



PPL Stakeholder Meeting – Energy Efficiency Update

February 8th, 2023

Agenda

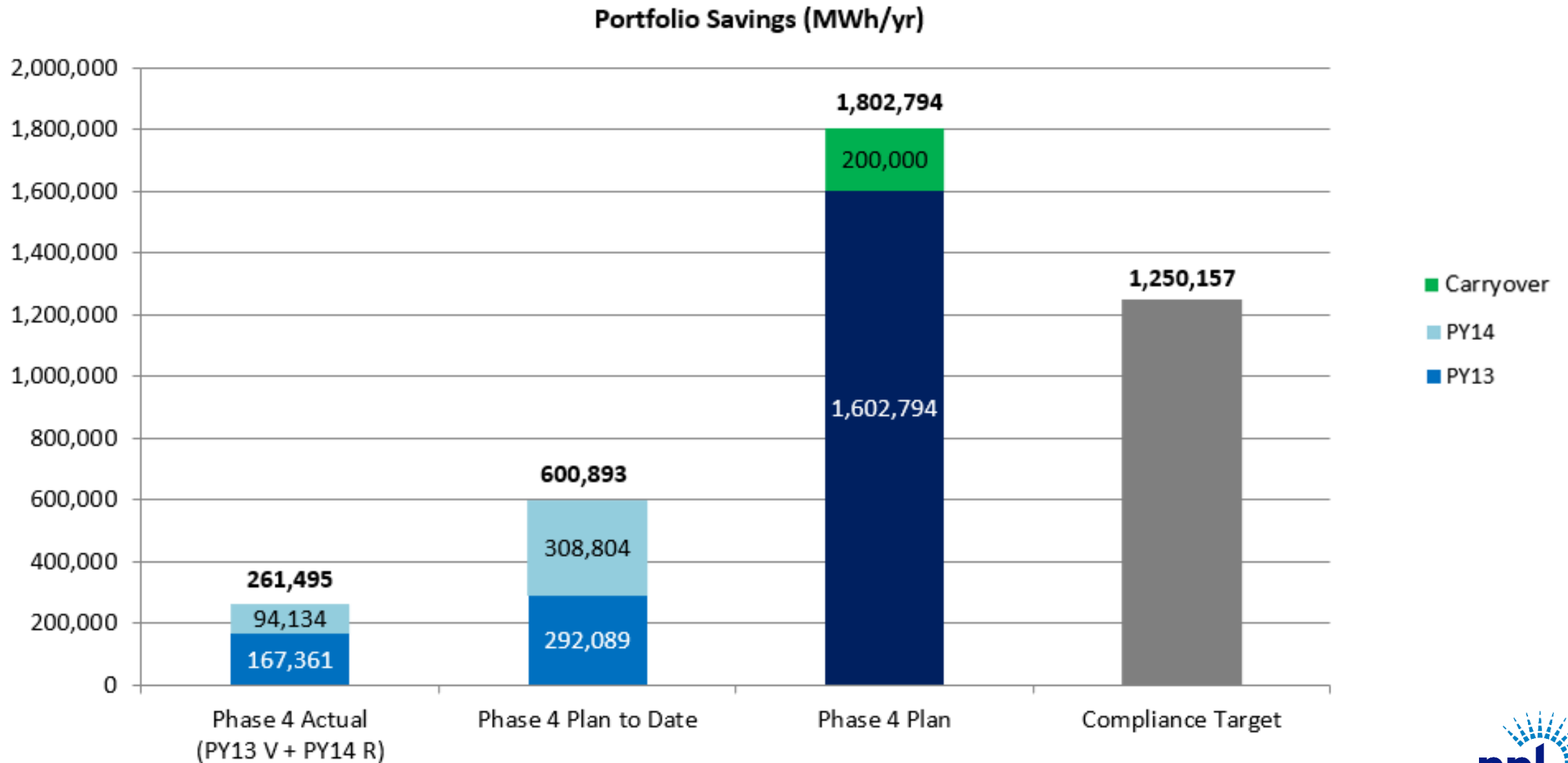


- Portfolio Overview
- Program and Components
 - Residential Update
 - Low Income Update
 - Non-Residential Update
 - PJM FCM Update
- Q&A, Discussion: Please stay muted until this point
- Wrap

