



**Michael Zimmerman**  
Senior Counsel, Regulatory

411 Seventh Avenue  
Mail drop 15-7  
Pittsburgh, PA 15219

Tel: 412-393-6268  
mzimmerman@duqlight.com

January 18, 2022

**Via Electronic Filing**

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120

**Re: Duquesne Light Company's Energy Efficiency and Conservation Phase IV Plan  
Semi-Annual Report - Program Year 13  
Docket No. M-2020-3015228**

Dear Secretary Chiavetta:

Enclosed for filing, please find the Semi-Annual Report for the period of June 1, 2021 through May 31, 2022, Program Year 13, of Duquesne Light Company's Energy Efficiency and Conservation Phase IV Plan. Duquesne Light is also providing a copy of this Report to the Act 129 Statewide Evaluator.

Should you have any questions, please do not hesitate to contact me or Dave Defide at 412-393-6107.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Michael Zimmerman".

Michael Zimmerman  
Senior Counsel, Regulatory

Enclosures

Cc: Certificate of Service

## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant):

### ELECTRONIC MAIL

Bureau of Investigation & Enforcement  
Richard Kanaskie  
Commonwealth Keystone Building  
400 North Street, 2<sup>nd</sup> Floor West  
PO Box 3265  
Harrisburg, PA 17105-3265  
[rkanaskie@pa.gov](mailto:rkanaskie@pa.gov)

Office of Small Business Advocate  
Sharon Webb  
Steve Gray  
555 Walnut Street, 1<sup>st</sup> Floor  
Harrisburg, PA 17101  
[swebb@pa.gov](mailto:swebb@pa.gov)  
[sgray@pa.gov](mailto:sgray@pa.gov)

Office of Consumer Advocate  
Aron Beatty  
555 Walnut Street  
Forum Place, 5<sup>th</sup> Floor  
Harrisburg, PA 17101-1923  
[ABeatty@paoca.org](mailto:ABeatty@paoca.org)



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Michael Zimmerman  
Duquesne Light Company  
411 Seventh Avenue, 15-7  
Pittsburgh, PA 15219  
Phone: 412-393-6268  
Email: [mzimmerman@duqlight.com](mailto:mzimmerman@duqlight.com)

Dated: January 18, 2022



# Semiannual Report to the Pennsylvania Public Utility Commission

Phase IV of Act 129

Program Year 13  
(June 1, 2021–May 31, 2022)

For Pennsylvania Act 129 of 2008  
Energy Efficiency and Conservation Plan

Prepared by Guidehouse Inc.

For:



Duquesne Light Company

January 15, 2022

**guidehouse.com**

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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., PY13, from June 1, 2021 to May 31, 2022
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 (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 evaluation, measurement, and verification plan calls for a historical 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 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 13 (PY13), 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 6 months of PY13. 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 PY13 energy efficiency programs will be reported in the final annual report, to be filed on September 30, 2022.

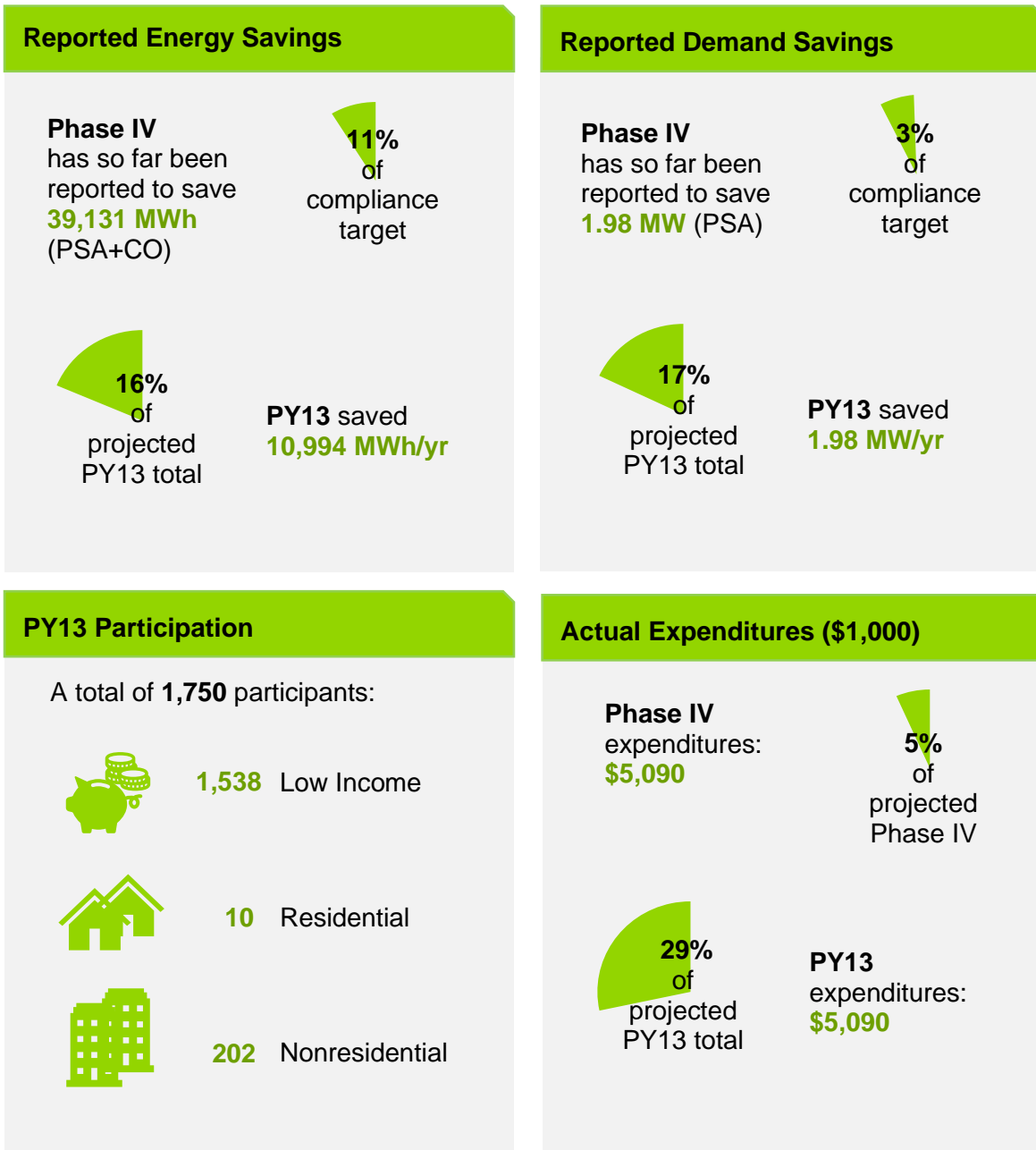
Phase IV of Act 129 includes a peak demand reduction goal for Duquesne Light. Unlike previous phases of Act 129, Phase IV peak demand reduction targets must be met through coincident demand reductions from energy efficiency measures. The Act 129 peak demand reduction definition is non-holiday weekdays 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>



