b>-</b>	<b>27,673</b>
<b>Carry-Over Savings from Phase III</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>306,275</b>
<b>Adjusted Portfolio Total</b>	<b>27,673</b>	<b>27,673</b>	<b>-</b>	<b>333,948</b>

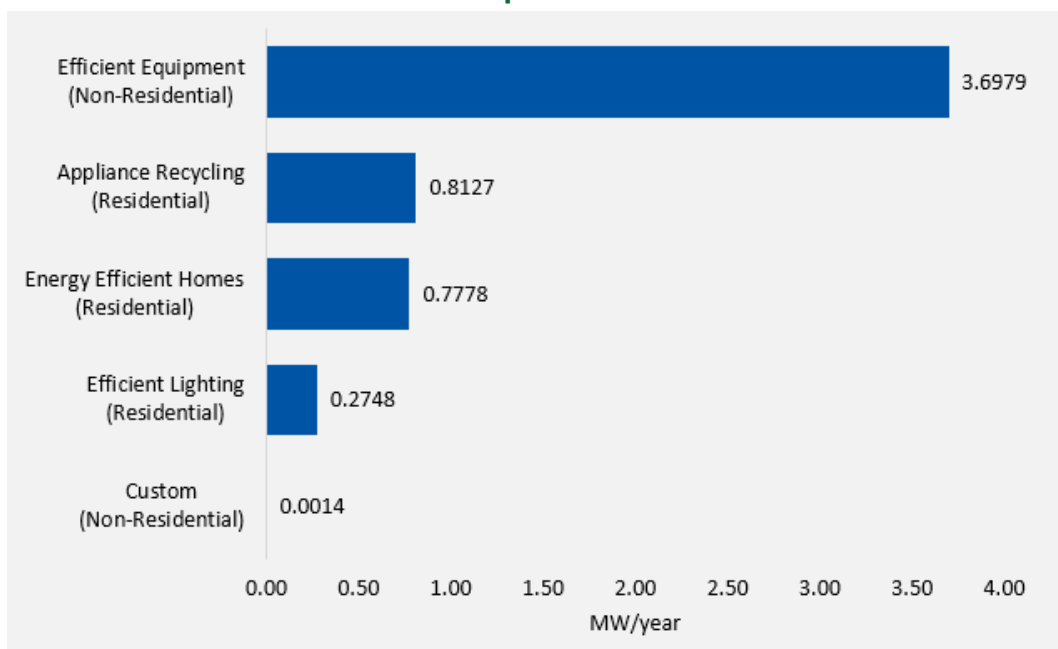
## 6 Summary of Peak Demand Impacts by Program

Act 129 defines peak demand savings from energy efficiency as the average expected reduction in electric demand from 2:00 p.m. to 6:00 p.m. EDT on non-holiday weekdays from June to August. The peak demand impacts from energy efficiency in this report are presented at the system level, meaning they reflect adjustments for transmission and distribution losses. PPL Electric Utilities uses the following line loss percentages/multipliers by sector.<sup>5 6</sup>

- Residential = 1.0875
- Small C&I = 1.0875
- Large C&I = 1.0420

Figure 6 presents a summary of the PYRTD reported gross peak demand savings by energy efficiency program component for Program Year 13. Because this is the first report of Phase IV, the PSA peak demand savings for Phase IV of Act 129 are the same as the PYTD peak demand savings from the current program year so a separate chart is not included.

**Figure 6: PYRTD and Phase IV Gross Peak Demand Savings by Program Component <sup>(1)</sup>**



<sup>(1)</sup> Total of individual program component savings may not sum to total due to rounding.

<sup>5</sup> Pennsylvania Public Utility Commission. February 2021. *Technical Reference Manual*. Act 129 Energy Efficiency and Conservation Program & Act 213 Alternative Energy Portfolio Standards.

<sup>6</sup> For GNE records, the line loss multiplier was calculated as a blended rate of 1.0827 using the proportion of reported demand reductions of the residential and small C&I sectors compared to the large C&I sector (89% and 11%, respectively).

Table 4 presents a summary of the peak demand impacts by program through the current reporting period.

**Table 4: Peak Demand Savings by Program Component (MW/Year)**

Program Component	PYRTD	RTD	VTD	PSA
<b>Low-Income</b>				
Low-Income	-	-	-	-
<b>Residential</b>				
Appliance Recycling	0.8127	0.8127	-	0.8127
Efficient Lighting	0.2748	0.2748	-	0.2748
Energy Efficient Homes	0.7778	0.7778	-	0.7778
Student Energy Efficient Education	-	-	-	-
<b>Non-Residential</b>				
Custom	0.0014	0.0014	-	0.0014
Efficient Equipment	3.6979	3.6979	-	3.6979
<b>Portfolio Total</b>	<b>5.5647</b>	<b>5.5647</b>	<b>-</b>	<b>5.5647</b>
<b>Carry-Over Savings from Phase III</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Adjusted Portfolio Total <sup>(1)</sup></b>	<b>5.5647</b>	<b>5.5647</b>	<b>-</b>	<b>5.5647</b>
<sup>(1)</sup> Totals may not sum due to rounding.				