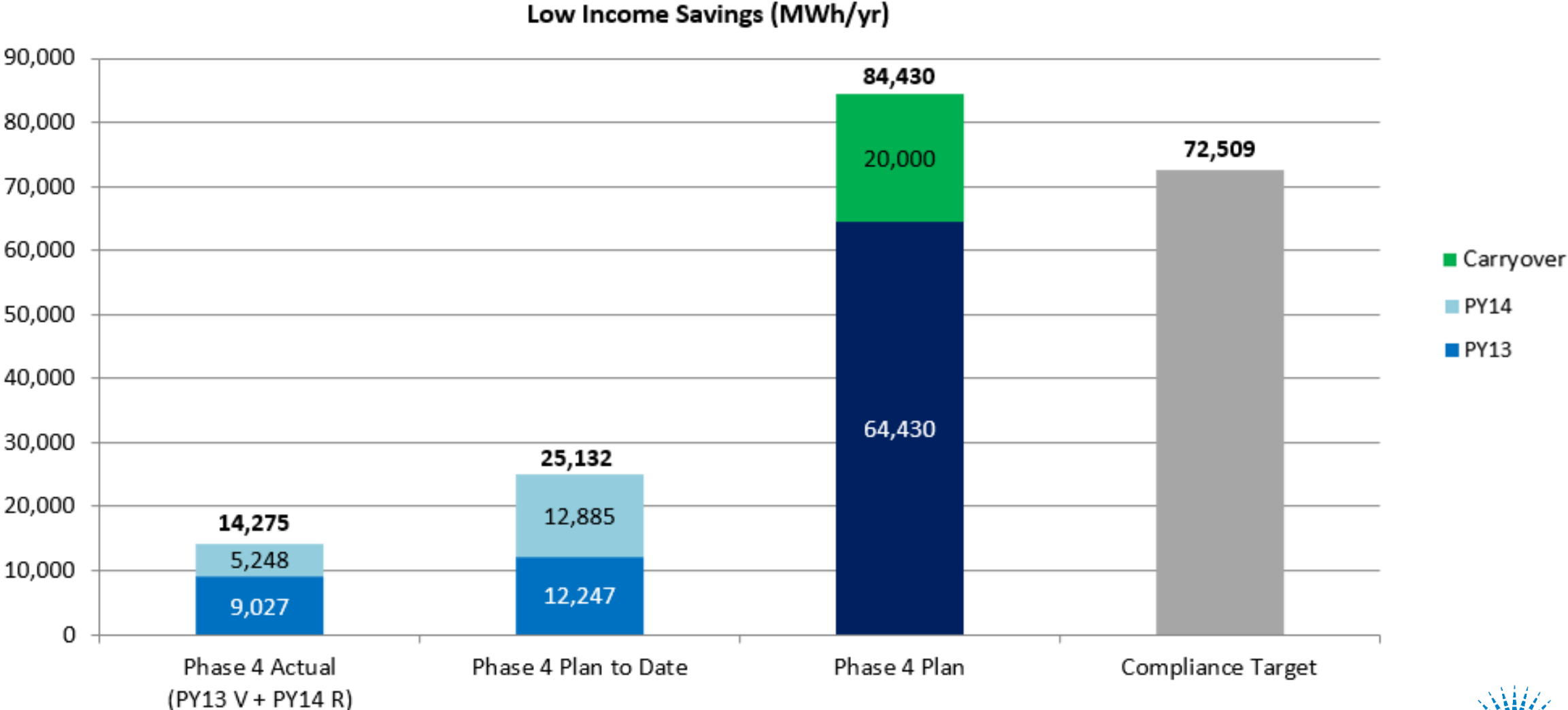


Portfolio Overview

Overview: Portfolio Savings (MWh)

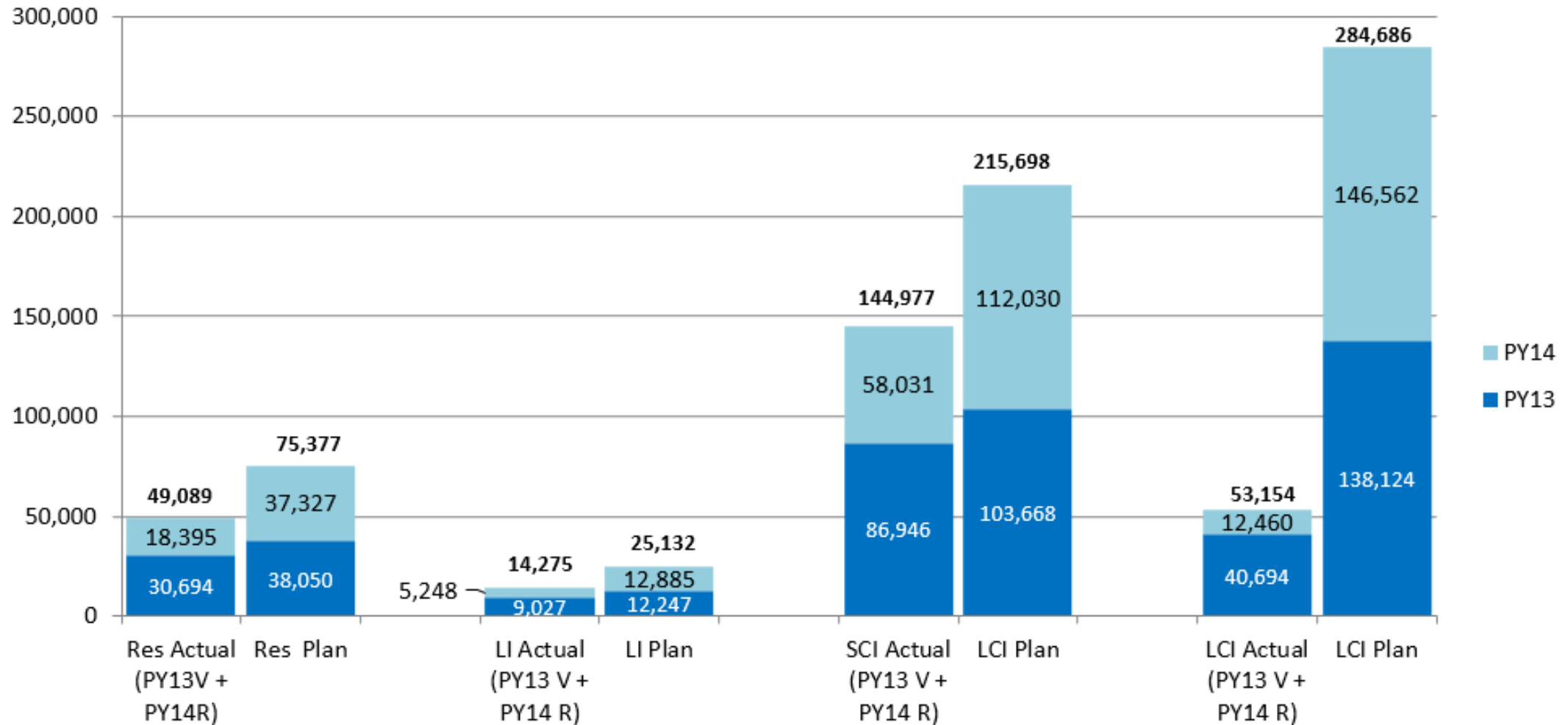


Overview: Low-Income Savings (MWh)