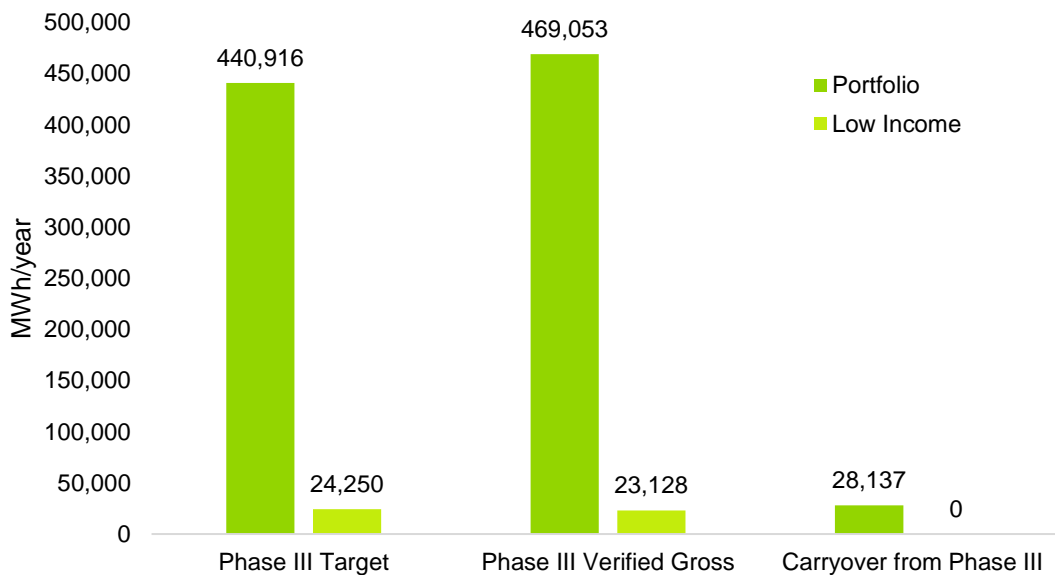
<sup>1</sup> Duquesne Light, "Revised Phase IV Energy Efficiency and Conservation Plan". March 1, 2021. <https://www.duquesnelight.com/docs/default-source/wattchoice/act-129/eec-phase-iv-plan-revised-march-1-2021-puc-approved-march-25-2021.pdf>

## 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**



Source: Guidehouse

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

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 PY13 on June 1, 2021, Duquesne Light has claimed:

- 10,994 MWh/yr of reported gross electric energy savings (PYRTD)
- 1.98 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.

