



# Semiannual Report to the Pennsylvania Public Utility Commission

**Phase IV of Act 129**

**Program Year 14  
(June 1, 2022-May 31, 2023)**

For Pennsylvania Act 129 of 2008  
Energy Efficiency and Conservation Plan

**Prepared by Guidehouse Inc. for:**



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## Acronyms

C&I	Commercial and Industrial
CSP	Conservation Service Provider or Curtailment Service Provider
EDC	Electric Distribution Company
EDT	Eastern Daylight Time
EE&C	Energy Efficiency and Conservation
GNI	Government, Nonprofit, Institutional
HVAC	Heating, Ventilating, and Air Conditioning
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
PMRS	Program Management and Reporting System
PSA+CO	PSA savings plus Carryover from Phase III
PY	Program Year: e.g., PY14, from June 1, 2022 to May 31, 2023
PYRTD	Program Year Reported to Date
PYVTD	Program Year Verified to Date
RTD	Phase IV to Date Reported Gross Savings
SBDI	Small Business Direct Install
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 Energy Efficiency and Conservation (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 change 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 electric distribution company (EDC) or its program implementation conservation service providers 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 measurement and verification (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 applying 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 Technical Reference Manual (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 total resource cost (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. Program year to date (PYTD) values for energy efficiency will always be reported as gross savings in a semiannual 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 (PYRTD).

**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 Pennsylvania Public Utilities Commission (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 PA 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 Duquesne Light in program year 14 (PY14), as well as the cumulative accomplishments of the Phase IV programs since inception. This report also documents the energy savings carried over from Phase III. The Phase III carryover savings count toward 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 PY14. Compliance with Act 129 savings goals is ultimately based on verified gross savings. Duquesne Light retained Guidehouse as an independent evaluation contractor for Phase IV of Act 129. Guidehouse is responsible for the measurement and verification (M&V) of the savings and calculation of verified gross savings. The verified gross savings for PY14 energy efficiency programs will be reported in the final annual report, to be filed on September 30, 2023.

Phase IV of Act 129 includes a peak demand reduction goal for Duquesne Light. 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 p.m. to 6 p.m. 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.

## PORTFOLIO

Duquesne Light offers 17 energy efficiency programs to nonresidential, residential, and low income customers in Phase IV.<sup>1</sup>



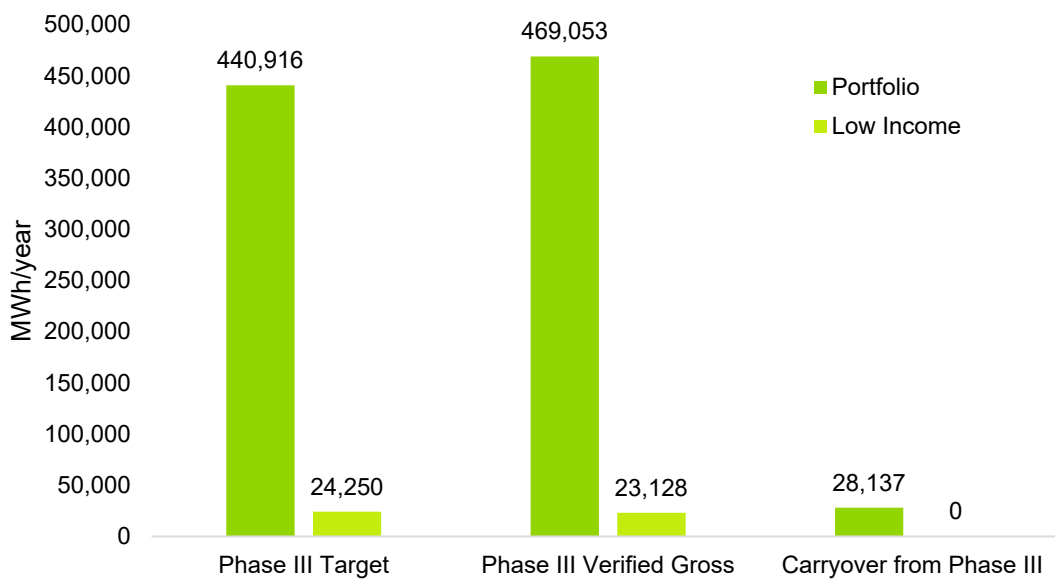
<sup>1</sup> Duquesne Light, "Revised Phase IV Energy Efficiency and Conservation Plan". March 1, 2021.  
<https://www.duquesnelight.com/docs/default-source/wattchoice/act-129/eec-phase-iv-plan-revised-march-1-2021-puc-approved-march-25-2021.pdf>

## 2. Summary of Achievements

### 2.1 Carryover Savings from Phase III of Act 129

The PA PUC’s Phase IV Implementation Order<sup>2</sup> allowed EDCs to carry over verified savings above the Phase III portfolio and low income savings goals and apply those savings toward Phase IV compliance targets. Duquesne Light has 28,137 MWh/year of portfolio carryover savings and 0 MWh/year of low income carryover savings from Phase III toward its Phase IV energy reduction targets. Figure 1 compares Duquesne Light’s Phase III verified gross savings total<sup>3</sup> to the Phase III compliance target to illustrate the carryover calculation.

**Figure 1. Carryover Savings from Phase III of Act 129**



Note: Phase III Verified Gross Savings do not include carryover savings from Phase II.

Source: Guidehouse

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

### 2.2 Phase IV Energy Efficiency Achievements to Date

Since the beginning of PY14 on June 1, 2022, Duquesne Light has claimed:

- 45,770 MWh/yr of reported gross electric energy savings (PYRTD)
- 7.82 MW/yr of reported gross peak demand savings (PYRTD)

Since the beginning of Phase IV of Act 129 on June 1, 2021, Duquesne Light has achieved:

<sup>2</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>3</sup> Phase III Verified Gross Savings do not include carryover savings from Phase II.