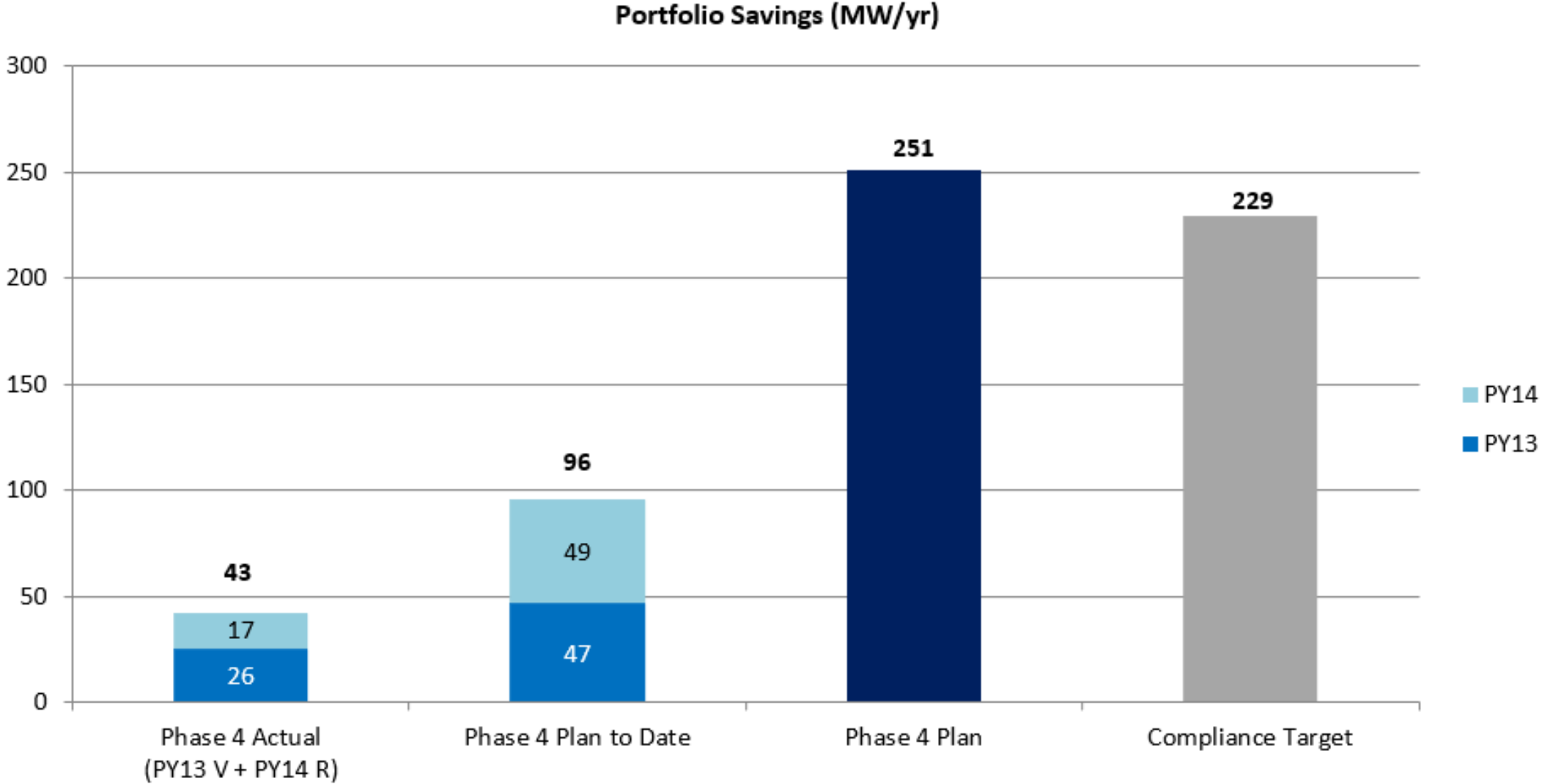


Overview: Sector Savings (MWh)

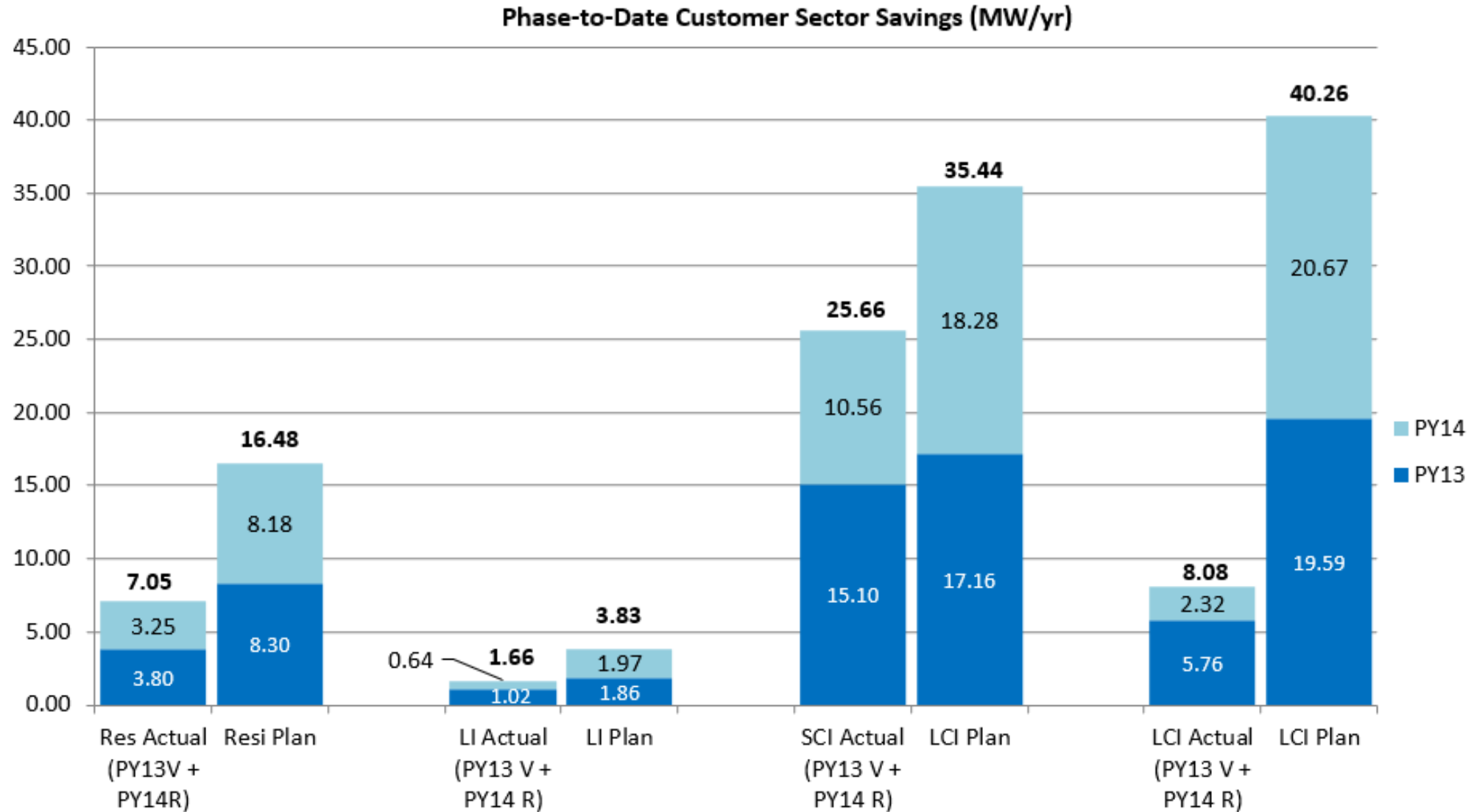
Phase-to-Date Customer Sector Savings (MWh/yr)