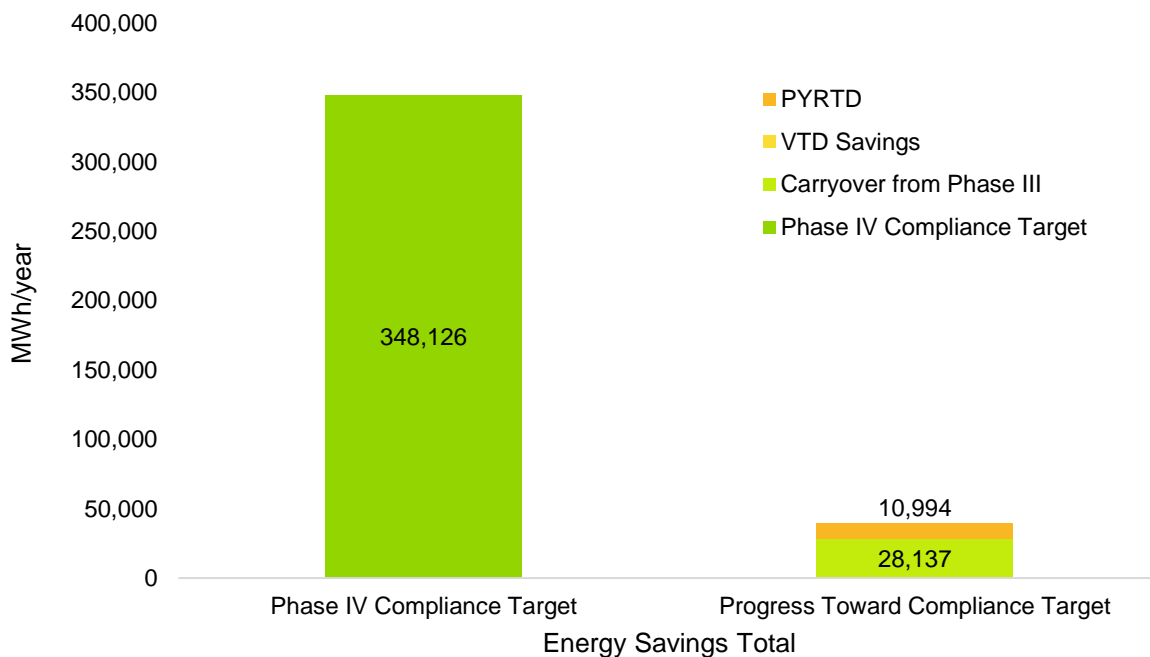
- 10,994 MWh/yr of reported gross electric energy savings (RTD)
- 1.98 MW/yr of reported gross peak demand savings (RTD) from energy efficiency programs
- 10,994 MWh/yr of gross electric energy savings (PSA). This total includes verified gross savings from previous Phase IV program years and the PYTD reported gross savings from PY13.
- 1.98 MW/yr of gross peak demand savings (PSA) from energy efficiency programs

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

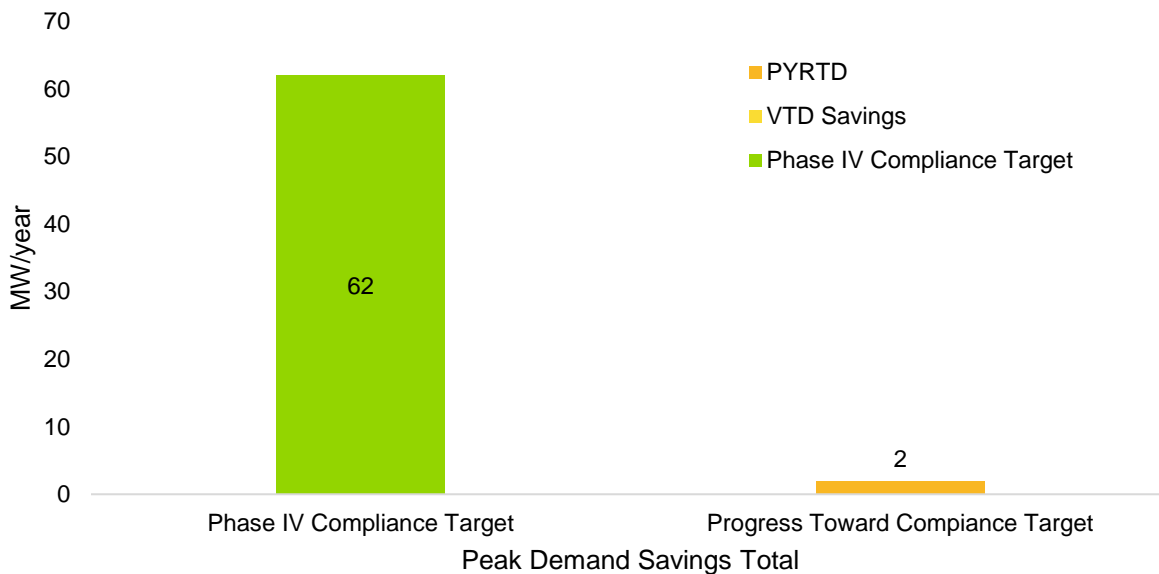
- 39,131 MWh/yr of PSA+CO energy savings recorded to date in Phase IV
  - This value represents 11% of the May 31, 2026 energy savings compliance target of 348,126 MWh/yr.