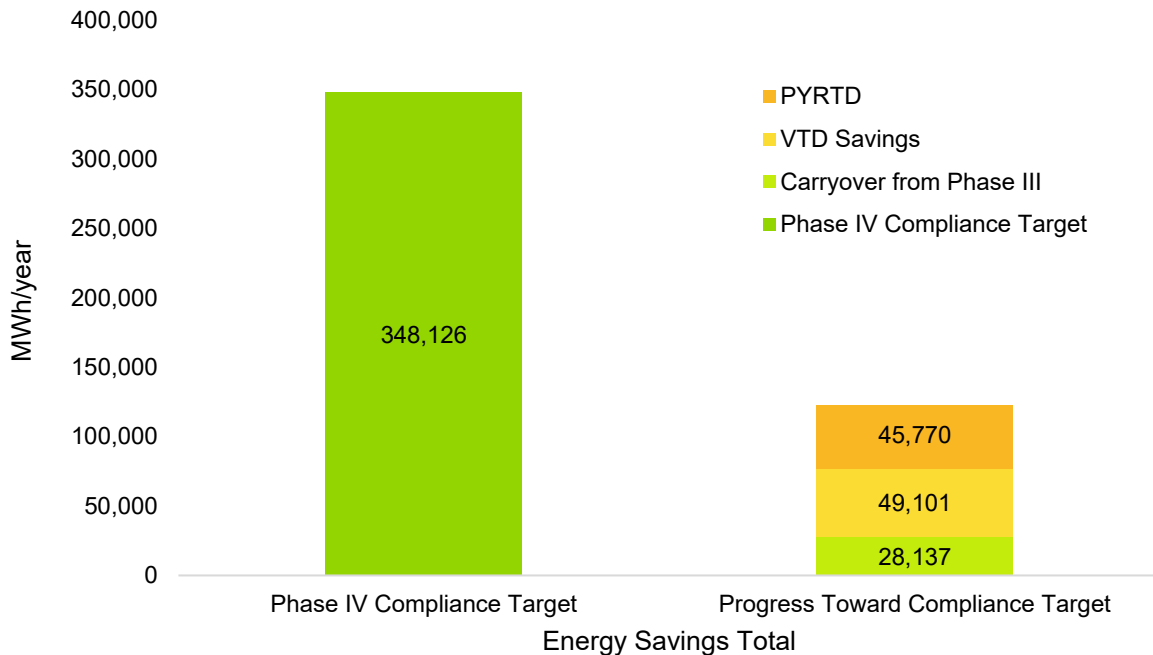
- 93,261 MWh/yr of reported gross electric energy savings (RTD)
- 16.16 MW/yr of reported gross peak demand savings (RTD) from energy efficiency programs
- 94,871 MWh/yr of gross electric energy savings (PSA). This total includes verified gross savings from previous Phase IV program years and the PYTD reported gross savings from PY14.
- 17.28 MW/yr of gross peak demand savings (PSA) from energy efficiency programs

Including carryover savings from Phase III, Duquesne Light has achieved:

- 123,008 MWh/yr of PSA+CO energy savings recorded to date in Phase IV
  - This value represents 35% of the May 31, 2026 energy savings compliance target of 348,126 MWh/yr.

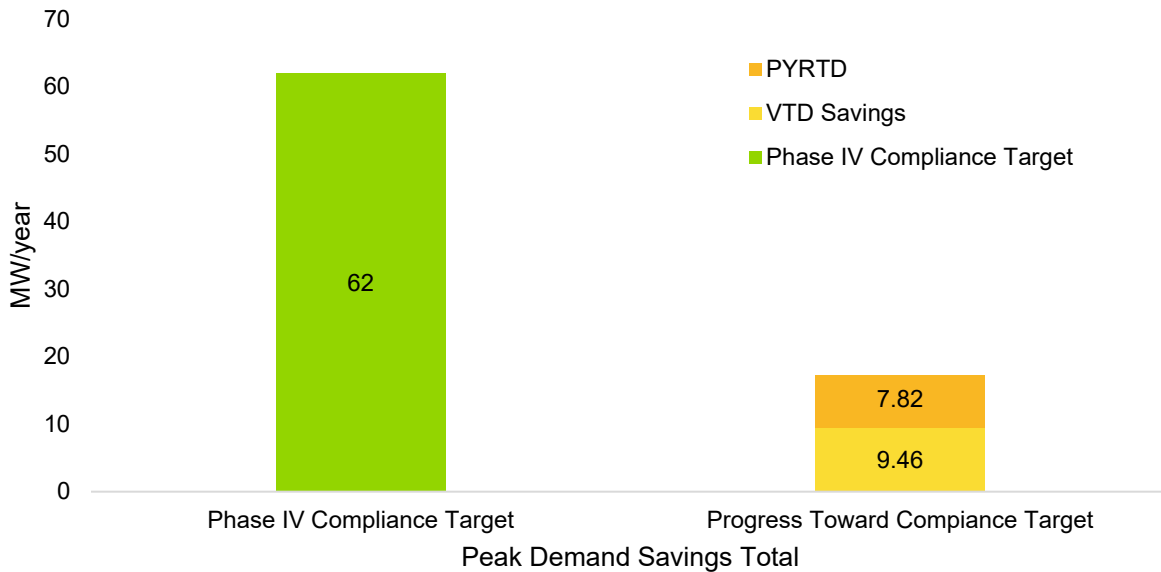
Figure 2 and Figure 3 show Duquesne Light’s EE&C Plan progress toward Phase IV energy conservation and peak demand reduction compliance targets.