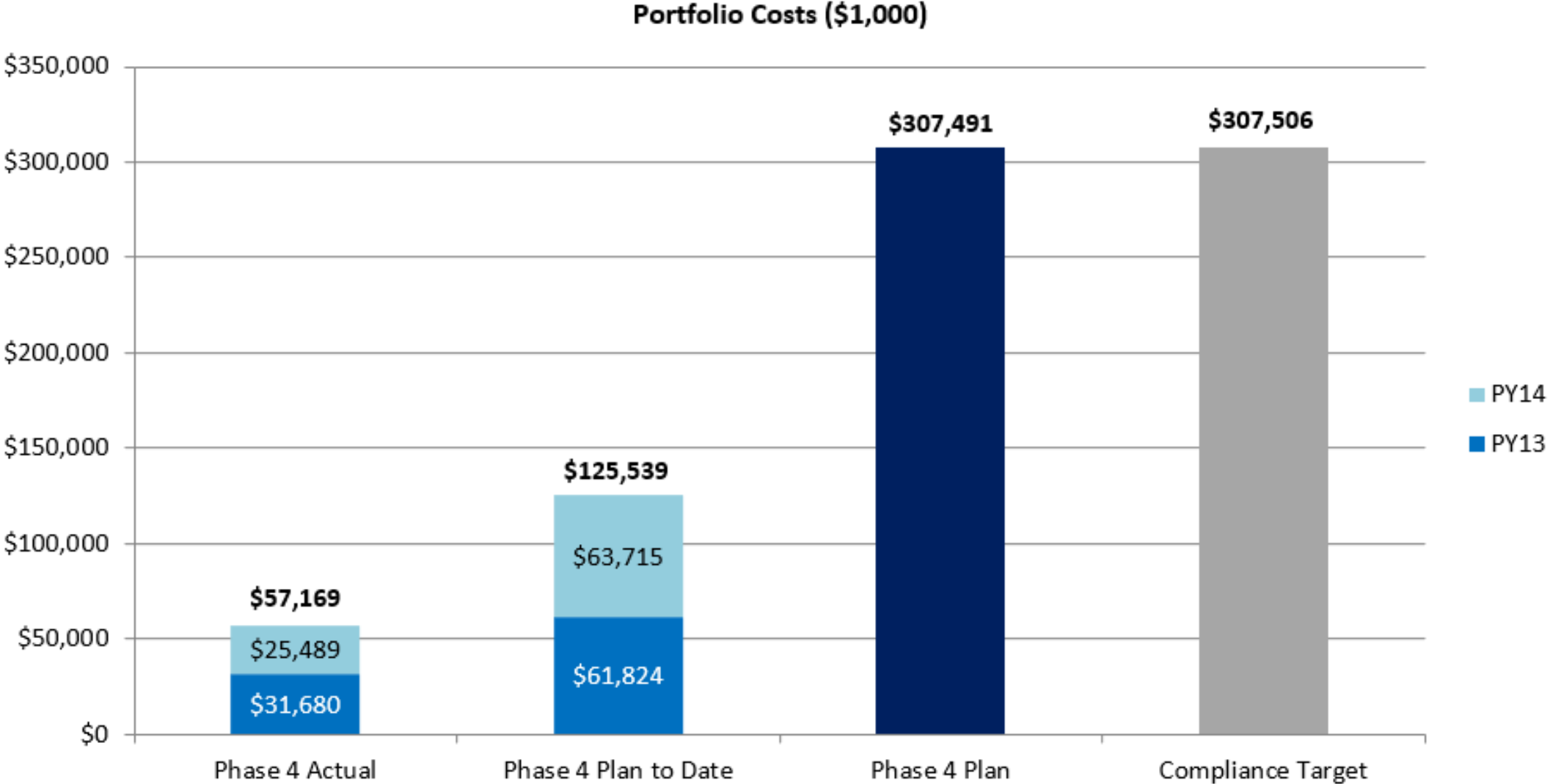
Overview: Portfolio Savings (MW)



Overview: Sector Savings (MW)