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

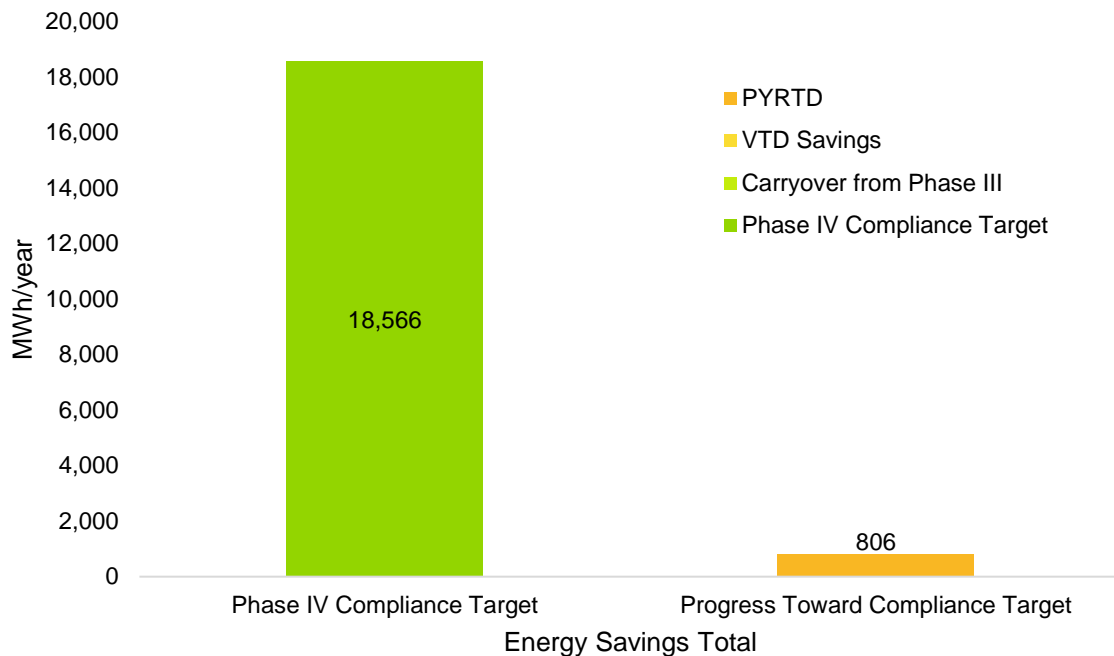
**Figure 3. Performance toward Phase IV Portfolio Peak Demand Target**


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 329 EE&C measures to its residential and nonresidential customer classes. Of the 329 measures, 30 measures are available to the low income customer segment at no cost to the customer<sup>4</sup>. This represents 9.1% of the total measures offered in the EE&C plan and exceeds the proportionate number of measures targeted.

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 4% 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>

**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 PY13. 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. PY13 Summary Statistics by Customer Segment**

Parameter	Residential (Non-Low Income)	Residential Low Income	Small C&I	Large C&I	GNI*	Total**
No. of Participants	10	1,538	137	65	107	1,750
PYRTD MWh/yr	50	806	3,728	6,410	1,856	10,994
PYRTD MW/yr	0.00	0.07	0.65	1.26	0.31	1.98
Incentives (\$1,000)	\$0	\$2	\$305	\$433	\$153	\$740

\*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 do not include values in the GNI column because GNI participation and savings data is already reflected in the small C&I and large C&I columns.

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	10	1,538	137	65	107	1,750
PSA MWh/yr	50	806	3,728	6,410	1,856	10,994
PSA MW/yr	0.00	0.07	0.65	1.26	0.31	1.98
Incentives (\$1,000)	\$0	\$2	\$305	\$433	\$153	\$740

\*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 do not include values in the GNI column because 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. Participation rates for PY13 are lower than expected to date due to program ramp up for new and modified programs; the team expects increased participation in the second half of PY13. A summary of the Phase IV programs and implementation to date is as follows:

#### Residential Programs:

- **Upstream Incentives:** No program activity is reported to date in PY13. This new program is expected to ramp up in the second half of the program year.
- **Midstream Incentives:** No program activity is reported to date in PY13. This new program is expected to ramp up in the second half of the program year.
- **Downstream Incentives:** To date, the program has reported savings from community events and sweepstakes giveaways. Activity in the other components of the program is expected to ramp up in the second half of the program year.
- **Appliance Recycling:** No program activity is reported to date in PY13. This new program is expected to ramp up in the second half of the program year.
- **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 increased from Q1 to Q2, and the program is expected to continue to ramp up in the second half of the year.
- **Residential Behavioral and Low Income Residential Behavioral:** These programs will continue to operate similar to Phase III with the introduction of new cohorts, which will be launched for additional low income and market rate customers.

#### Small Business Programs:

- **Small Business Direct Install (SBDI):** Projects labeled as small multifamily housing retrofit in PMRS are reported under the SBDI program. This includes one project completed in PY13 Q1-2. Six other projects are labeled as SBDI in PMRS in PY13 Q1-2; these projects were initiated in Phase III but delivered and paid for in Phase IV. In Phase III these six projects would have been reported under the Public Agency Partnership program.
- **Small Business Solutions:** Small Business Solutions, targeting non-residential customers with demand <300kW, and show increased participation from Q1 to Q2.
- **Small Business Midstream Solutions:** Program currently includes lighting measures. HVAC measures are expected to be introduced later in PY13.

- **Small Business Virtual Commissioning:** No program activity is reported to date in PY13. This new program is expected to ramp up in the second half of the program year.

**Large Business Programs:**

- **Large Business Solutions:** Large Business Solutions, targeting non-residential customers with demand  $\geq 300\text{kW}$ , shows increased participation from Q1 to Q2.
- **Large Business Midstream Solutions:** The program currently includes lighting measures. HVAC measures are expected to be introduced later in PY13.
- **Large Business Virtual Commissioning:** No program activity is reported to date in PY13. This new program is expected to ramp up in the second half of the program year.

### 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 PY13 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 PY13, 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 PY13. These sample design memos will be submitted for SWE's review by February 28, 2022.