**Figure 2. Performance toward Phase IV Portfolio Energy Target**



Source: Guidehouse

**Figure 3. Performance toward Phase IV Portfolio Peak Demand Target**



Source: Guidehouse

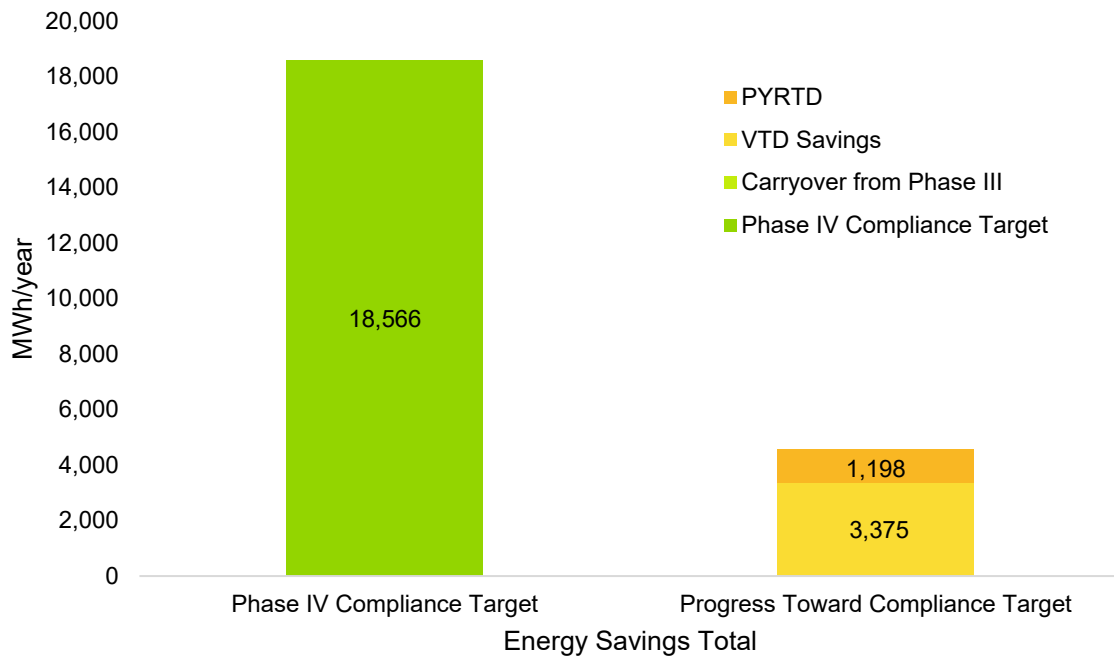
The Phase IV Implementation Order directed EDCs to offer conservation measures to the low income customer segment based on the proportion of electric sales attributable to low income households. The proportionate number of measures targeted for Duquesne Light is 8.4%. Duquesne Light offers 194 EE&C measures to its residential and nonresidential customer classes. Of the 194 measures, 28 measures are available to the low income customer segment at no cost to the customer<sup>4</sup>. This represents 14.4% of the total measures offered in the EE&C plan and exceeds the proportionate number of measures targeted<sup>5</sup>.

The PA PUC also established a low income energy savings target of 5.3% of the portfolio savings goal. The low income savings target for Duquesne Light is 18,566 MWh/yr 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, Duquesne Light has achieved 25% of the Phase IV low income energy savings target.

<sup>4</sup> Duquesne Light, “Revised Phase IV Energy Efficiency and Conservation Plan”, March 1, 2021, Table 7A: Eligible Measures-Residential (page 144) and Table 7B: Eligible Measures- Non-Residential (page 146). <https://www.duquesnelight.com/docs/default-source/wattchoice/act-129/eec-phase-iv-plan-revised-march-1-2021-puc-approved-march-25-2021.pdf>

<sup>5</sup> Current counts reflect PY13 activity and will be updated at the end of PY14.

**Figure 4. EE&C Plan Performance toward Phase IV Low Income Compliance Target**



Source: Guidehouse

### 2.3 Phase IV Performance by Customer Segment

Table 1 presents the participation, savings, and spending by customer sector for PY14. The residential, small C&I, and large C&I sectors are defined by EDC tariff and the residential low income and governmental/educational/nonprofit (GNI) 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 GNI segment includes customers who are part of the small commercial and industrial (C&I) or large C&I rate classes. The savings, spending, and participation values for the low income segment has been removed from the parent sectors in Table 1. Pursuant to the Commission’s Implementation Order for Phase IV, Duquesne Light will not offer a specialized program, but will report the savings associated with the GNI customers participating in the Non-Residential programs. The savings, spending, and participation values for the GNI segment are shown in Table 1, but have not been removed from the parent sectors.

**Table 1. PY14 Summary Statistics by Customer Segment**

Parameter	Residential (Non-Low Income)	Residential Low Income	Small C&I	Large C&I	GNI*	Total**
No. of Participants***	16,202	4,190	714	154	200	21,260
PYRTD MWh/yr	2,637	1,198	19,804	22,132	8,451	45,770
PYRTD MW/yr	0.56	0.12	3.87	3.28	1.28	7.82
Incentives (\$1,000)	\$293	\$593	\$3,141	\$2,280	\$1,317	\$6,307

\*Small C&I and large C&I are the total savings associated with their respective sector, including projects that fall under GNI. GNI values have been provided for informational purposes only.

\*\*Total values may not add up due to rounding and do not include values in the GNI column. GNI participation and savings data is already reflected in the small C&I and large C&I columns.

\*\*\* Populations for the Residential and LI Behavior programs are captured at year end and therefore not represented here

Source: Guidehouse

Table 2 summarizes plan performance by sector since the beginning of Phase IV.

**Table 2. Phase IV Summary Statistics by Customer Segment**

Parameter	Residential	Low Income	Small C&I	Large C&I	GNI*	Total**
No. of Participants	207,241	28,999	1,434	344	404	238,018
PSA MWh/yr	11,013	4,573	35,954	43,332	14,218	94,871
PSA MW/yr	1.62	0.46	8.14	7.07	2.27	17.28
Incentives (\$1,000)	\$512	\$1,568	\$5,455	\$3,817	\$2,059	\$11,352

\*Small C&I and Large C&I are the total savings associated with their respective sector, including projects that fall under GNI. GNI values have been provided for informational purposes only.

\*\*Total values may not add up due to rounding and do not include values in the GNI column. GNI participation and savings data is already reflected in the Small C&I and Large C&I columns.