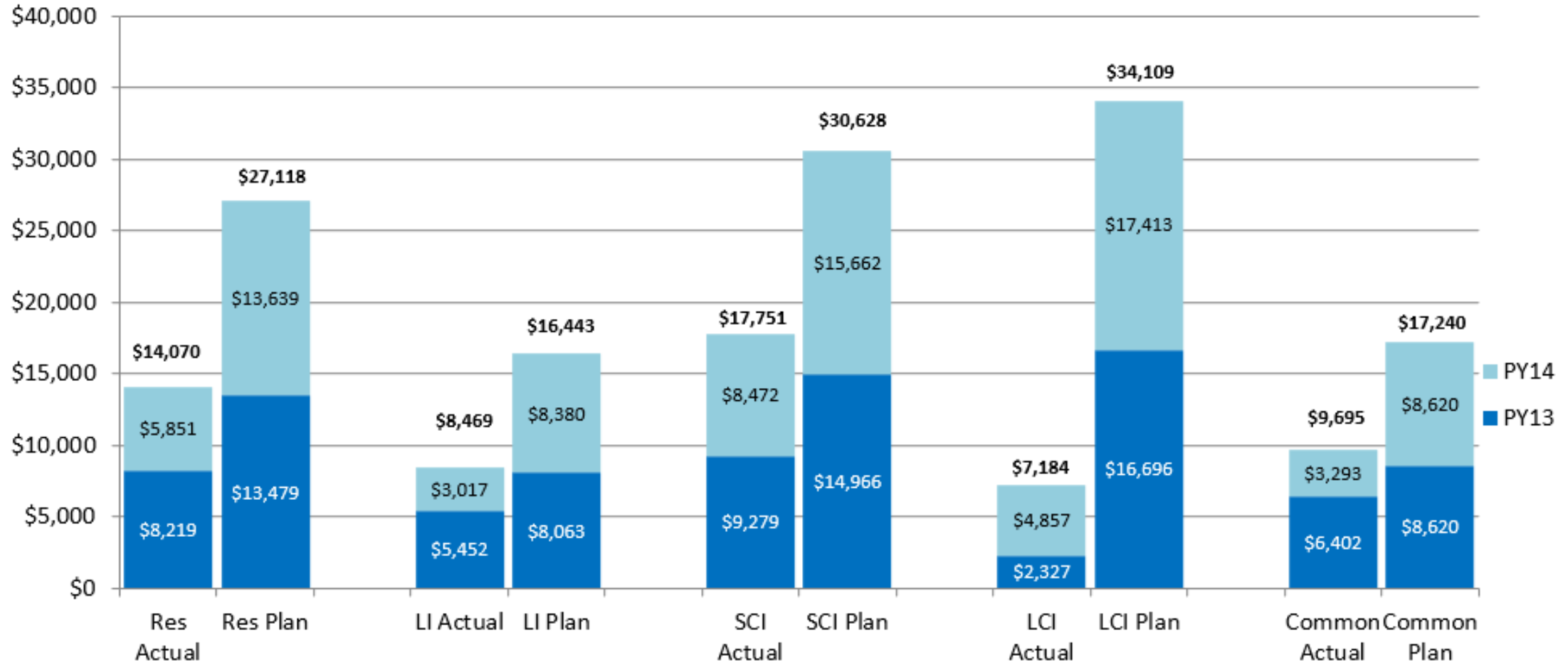


Overview: Portfolio Costs



Overview: Sector Costs

Phase-to-Date Customer Sector Costs (\$1,000)



Programs and Components: Residential Update



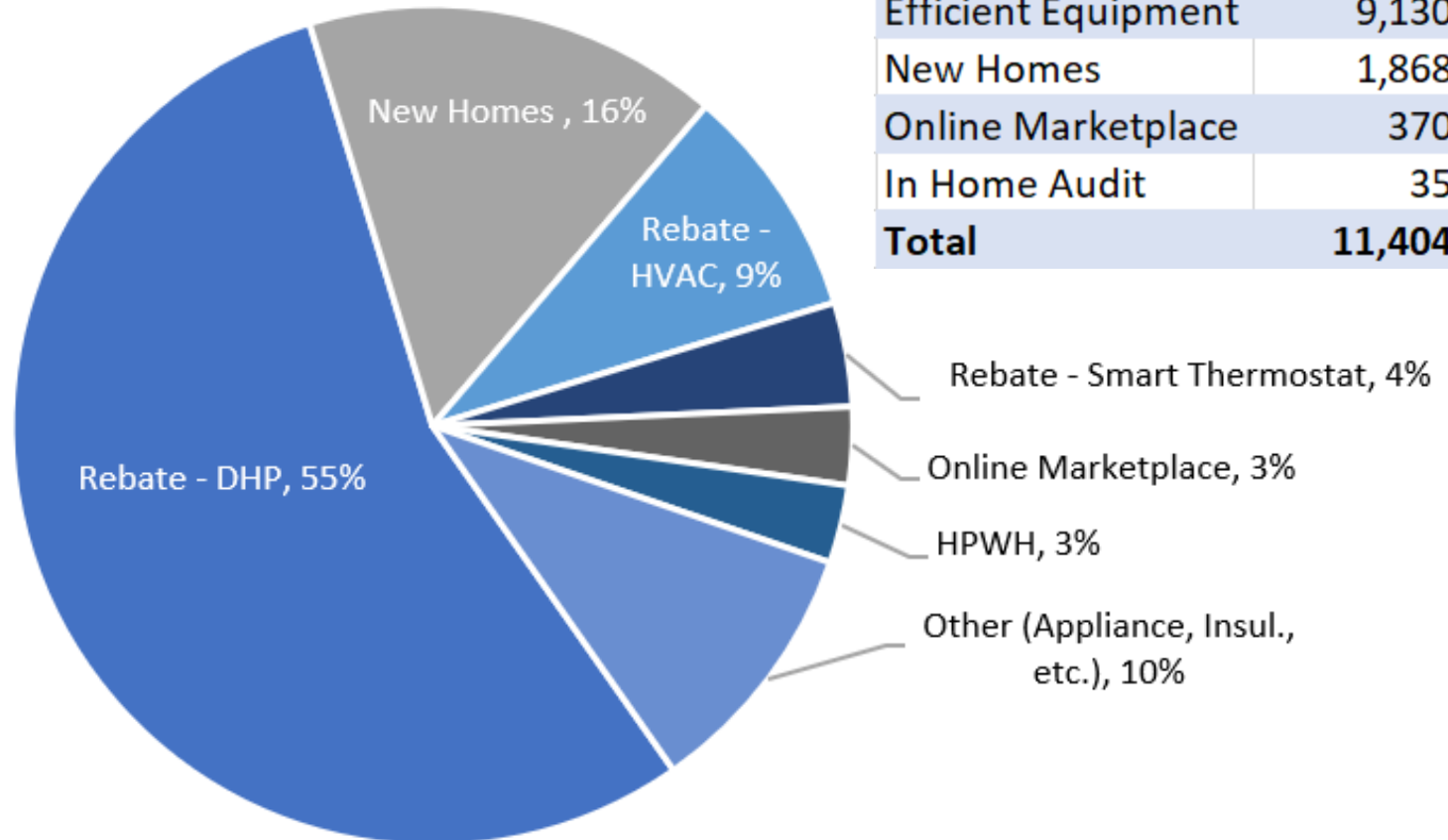
Residential Program: Energy Efficient Homes