Thus far, Guidehouse has provided responses to the SWE's PY13 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%	U	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				
	MWh	MW	PY13	PY14	PY15	PY16	PY17	PY13	PY14	PY15	PY16	PY17
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.

## 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 PY13 and Phase IV.

- The Residential Energy Efficiency program includes seven components:
  - For appliance recycling, participation is equal to the number of distinct account numbers in the program tracking data, within a given program year
  - For direct install audit and downstream, participation is equal to the number of distinct account numbers in the program tracking data, within a given program year
  - For midstream, participation is equal to the number of distinct account numbers in the program tracking data, within a given program year
  - For home energy reports, participation is the number of unique customers who receive the report
  - For upstream and giveaways, participation cannot be accurately collected due to the nature of the program/component and therefore are not counted.
- The Commercial Prescriptive program includes two components:
  - For downstream, direct install, and virtual commissioning (VCx), participation is equal to the number of distinct account numbers in the program tracking data, within a given program year
  - For midstream, participation is equal to the number of distinct account numbers in the program tracking data, within a given program year

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

Program	Component	PYTD Participation	P4TD Participation
Appliance Recycling	Appliance Recycling	-	-
Residential Downstream Incentives	Downstream, Direct Install Audits, Giveaways	10	10
Residential Midstream Incentives	Midstream	-	-
Residential Upstream Incentives	Upstream	-	-
Residential Behavioral Energy Efficiency	Home Energy Reports	-	-
Low Income Energy Efficiency	Downstream, Direct Install Audits, Giveaways	1,538	1,538
Low Income Behavioral Efficiency	Home Energy Reports	-	-

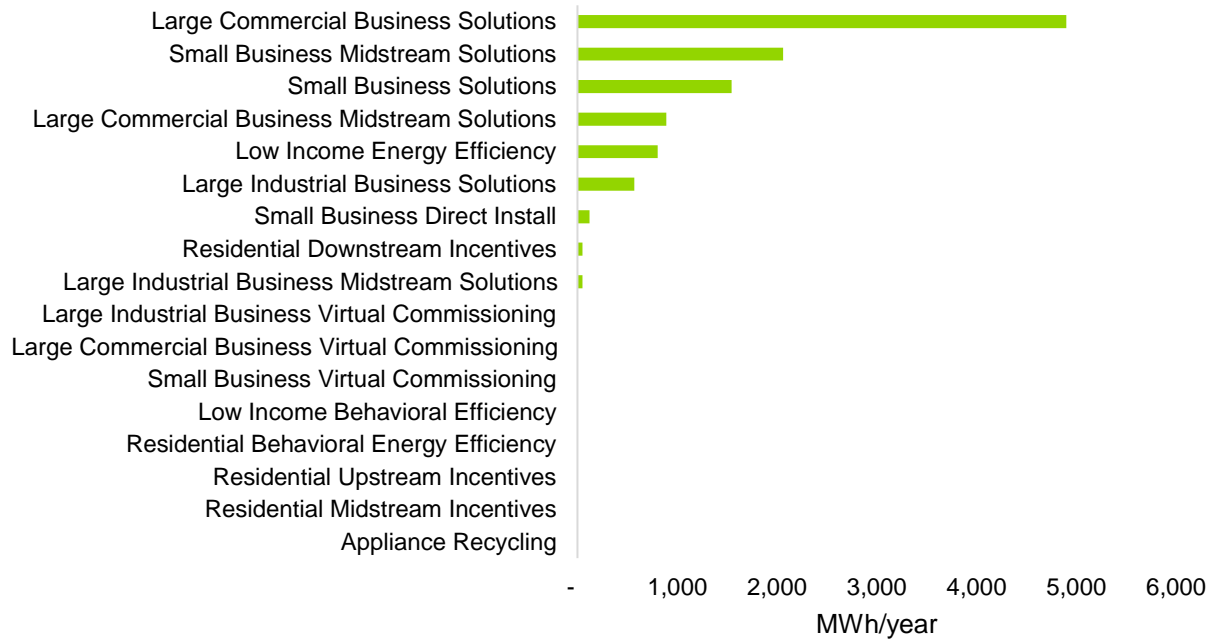
<b>Program</b>	<b>Component</b>	<b>PYTD Participation</b>	<b>P4TD Participation</b>
Small Business Direct Install	Direct Install	7	7
Small Business Solutions	Downstream	49	49
Small Business Midstream Solutions	Midstream	81	81
Small Business Virtual Commissioning	VCx	-	-
Large Commercial Business Solutions	Downstream	29	29
Large Commercial Business Midstream Solutions	Midstream	22	22
Large Commercial Business Virtual Commissioning	VCx	-	-
Large Industrial Business Solutions	Downstream	7	7
Large Industrial Business Midstream Solutions	Midstream	7	7
Large Industrial Business Virtual Commissioning	VCx	-	-
<b>Total</b>		<b>1,750</b>	<b>1,750</b>