## 7 Summary of Finances

This section provides an overview of the expenditures associated with PPL Electric Utilities' portfolio and the recovery of those costs from ratepayers.

### 7.1 PROGRAM AND PORTFOLIO FINANCIALS

Program-specific and portfolio total finances through the end of Q2 for PY13 are shown in Table 5. The columns in Table 5 are adapted from the list of 'Program Cost Elements' in the Commission's EE&C Plan template<sup>7</sup> for Phase IV. Thus far in PY13, 33% of all EE&C Plan expenditures have been incentives to participants and trade allies. The dollar amounts are based on EDC tracking of expenditures with no adjustments to account for inflation.<sup>8</sup> Because this is the first report of Phase IV, the program year to date financials are the same as the Phase IV total financials so a separate table is not included. PPL Electric Utilities uses a separate accounting system for financial reporting so totals in these tables may not match those reported in PPL Electric Utilities' participant tracking database.

- Incentives includes rebates, point-of-sale buydowns, kits, and direct install materials and labor
- EDC Materials, Labor, and Administration includes costs associated with an EDC's own employees.
- ICSP Materials, Labor, and Administration includes both the program implementation contractor and the costs of any other outside vendors an EDC employs to support program delivery.

**Table 5: Program Year to Date and Phase IV to Date Financials (\$1,000)**

Program	Incentives	EDC Materials, Labor, and Administration	CSP Materials, Labor, and Administration	Total Cost <sup>(1)</sup>
<b>Low-Income</b>				
Low-Income	\$1,018	\$70	\$1,414	\$2,502
<b>Residential</b>				
Appliance Recycling	\$119	\$32	\$461	\$612
Efficient Lighting	\$320	\$28	\$39	\$387
Energy Efficient Homes	\$833	\$34	\$424	\$1,291
Student Energy Efficient Education	\$0	\$2	\$71	\$73

<sup>7</sup> <https://www.puc.pa.gov/pcdocs/1676672.docx>

<sup>8</sup> The cost-recovery of program expenses through riders generally happens promptly so that costs are being recovered from ratepayers in the same dollars that they are incurred.

## SEMI-ANNUAL REPORT TO THE PA PUC – PROGRAM YEAR 13

Program	Incentives	EDC Materials, Labor, and Administration	CSP Materials, Labor, and Administration	Total Cost <sup>(1)</sup>
<b>Non-Residential</b>				
Custom	\$91	\$24	\$226	\$341
Efficient Equipment	\$1,352	\$54	\$1,313	\$2,720
Common Portfolio Costs <sup>(2)</sup>	\$0	\$1,941	\$1,396	\$3,337
<b>Portfolio Total <sup>(1)</sup></b>	<b>\$3,734</b>	<b>\$2,186</b>	<b>\$5,344</b>	<b>\$11,264</b>
SWE Costs <sup>(3)</sup>	\$0	\$0	\$0	\$198
<b>Total <sup>(1)</sup></b>	<b>\$3,734</b>	<b>\$2,186</b>	<b>\$5,344</b>	<b>\$11,462</b>
<sup>(1)</sup> Total many not equal sum due to rounding. <sup>(2)</sup> Common Portfolio Costs include PPL Electric Utilities' labor and materials, costs related to PPL Electric Utilities' tracking system, EE&C plan development, etc. <sup>(3)</sup> Statewide Evaluation costs are outside of the 2% spending cap.				

Cost-effectiveness testing for Act 129 EE&C programs is performed using the TRC Test. Benefit cost modeling is conducted annually using verified gross and verified net savings once the results of the independent impact evaluation are completed. TRC test results for PY13 will be presented in the final annual report to the PA PUC on September 30, 2022 along with a more granular breakdown of portfolio costs.

## 7.2 COST RECOVERY

Act 129 allows Pennsylvania EDCs to recover EE&C plan costs through a cost-recovery mechanism. PPL Electric Utilities' cost-recovery charges are organized separately by customer sectors to ensure that the electric rate classes that finance the programs are the rate classes that receive the direct energy and conservation benefits. Cost-recovery is necessarily tied to the way customers are metered and charged for electric service. Readers should be mindful of the differences between Table 6 and Section 0. For example, the low-income customer segment is a subset of PPL Electric Utilities' residential tariff(s) and therefore not listed in Table 6.



**Table 6: EE&C Plan Expenditures by Cost-Recovery Category<sup>9</sup>**

<b>Cost Recovery Sector</b>	<b>Rate Classes Included</b>	<b>PYTD Spending (\$1000)</b>	<b>P4TD Spending (\$1000)</b>
Residential & Low-Income	Residential (primarily RS)	\$7,327	\$7,327
Small C&I	Small C&I (primarily GS1 & GS3)	\$2,540	\$2,540
Large C&I	Large C&I (primarily LP4 & LP5)	\$726	\$726
GNE	Residential, Small C&I, and Large C&I	\$870	\$870
Portfolio Total <sup>(1)</sup>	-	\$11,462	\$11,462

<sup>(1)</sup> Totals may not sum due to rounding.

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<sup>9</sup> Includes SWE costs