Savings Summary

MWh
PY13: 14,689
PY14: 11,404
PTD:
26,093

MW
PY13: 1.03
PY14: 1.59
PTD:
2.62

PY14 Savings by Category



Category	MWh	MW
Efficient Equipment	9,130	0.67
New Homes	1,868	0.76
Online Marketplace	370	0.03
In Home Audit	35	0
Total	11,404	1.46

Residential Program: Energy Efficient Homes

Program Recognition



Residential Program: Energy Efficient Homes

Pilots

- **Deep Energy Retrofits**
 - Identify barriers to participation
 - Offer comprehensive measure packages
 - Test delivery approaches
 - 120 rebates paid thru November 2022; 88% being Tier 1 with two qualifying measures
- **Net Zero Energy Homes**
 - Provide financial and technical support to construct 1-3 homes
 - Demonstrate implementation of residential new construction standards



Residential Program: EE Homes – New Homes

Savings Summary

MWh

PY13: 2,933

PY14: 1,868

PTD:

4,801

MW

PY13: 1.2

PY14: 0.76

PTD:

1.98

Homes Built PTD

PY13

- 1,242 homes built
- Over \$877K in incentives

PY14

- 789 homes built
- Over \$563K in incentives

There currently 88 builders participating in the program



Residential Program: EE Homes – New Homes

Feature Build



- Single-family home located in Peach Bottom
- Ground-source heat pump and electric water heater
- All LED lighting
- **Achieved savings of 9,500 kWh & 1.54 kW in peak demand**
- **\$2,861 in incentives**

Program Recognition

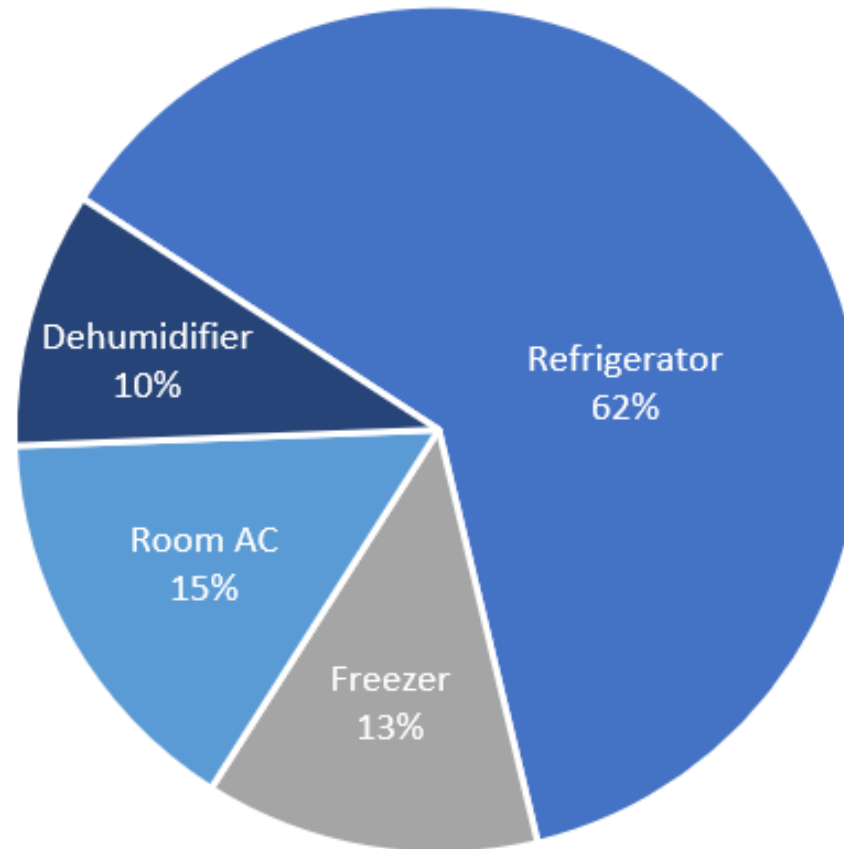


Residential Program: Appliance Recycling

Savings Summary

MWh
PY13: 7,900 PY14: 5,094
PTD: 12,994
MW
PY13: 1.9 PY14: 1.2
PTD: 3.10

Units Collected PTD



- Pick up and recycling of both large and small appliances

Unit Type	Total
Refrigerator	11,618
Freezer	2,386
Room AC	2,881
Dehumidifier	1,828
Total	18,713



Residential Program: Appliance Recycling



Recycling Events

	PY13			PY14	
	Hazleton	Allentown	Montoursville	Wilkes-Barre	Lancaster
Date	Sept 21	Apr 21	May 22	Sept 22	Oct 21
Total Customers	39	399	179	145	163
ACs	54	360	215	167	179
Dehumidifiers	13	301	111	115	114
Total Appliances	67	661	326	282	293