Source: Guidehouse

## 5. Summary of Energy Impacts by Program

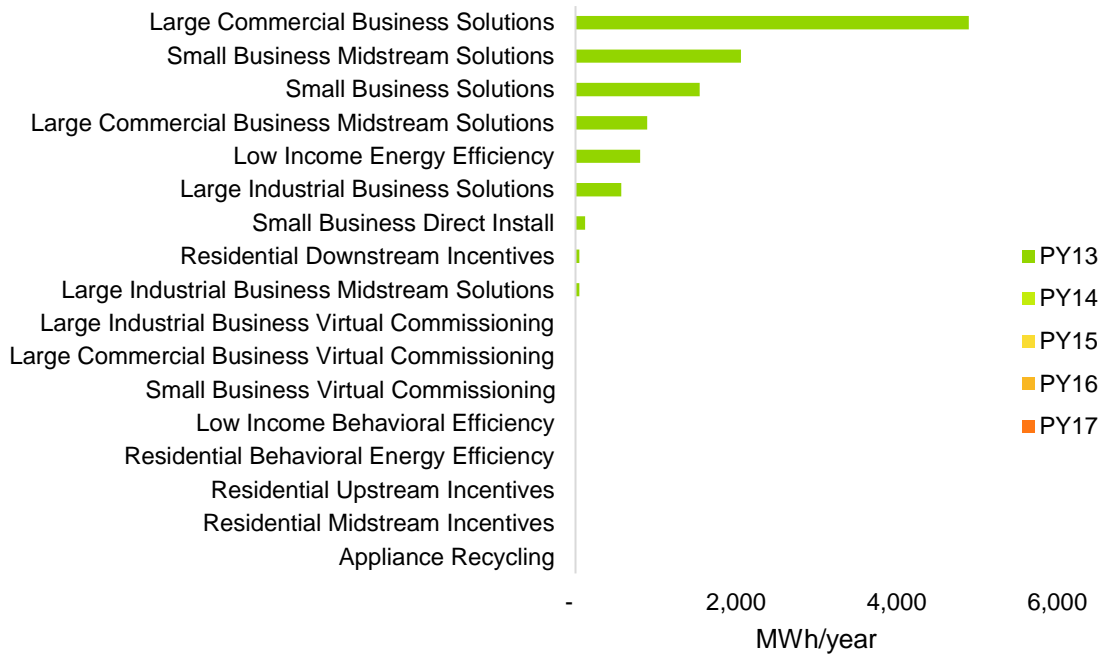
Figure 5 summarizes the PYTD reported gross energy savings by program for PY13. This report presents energy impacts at the meter level, and they do not reflect adjustments for transmission and distribution losses.

**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
Appliance Recycling	-	-	-	-
Residential Downstream Incentives	50	50	-	50
Residential Midstream Incentives	-	-	-	-
Residential Upstream Incentives	-	-	-	-
Residential Behavioral Energy Efficiency	-	-	-	-
Low Income Energy Efficiency	806	806	-	806
Low Income Behavioral Efficiency	-	-	-	-
Small Business Direct Install	121	121	-	121
Small Business Solutions	1,546	1,546	-	1,546
Small Business Midstream Solutions	2,061	2,061	-	2,061
Small Business Virtual Commissioning	-	-	-	-
Large Commercial Business Solutions	4,900	4,900	-	4,900
Large Commercial Business Midstream Solutions	892	892	-	892

<b>Program</b>	<b>PYRTD</b>	<b>RTD</b>	<b>VTD</b>	<b>PSA</b>
Large Commercial Business Virtual Commissioning	-	-	-	-
Large Industrial Business Solutions	570	570	-	570
Large Industrial Business Midstream Solutions	49	49	-	49
Large Industrial Business Virtual Commissioning	-	-	-	-
<b>Portfolio Total</b>	<b>10,994</b>	<b>10,994</b>	<b>-</b>	<b>10,994</b>

Source: Guidehouse

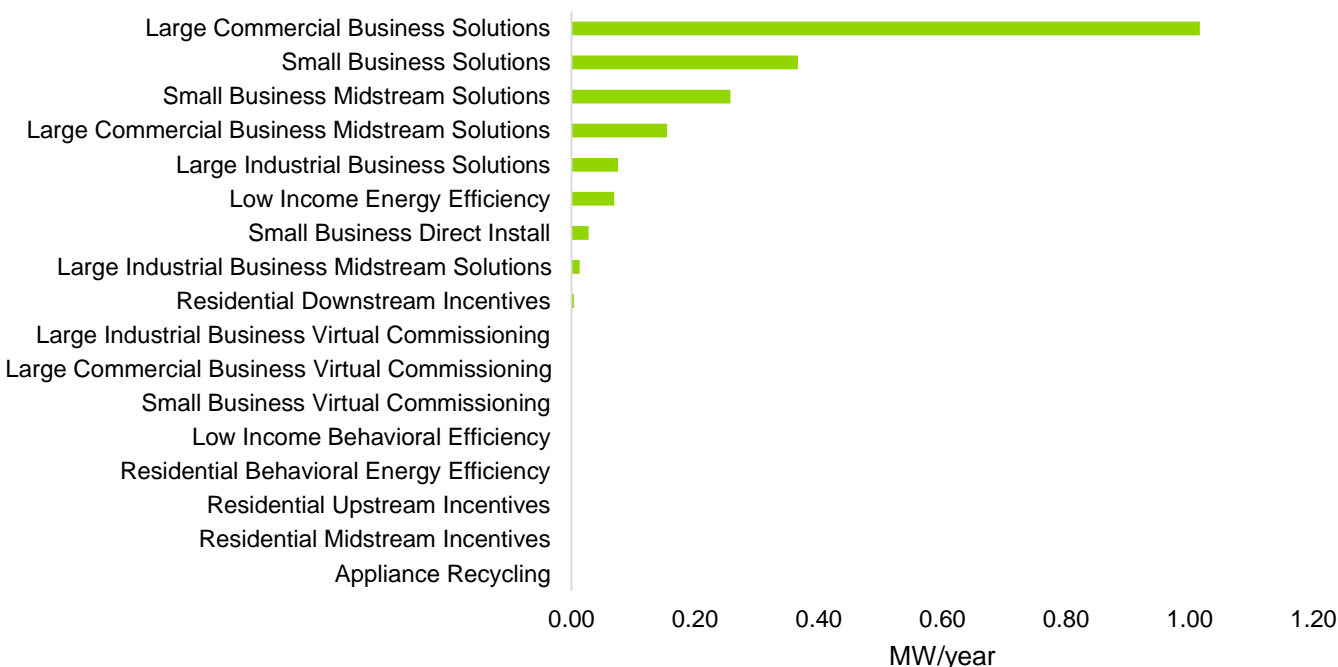
## 6. Summary of Peak Demand Impacts by Program