Source: Guidehouse

## 3. Updates and Findings

### 3.1 Implementation Updates and Findings

Duquesne Light's Phase IV EE&C Plan includes programs that are being continued as previously implemented in Phase III, modified based on previous years' experience implementing them, and newly added programs. The new programs include Small Business Virtual Commissioning, Large Business Virtual Commissioning, and Residential Midstream Incentives. Additionally, Duquesne Light also designed, developed, and updated a new system, PMRS 2.0, for tracking, managing, and reporting measure, project, program, and portfolio activities for Phase IV. A summary of the Phase IV programs and implementation to date is as follows:

#### 3.1.1 Residential Programs

- **Upstream Incentives:** Program activity has been slow to date in PY14 but is expected to ramp up in the second half of the program year.
- **Midstream Incentives:** No program activity has been reported to date in Phase IV.
- **Downstream Incentives:** To date, the program has reported savings from rebates and educational kits, as well as savings from community events and sweepstakes giveaways.
- **Appliance Recycling:** Program activity to date for PY14 is running as projected in the Phase IV EE&C plan.
- **Low Income Energy Efficiency:** Activities include a walkthrough audit for single-family and multifamily dwellings and a thorough audit for single-family homes where participants receive additional direct install measures. Participation appears to be running as projected in the Phase IV EE&C plan.
- **Residential Behavioral and Low Income Residential Behavioral:** These programs will continue to operate similar to Phase III with the introduction of new cohorts, which were launched in PY13 for additional low income and market rate customers. Program activity will be reported at program year end.

#### 3.1.2 Small Business Programs

- **Small Business Direct Install (SBDI):** Projects labeled as small multifamily housing retrofit in PMRS are reported under the SBDI program. SBDI has more than doubled the participation for the entire PY13 (41) in the first two quarters of PY14 (102 PY to date).
- **Small Business Solutions:** Small Business Solutions, targeting non-residential customers with demand <300kW, shows consistent participation from PY13 to PY14 so far.
- **Small Business Midstream Solutions:** Program currently includes only lighting measures, and has been a significant contributor to Small Business program savings through PY14 Q2.
- **Small Business Virtual Commissioning:** SBVCx has nine projects submitted through PY14 Q2.

### 3.1.3 Large Business Programs

- **Large Business Solutions:** Large Business Solutions, targeting non-residential customers with demand  $\geq 300\text{kW}$ , shows increased participation and savings in PY14 compared to PY13.
- **Large Business Midstream Solutions:** The program currently includes lighting measures. No HVAC measures have been submitted as of PY14 Q2.
- **Large Business Virtual Commissioning:** LBVCx has six projects submitted through PY14 Q2.

### 3.2 Evaluation Updates and Findings

This section summarizes evaluation highlights of Duquesne Light's progress in Phase IV. Guidehouse prepared a Phase IV evaluation plan that describes all activities planned for PY14 and Phase IV. Guidehouse received and addressed statewide evaluator (SWE) comments regarding the plan. Guidehouse plans to follow the planned evaluation activities consistent with the Phase IV evaluation plan for each program for PY14, which Table 3 summarizes. In case of any necessary deviations from the plan, Guidehouse will inform, discuss, and agree with Duquesne Light and SWE in advance of pursuing any changes.

Guidehouse will prepare and submit nonresidential and residential program sample design memorandums that will describe stratification, sample targets, and research methods the team will use to gather information for the programs that are the focus of verification efforts in PY14.

Thus far, Guidehouse has provided responses to the SWE's PY14 quarterly data requests for Q1 and Q2. This included data and project files from the various programs to demonstrate program activity to date.

**Table 3. Schedule of Major Evaluation Activities Involving Primary Research for Each Program**

	Projected		Impact					Progress/NTG				
	MWh	MW	PY13	PY14	PY15	PY16	PY17	PY13	PY14	PY15	PY16	PY17
<b>Residential</b>												
Upstream Incentives	3.7%	2.1%	X	X	X	X	X	*	X	*	*	*
Midstream Incentives	0.2%	0.2%	U	*	X	*	*	*	*	X	*	*
Downstream Incentives	6.4%	3.9%	X	*	X	*	X	X	*	*	*	*
Appliance Recycling	3.4%	2.7%	X	*	X	*	*	*	*	X	*	*
Residential Behavioral	10.8%	8.1%	X	X	X	X	X	*	P	*	*	*
Low Income Behavioral	1.3%	0.9%	X	X	X	X	X	*	P	*	*	*
Low Income Energy Efficiency	4.5%	2.8%	*	X	*	X	*	*	P	*	*	*
<b>Small/Medium C&amp;I</b>												
Small Business Direct Install	6.2%	6.7%	*	X	*	X	*	*	X	*	*	*
Small Business Solutions	13.6%	12.8%	Uses a 2-year rolling sample approach					*	X	*	*	*
Small Business Midstream	7.4%	10.1%	X	*	X	*	*	D	*	X	*	*
Small Virtual Commissioning	1.6%	3.3%	U	X	*	X	*	*	*	X	*	*
<b>Large C&amp;I</b>												
Large Business Solutions*	33.1%	33.7%	Uses a 2-year rolling sample approach					*	X	*	N	*

	Projected		Impact					Progress/NTG				
Large Business Midstream	6.8%	10.5%	X	*	X	*	*	D	*	X	*	*
Large Virtual Commissioning	1.1%	2.2%	U	X	*	X	*	*	*	X	*	*
<b>Portfolio</b>	<b>100%</b>	<b>100%</b>										

\* Uses realization rate values from the most recent evaluation activities based on previous years.

X: Guidehouse will conduct verification and/or primary research for impact evaluation activities and/or primary research for process/NTG activities.

U: Savings will be unverified for this program year.

P: Guidehouse will conduct process evaluation only for this year for this program.

D: Guidehouse will conduct only market actor assessment via distributor interviews for this year for this program.

N: Guidehouse will conduct only NTG assessment for this year for this program.