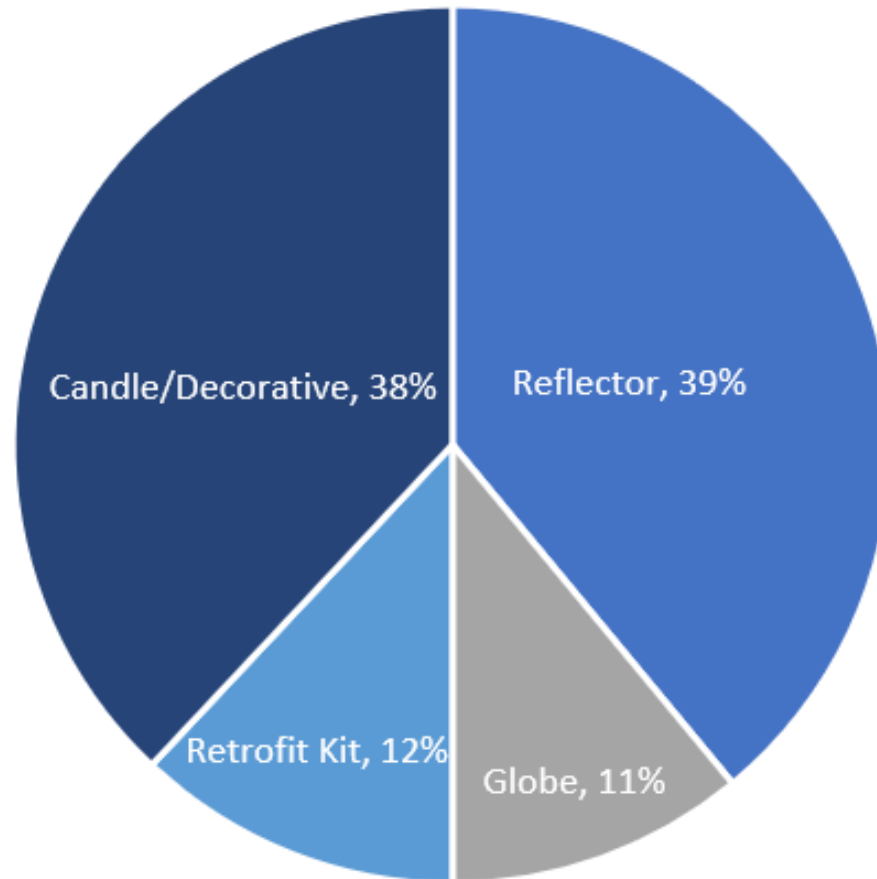
Residential Program: EE Lighting

Savings Summary

MWh
PY13: 4,349 PY14: 1,734
PTD: 6,083

MW
PY13: 0.68 PY14: 0.27
PTD: .95

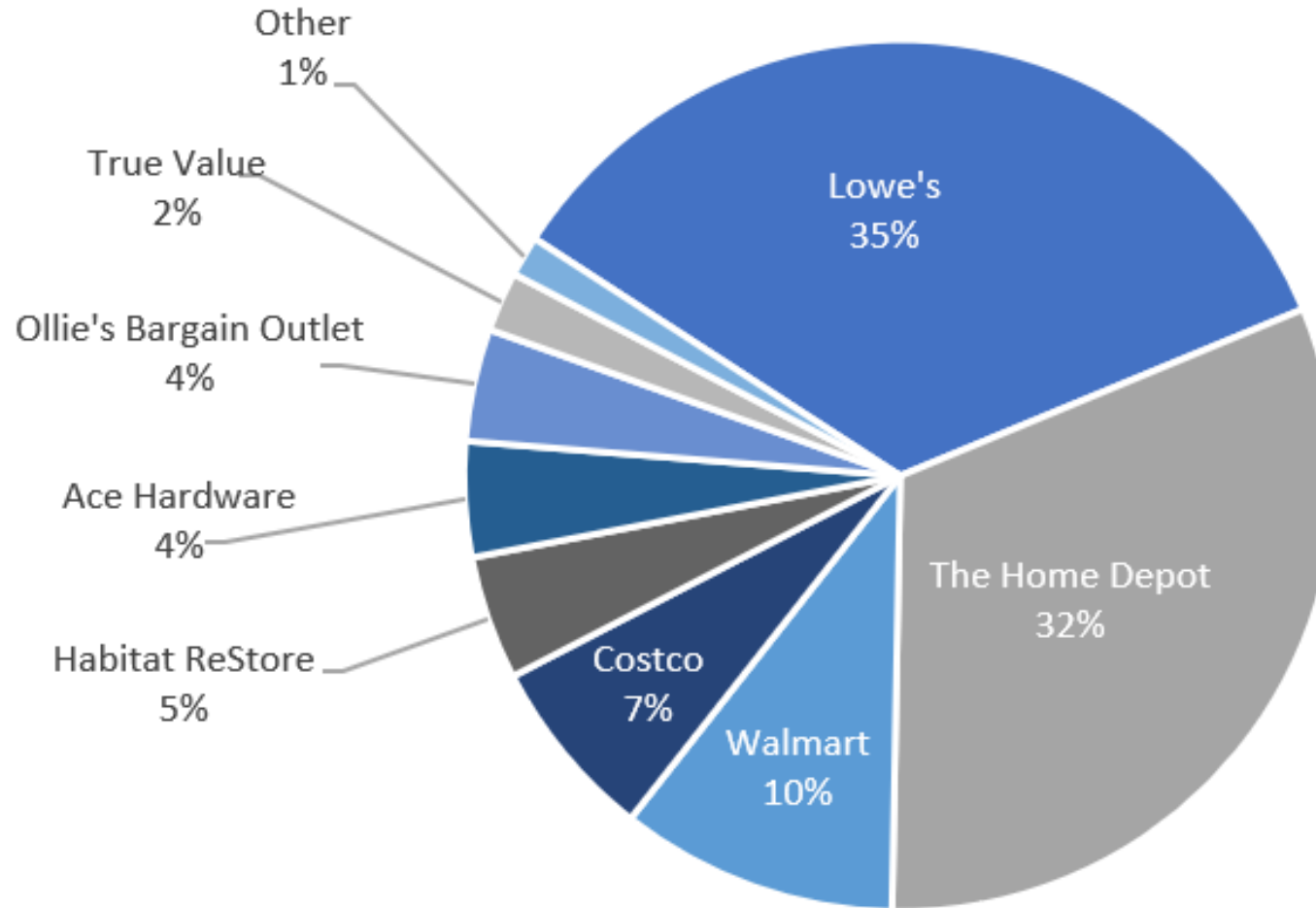
PY14 Bulb Mix



- 1,087,653 LEDs PTD
- Ensure LEDs are available to customers in all PPL territory at a variety of retailers