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 = 1.0081

Figure 7 summarizes the PYRTD reported gross peak demand savings by energy efficiency program for PY13.

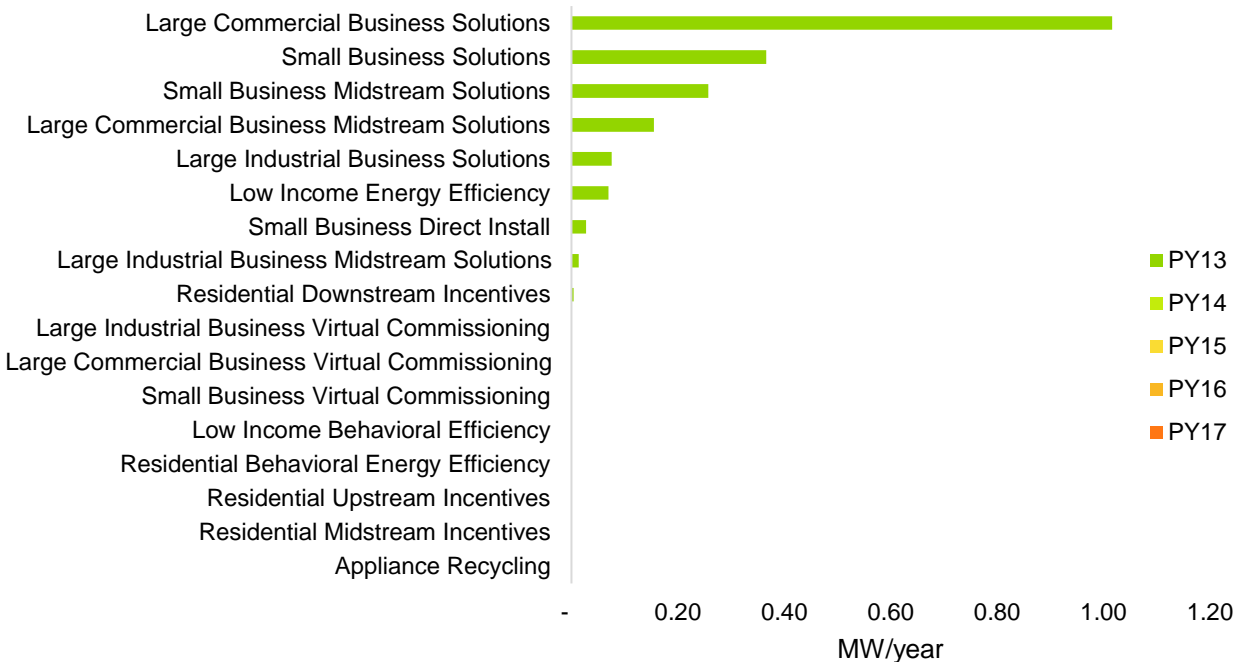
**Figure 7. PYRTD Gross Peak Demand Savings by Program**



Source: Guidehouse

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
Appliance Recycling	-	-	-	-
Residential Downstream Incentives	0.004	0.004	-	0.004
Residential Midstream Incentives	-	-	-	-
Residential Upstream Incentives	-	-	-	-
Residential Behavioral Energy Efficiency	-	-	-	-
Low Income Energy Efficiency	0.07	0.07	-	0.07
Low Income Behavioral Efficiency	-	-	-	-
Small Business Direct Install	0.03	0.03	-	0.03
Small Business Solutions	0.37	0.37	-	0.37
Small Business Midstream Solutions	0.26	0.26	-	0.26
Small Business Virtual Commissioning	-	-	-	-
Large Commercial Business Solutions	1.02	1.02	-	1.02
Large Commercial Business Midstream Solutions	0.15	0.15	-	0.15

<b>Program</b>	<b>PYRTD</b>	<b>RTD</b>	<b>VTD</b>	<b>PSA</b>
Large Commercial Business Virtual Commissioning	-	-	-	-
Large Industrial Business Solutions	0.08	0.08	-	0.08
Large Industrial Business Midstream Solutions	0.01	0.01	-	0.01
Large Industrial Business Virtual Commissioning	-	-	-	-
<b>Portfolio Total</b>	<b>1.98</b>	<b>1.98</b>	<b>-</b>	<b>1.98</b>

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 PY13. 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>5</sup> for Phase IV. So far in PY13, 15% 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 materials, labor, and administration includes the program implementation contractor, and the costs of any other outside vendors Duquesne Light employs to support program delivery and EMV.