Source: Guidehouse



## 4. Summary of Participation by Program

Participation is defined differently for certain programs depending on the program delivery channel and data tracking practices. The nuances of the participant definition vary by program, and within elements of a given program. The following bullets summarize Phase IV participation counting logic by program, and Table 4 provides the current participation totals for PY14 and Phase IV.

- The Residential Energy Efficiency program includes seven components:
  - For customers participating in the Rebate component of the Residential Downstream Incentives Program (RDIP), it is the number of distinct account numbers in the program tracking data within a given program year. For the Educational Kits component of RDIP, it is the number of kits distributed within a given program year.
  - For Residential Midstream Incentives Program (RMIP), it is the number of distinct account numbers in the program tracking data within a given program year.
  - For Residential Upstream Incentives Program (RUIP), participation cannot be accurately collected due to the nature of the program and therefore are not counted. Guidehouse used guidance listed in the applicable Pennsylvania TRM sections for a census of projects implemented during PY14.
  - For Residential Appliance Recycling Program (RARP), it is the number of distinct measures in the program tracking data within a given program year.
  - For Low Income Energy Efficiency Program (LIEEP), it is the number of distinct account numbers in the tracking data within a given program year.
  - For Residential and LI Behavior, it is the number of distinct account numbers in the tracking data within a given program year. Participation is not collected until the end of the program year.
- The Commercial Prescriptive program includes four components:
  - For Small Business Direct Install (SBDI), it is the number of unique participants (defined as unique account numbers).
  - For Small and Large Business Solutions, including industrial, it is the number of unique participants (defined as unique account numbers).
  - For Small and Large Business Midstream Solutions, including industrial, it is the number of unique participants (defined as unique account numbers).
  - For Small and Large Virtual Commissioning, including industrial, it is the number of unique participants (defined as unique account numbers).

**Table 4. EE&C Plan Participation by Program Component**

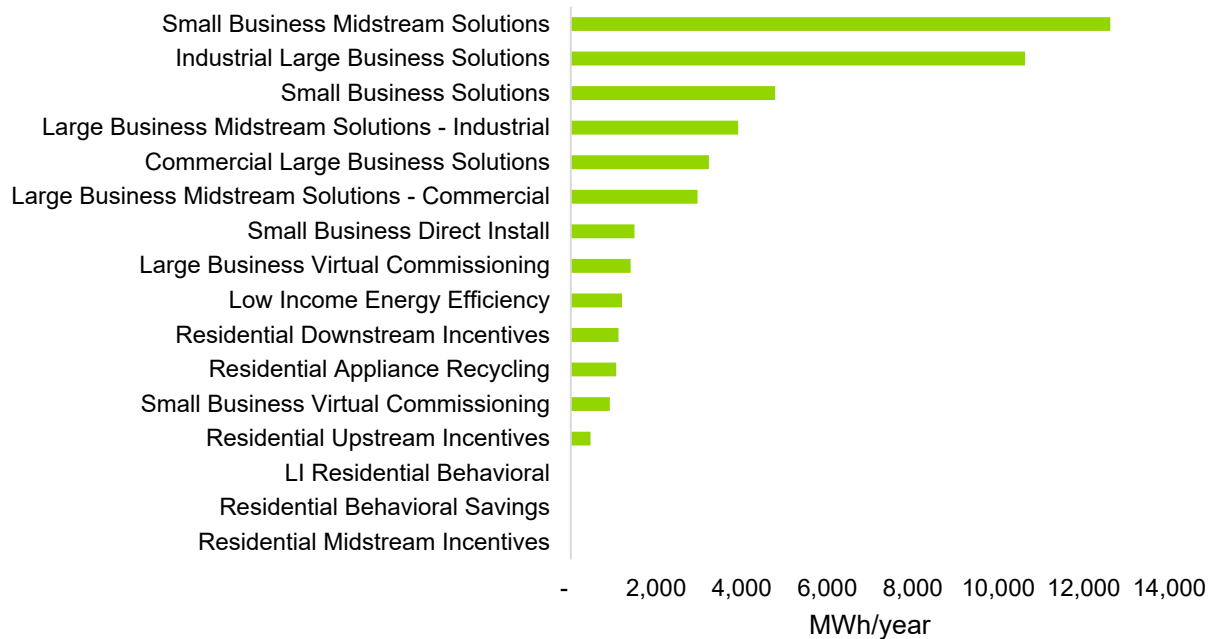
Program	Component	PYTD Participation	P4TD Participation
Residential Appliance Recycling	Appliance Recycling	1,300	1,845
Residential Downstream Incentives	Downstream, Direct Install Audits, Giveaways	14,902	19,550
Residential Midstream Incentives	Midstream	-	-
Residential Upstream Incentives	Upstream	N/A	N/A
Residential Behavioral Energy Efficiency	Home Energy Reports	-	185,846
Low Income Energy Efficiency	Downstream, Direct Install Audits, Giveaways	4,190	8,401
Low Income Behavioral Efficiency	Home Energy Reports	-	20,598
Small Business Direct Install	Direct Install	102	143
Small Business Solutions	Downstream	90	281
Small Business Midstream Solutions	Midstream	513	1,001
Small Business Virtual Commissioning	VCx	9	9
Large Commercial Business Solutions	Downstream	15	64
Large Commercial Business Midstream Solutions	Midstream	92	181
Large Commercial Business Virtual Commissioning	VCx	6	6
Large Industrial Business Solutions	Downstream	5	18
Large Industrial Business Midstream Solutions	Midstream	36	75
Large Industrial Business Virtual Commissioning	VCx	1,300	1,845
<b>Total</b>		<b>21,260</b>	<b>238,018</b>

Source: Guidehouse

## 5. Summary of Energy Impacts by Program

Figure 5 summarizes the PYTD reported gross energy savings by program for PY14. This report presents energy impacts at the meter level, and they do not reflect adjustments for transmission and distribution losses.

**Figure 5. PYTD Reported Gross Energy Savings by Program**



Source: Guidehouse

Figure 6 summarizes the PSA gross energy savings by program for Phase IV of Act 129. PSA savings include verified gross savings from previous program years and the PYTD savings from the current program year.

**Figure 6. PSA Energy Savings by Program for Phase IV**


Source: Guidehouse

Table 5 summarizes energy impacts by program through the current reporting period.

**Table 5. Energy Savings by Program (MWh/Year)**

Program	PYRTD	RTD	VTD	PSA
Residential Downstream Incentives	1,115	2,648	1,099	2,214
Residential Midstream Incentives	-	-	-	-
Residential Upstream Incentives	460	1,841	1,659	2,119
Residential Appliance Recycling	1,062	1,409	391	1,453
Low Income Energy Efficiency	1,198	3,732	2,179	3,377
Residential Behavioral Savings	-	5,137	5,227	5,227
LI Residential Behavioral	-	931	1,196	1,196
Small Business Direct Install	1,490	2,788	1,343	2,833
Small Business Solutions	4,781	10,915	8,369	13,150
Small Business Midstream Solutions	12,621	23,286	6,438	19,059
Small Business Virtual Commissioning	912	912	-	912
Commercial Large Business Solutions	3,229	12,418	10,442	13,671
Industrial Large Business Solutions	10,624	12,766	1,933	12,557
Large Business Midstream Solutions - Commercial	2,964	6,323	4,727	7,691

<b>Program</b>	<b>PYRTD</b>	<b>RTD</b>	<b>VTD</b>	<b>PSA</b>
Large Business Midstream Solutions - Industrial	3,915	6,756	4,098	8,013
Large Business Virtual Commissioning	1,400	1,400	-	1,400
<b>Portfolio Total</b>	<b>45,770</b>	<b>93,261</b>	<b>49,101</b>	<b>94,871</b>

Source: Guidehouse

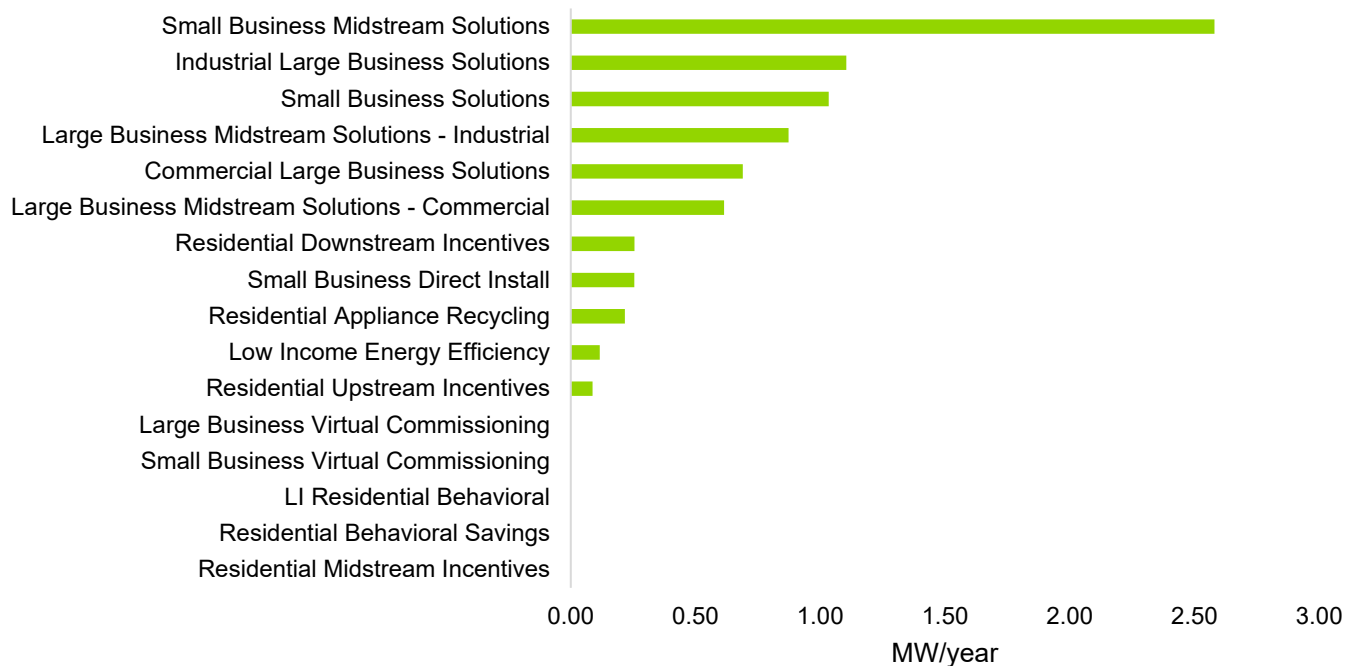
## 6. Summary of Peak Demand Impacts by Program

Act 129 defines peak demand savings from energy efficiency as the average expected reduction in electric demand from 2 p.m. to 6 p.m. EDT on non-holiday weekdays from June to August. This report presents peak demand impacts from energy efficiency at the system level, meaning they reflect adjustments for transmission and distribution losses. Duquesne Light uses the following line loss percentages or multipliers by sector:

- Residential = 1.0741
- Small C&I = 1.0741
- Large C&I = 1.0741
- Large C&I High Voltage = 1.0081