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

Program	Incentives	EDC Materials, Labor, and Administration	CSP Materials, Labor, and Administration	Total Cost
Appliance Recycling	\$0	\$17	\$550	\$567
Residential Downstream Incentives	\$0	\$22	\$678	\$700
Residential Midstream Incentives	\$0	\$12	\$43	\$55
Residential Upstream Incentives	\$0	\$19	\$152	\$171
Low Income Energy Efficiency	\$2	\$44	\$798	\$844
Residential Behavioral Energy Efficiency	\$0	\$26	\$69	\$95
Low Income Behavioral Efficiency	\$0	\$21	\$9	\$30
Small Business Direct Install	\$12	\$27	\$87	\$126
Small Business Solutions	\$119	\$24	\$271	\$414
Small Business Midstream Solutions	\$174	\$21	\$202	\$397

<sup>5</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	CSP Materials, Labor, and Administration	Total Cost
Small Business Virtual Commissioning	\$0	\$11	\$16	\$27
Large Commercial Business Solutions	\$342	\$55	\$532	\$929
Large Commercial Business Midstream Solutions	\$61	\$17	\$122	\$200
Large Commercial Business Virtual Commissioning	\$0	\$11	\$8	\$19
Large Industrial Business Solutions	\$26	\$25	\$209	\$260
Large Industrial Business Midstream Solutions	\$4	\$13	\$27	\$44
Large Industrial Business Virtual Commissioning	\$0	\$10	\$4	\$14
<b>Common Portfolio Costs<sup>6</sup></b>				
<b>Portfolio Total</b>	\$740	\$375	\$3,777	\$4,892
<b>SWE Costs<sup>7</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>\$198</b>
<b>Total</b>	<b>\$740</b>	<b>\$375</b>	<b>\$3,777</b>	<b>\$5,090</b>

Source: Guidehouse

Table 8 shows program-specific and portfolio total finances since the inception of Phase IV. So far in Phase IV, 15% of all EE&C plan expenditures have been incentives to participants and trade allies.

<sup>6</sup> Common Portfolio Costs include costs associated with program tracking data management, support (legal, IT), portfolio level marketing, and EMV.

<sup>7</sup> Statewide Evaluation costs are outside of 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>CSP Materials, Labor, and Administration</b>	<b>Total Cost</b>
Appliance Recycling	\$0	\$17	\$550	\$567
Residential Downstream Incentives	\$0	\$22	\$678	\$700
Residential Midstream Incentives	\$0	\$12	\$43	\$55
Residential Upstream Incentives	\$0	\$19	\$152	\$171
Low Income Energy Efficiency	\$2	\$44	\$798	\$844
Residential Behavioral Energy Efficiency	\$0	\$26	\$69	\$95
Low Income Behavioral Efficiency	\$0	\$21	\$9	\$30
Small Business Direct Install	\$12	\$27	\$87	\$126
Small Business Solutions	\$119	\$24	\$271	\$414
Small Business Midstream Solutions	\$174	\$21	\$202	\$397
Small Business Virtual Commissioning	\$0	\$11	\$16	\$27
Large Commercial Business Solutions	\$342	\$55	\$532	\$929
Large Commercial Business Midstream Solutions	\$61	\$17	\$122	\$200
Large Commercial Business Virtual Commissioning	\$0	\$11	\$8	\$19
Large Industrial Business Solutions	\$26	\$25	\$209	\$260
Large Industrial Business Midstream Solutions	\$4	\$13	\$27	\$44
Large Industrial Business Virtual Commissioning	\$0	\$10	\$4	\$14
<b>Common Portfolio Costs<sup>8</sup></b>				
<b>Portfolio Total</b>	<b>\$740</b>	<b>\$375</b>	<b>\$3,777</b>	<b>\$4,892</b>
<b>SWE Costs<sup>9</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>\$198</b>
<b>Total</b>	<b>\$740</b>	<b>\$375</b>	<b>\$3,777</b>	<b>\$5,090</b>

Source: Guidehouse

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 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. 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>10</sup>**

Cost Recovery Sector	Rate Classes Included	PYTD Spending (\$1,000)	P4TD Spending (\$1,000)
Residential	RS, RH, RA	\$2,528	\$2,528
Small/Medium Commercial and Industrial	GS, GM, GMH	\$1,017	\$1,017
Large Commercial	GL, GLH, L	\$1,201	\$1,201
Large Industrial	GL, GLH, L, HVPS	\$344	\$344
<b>Portfolio Total</b>		<b>\$5,090</b>	<b>\$5,090</b>

Source: Guidehouse

<sup>8</sup> Common Portfolio Costs include costs associated with program tracking data management, support (legal, IT), portfolio level marketing, and EMV.

<sup>9</sup> Statewide Evaluation costs are outside of the 2% spending cap.

<sup>10</sup> Includes SWE costs.