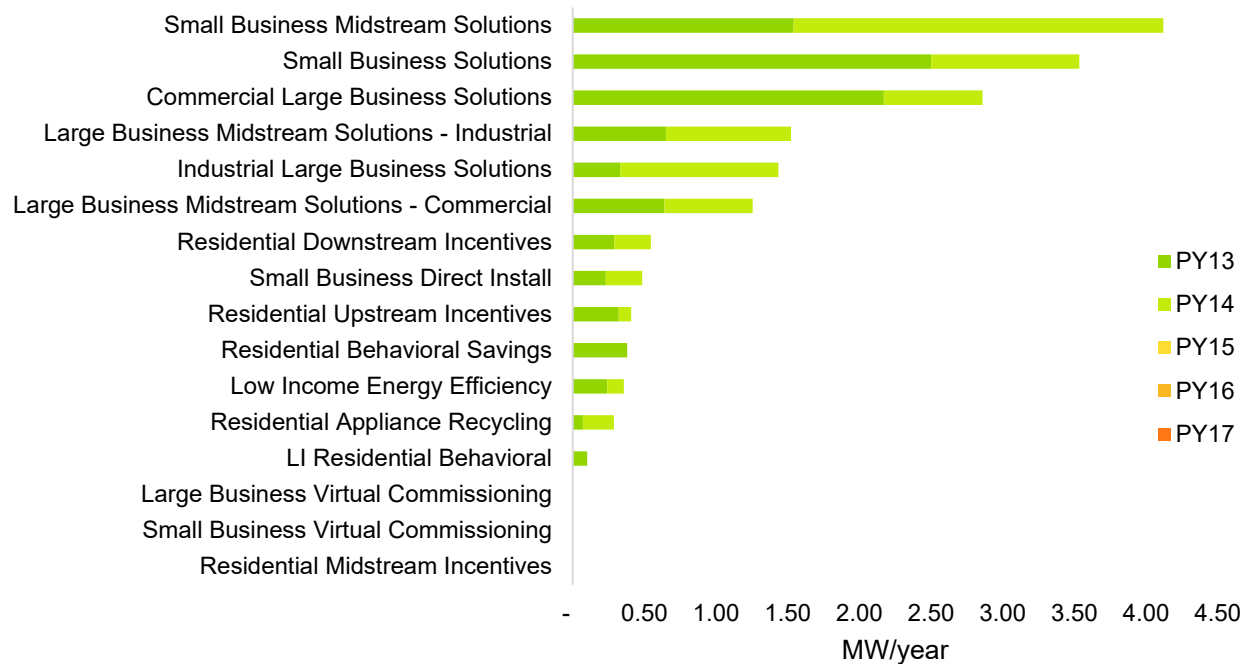
Figure 7 summarizes the PYRTD reported gross peak demand savings by energy efficiency program for PY14.

**Figure 7. PYRTD Gross Peak Demand Savings by Program**



Source: Guidehouse

Based on feedback from the SWE at the end of PY13, it was determined that a modification was needed in how the prescribed line loss factor was applied to Large C&I projects. This resulted in an adjustment to the reported and verified peak demand savings after the PY13 Annual Report was filed. Figure 8 and Table 6 reflect these adjustments. Figure 8 summarizes the PSA gross peak demand savings by energy efficiency program for Phase IV of Act 129.

**Figure 8. PSA Gross Peak Demand Savings by Energy Efficiency Program for Phase IV**


Source: Guidehouse

Table 6 summarizes the peak demand impacts by program through the current reporting period.

**Table 6. Peak Demand Savings by Program (MW/Year)**

Program	PYRTD	RTD*	VTD*	PSA*
Residential Downstream Incentives	0.26	0.56	0.29	0.55
Residential Midstream Incentives	-	-	-	-
Residential Upstream Incentives	0.09	0.33	0.32	0.41
Residential Appliance Recycling	0.22	0.29	0.07	0.29
Low Income Energy Efficiency	0.12	0.39	0.24	0.36
Residential Behavioral Savings	-	0.40	0.38	0.38
LI Residential Behavioral	-	0.03	0.10	0.10
Small Business Direct Install	0.25	0.46	0.23	0.48
Small Business Solutions	1.03	2.28	2.50	3.53
Small Business Midstream Solutions	2.58	4.71	1.54	4.12
Small Business Virtual Commissioning	-	-	-	-
Commercial Large Business Solutions	0.69	2.51	2.17	2.86
Industrial Large Business Solutions	1.10	1.45	0.33	1.43
Large Business Midstream Solutions - Commercial	0.61	1.23	0.64	1.25

<b>Program</b>	<b>PYRTD</b>	<b>RTD*</b>	<b>VTD*</b>	<b>PSA*</b>
Large Business Midstream Solutions - Industrial	0.87	1.52	0.65	1.52
Large Business Virtual Commissioning	-	-	-	-
<b>Portfolio Total</b>	<b>7.82</b>	<b>16.16</b>	<b>9.46</b>	<b>17.28</b>

*\* Peak demand savings will not match the PY13 Annual Report due to modifications in how the prescribed line loss factor was applied to Large C&I projects per the SWE's guidance after the PY13 Annual Report was filed.*

Source: Guidehouse



## 7. Summary of Finances

This section details the expenditures associated with Duquesne Light’s portfolio and the recovery of those costs from ratepayers.

### 7.1 Program and Portfolio Financials

Table 7 shows program-specific and portfolio total finances for PY14. The columns in Table 7 and Table 8 are adapted from the list of program cost elements in the PA PUC’s EE&C plan template<sup>6</sup> for Phase IV. So far in PY14, 52% of all EE&C plan expenditures have been incentives to participants and trade allies.

- Incentives include rebates, point-of-sale buydowns, kits, and direct install materials and labor.
- EDC materials, labor, and administration includes costs associated with Duquesne Light’s own employees.
- Implementation conservation service provider ICSP materials, labor, and administration includes the program implementation contractor, and the costs of any other outside vendors Duquesne Light employs to support program delivery.
- EM&V includes cost of program evaluation, measurement, and verification.

**Table 7. Program Year to Date Financials (\$1,000)**

Program	Incentives	EDC Materials, Labor, and Administration	ICSP Materials, Labor, and Administration	EM&V	Total Cost
Residential Downstream Incentives	\$215	\$15	\$543	\$25	\$798
Residential Midstream Incentives	\$0	\$15	\$19	\$1	\$35
Residential Upstream Incentives	\$0	\$15	\$302	\$17	\$334
Residential Appliance Recycling	\$78	\$15	\$190	\$12	\$295
Low Income Energy Efficiency	\$593	\$15	\$170	\$67	\$845
Residential Behavioral Savings	\$0	\$25	\$343	\$15	\$383
LI Residential Behavioral	\$0	\$25	\$100	\$3	\$128
Small Business Direct Install	\$751	\$12	\$99	\$43	\$905
Small Business Solutions	\$337	\$12	\$463	\$41	\$853
Small Business Midstream Solutions	\$1,893	\$13	\$950	\$28	\$2,884

<sup>6</sup> Implementation of Act 129 of 2008 – Phase IV Energy Efficiency and Conservation Plan Template. Docket No. M-2020-3015228. Section 10. September 9, 2020. <https://www.puc.pa.gov/pcdocs/1676672.docx>.

Program	Incentives	EDC Materials, Labor, and Administration	ICSP Materials, Labor, and Administration	EM&V	Total Cost
Small Business Virtual Commissioning	\$160	\$12	\$45	\$7	\$224
Large Commercial Business Solutions	\$307	\$13	\$480	\$86	\$886
Large Commercial Business Midstream Solutions	\$406	\$13	\$272	\$26	\$717
Large Commercial Business Virtual Commissioning	\$246	\$12	\$54	\$4	\$316
Large Industrial Business Solutions	\$756	\$13	\$790	\$38	\$1,597
Large Industrial Business Midstream Solutions	\$565	\$12	\$304	\$11	\$892
Large Industrial Business Virtual Commissioning	\$0	\$12	\$3	\$1	\$16
<b>Common Portfolio Costs<sup>7</sup></b>					
<b>Portfolio Total</b>	<b>\$6,307</b>	<b>\$249</b>	<b>\$5,127</b>	<b>\$425</b>	<b>\$12,108</b>
<b>SWE Costs<sup>8</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>\$72</b>
<b>Total</b>	<b>\$6,307</b>	<b>\$249</b>	<b>\$5,127</b>	<b>\$425</b>	<b>\$12,180</b>

Source: Guidehouse

Table 8 shows program-specific and portfolio total finances since the inception of Phase IV. So far in Phase IV, 45% of all EE&C plan expenditures have been incentives to participants and trade allies.

<sup>7</sup> Common Portfolio Costs include costs associated with program tracking data management, support (legal, IT), portfolio level marketing, and EMV.

<sup>8</sup> Statewide Evaluation costs are within the 2% spending cap.

**Table 8. Phase IV to Date Financials (\$1,000)**

<b>Program</b>	<b>Incentives</b>	<b>EDC Materials, Labor, and Administration</b>	<b>ICSP Materials, Labor, and Administration</b>	<b>EM&amp;V</b>	<b>Total Cost</b>
Residential Downstream Incentives	\$226	\$52	\$1,421	\$36	\$1,735
Residential Midstream Incentives	\$0	\$42	\$64	\$2	\$108
Residential Upstream Incentives	\$178	\$49	\$651	\$24	\$902
Residential Appliance Recycling	\$108	\$47	\$942	\$17	\$1,114
Low Income Energy Efficiency	\$1,568	\$74	\$1,264	\$95	\$3,001
Residential Behavioral Savings	\$0	\$76	\$847	\$22	\$945
LI Residential Behavioral	\$0	\$70	\$177	\$5	\$252
Small Business Direct Install	\$1,112	\$51	\$370	\$60	\$1,593
Small Business Solutions	\$788	\$48	\$989	\$59	\$1,884
Small Business Midstream Solutions	\$3,395	\$46	\$1,851	\$40	\$5,332
Small Business Virtual Commissioning	\$160	\$35	\$81	\$10	\$286
Large Commercial Business Solutions	\$952	\$80	\$1,499	\$122	\$2,653
Large Commercial Business Midstream Solutions	\$845	\$42	\$644	\$37	\$1,568
Large Commercial Business Virtual Commissioning	\$246	\$35	\$73	\$5	\$359
Large Industrial Business Solutions	\$839	\$50	\$1,195	\$55	\$2,139
Large Industrial Business Midstream Solutions	\$935	\$37	\$560	\$16	\$1,548
Large Industrial Business Virtual Commissioning	\$0	\$34	\$12	\$2	\$48
<b>Common Portfolio Costs<sup>9</sup></b>					
<b>Portfolio Total</b>	<b>\$11,352</b>	<b>\$868</b>	<b>\$12,640</b>	<b>\$607</b>	<b>\$25,467</b>
<b>SWE Costs<sup>10</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>\$468</b>
<b>Total</b>	<b>\$11,352</b>	<b>\$868</b>	<b>\$12,640</b>	<b>\$607</b>	<b>\$25,935</b>

Source: Guidehouse

<sup>9</sup> Common Portfolio Costs include costs associated with program tracking data management, support (legal, IT), portfolio level marketing, and EMV.

<sup>10</sup> Statewide Evaluation costs are within the 2% spending cap.

Cost-effectiveness testing for Act 129 EE&C programs is performed using the total resource cost (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 PY14 will be presented in the final annual report to the PA PUC on September 30, 2023, 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. Duquesne Light's cost recovery charges are organized separately by four customer sectors to ensure 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 9 and Section 2.3. For example, the low income customer segment is a subset of Duquesne Light's residential tariff(s) and is not listed in Table 9.

**Table 9. EE&C Plan Expenditures by Cost Recovery Category<sup>11</sup>**

Cost Recovery Sector	Rate Classes Included	PYTD Spending (\$1,000)	P4TD Spending (\$1,000)
Residential	RS, RH, RA	\$2,841	\$8,205
Small/Medium Commercial and Industrial	GS, GM, GMH	\$4,885	\$9,228
Large Commercial	GL, GLH, L	\$1,938	\$4,710
Large Industrial	GL, GLH, L, HVPS	\$2,516	\$3,792
<b>Portfolio Total</b>		<b>\$12,180</b>	<b>\$25,935</b>

Source: Guidehouse

<sup>11</sup> Includes SWE costs.