Residential Program: EE Lighting



PY14 LEDs by Retailer

Retailer	Label	Units
Lowe's	Big Box	107,853
The Home Depot	Big Box	98,376
Walmart	Big Box	32,135
Costco	Big Box	21,180
Habitat ReStore	Independent	14,354
Ace Hardware	Independent	13,341
Ollie's Bargain Outlet	Independent	13,016
True Value	Independent	6,920
Independent Hardware	Independent	1,076
Do it Best	Independent	916
Target	Big Box	868
Mexico Market	Independent	840
Batteries Plus	Independent	666
HTR	Independent	232
Goodwill	Independent	48
Sams Club	Big Box	18
Total		311,839



Residential Program: Student Energy Education

Savings Summary

MWh
PY13: 4,797 PY14: 0
PTD: 4,797

MW
PY13: 0.47 PY14: 0
PTD: 0.47

Program	Grade Level
Bright Kids	2 nd – 3 rd
Take Action	5 th – 7 th
Innovation	9 th – 12 th

PY13-14

- Fully subscribed
- Over 20,000 kits
- Focus on low-income schools
- Poster contest (K-8th)
- Innovation Challenge



Residential Program: Student Energy Education



Programs and Components: Low-Income Update



Low-Income Program

Savings Summary

MWh

PY13: 9,027
PY14: 5,248

PTD:
14,275

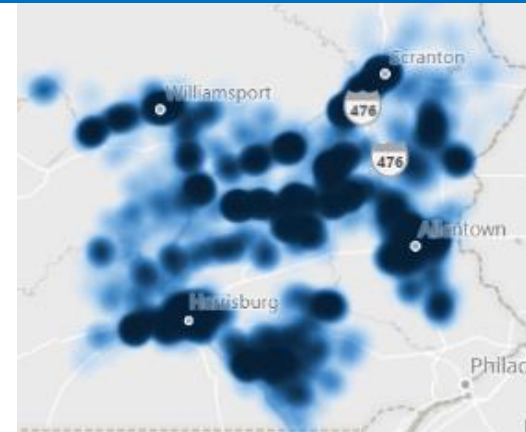
MW

PY13: 1.02
PY14: 0.64

PTD:
1.66

3 Channels – 11,327* Assessments and 32,090 Kits

- Single Family – 7,983 Assessments
 - Remote Energy Assessment (REA) – 7,501 Assessments
 - In-Home Assessment – 541 Assessments
- Multifamily - 3,358 Assessments
 - Virtual Energy Assessment – 3,051
 - In-Home Assessment – 324
- Welcome Kits – 32,090



Appointment Heat Map



* Note: Some customers served twice due to follow-up measures



Low-Income Program: Focus on Multifamily

Focus on Multifamily Re-engagement

- Re-engaging multifamily property owners and building operators to provide needed services to low-income tenants
- Working with stakeholders to identify low-income MF properties
- Applying holistic approach in Phase IV, similar to Phase III approach
- Completed first holistic job in PY14
- Completed: **4**
- Queue: **7**

Low-Income Program: Carveouts & Pilots

Master Metered Multifamily

- Completed first holistic job in Lock Haven
- Queue: 8

Coordination Efforts

- Natural Gas Distribution Companies (NGDC) – 14 complete in PY14
- Customer Assistance Programs
 - Continue to coordinate with OnTrack, LIHEAP, other CAP program participants



Low-Income Program: Carveouts & Pilots

Comprehensive Measures

- Started on In-Home work in PY13 and continued at an increased pace

Health and Safety Pilot

- Health and Safety Pilot dollars spent to bridge to comprehensive measures

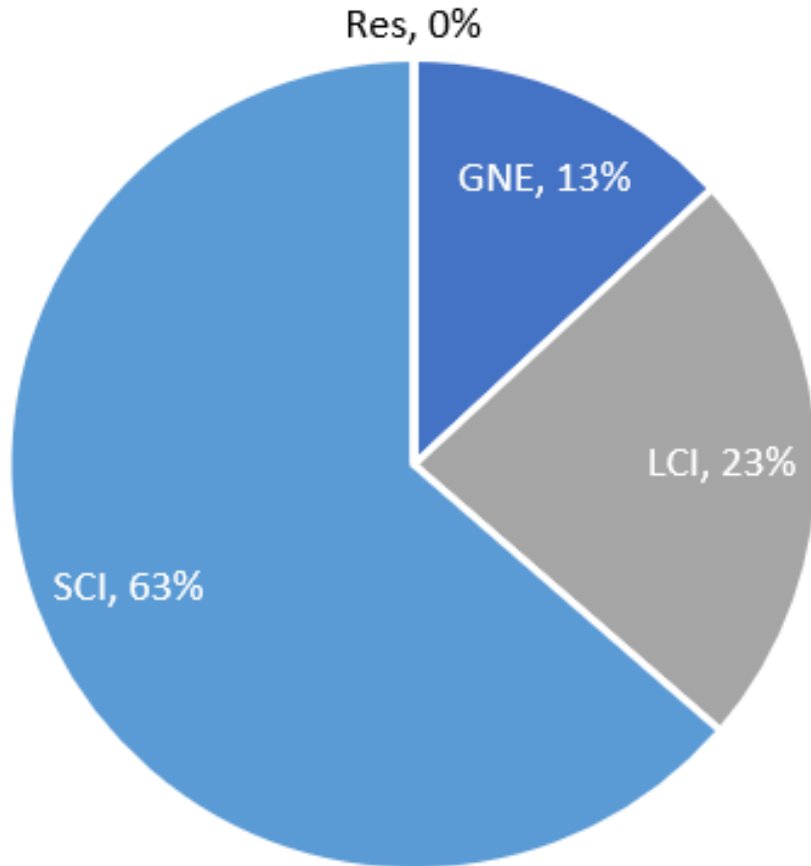


Programs and Components: Non-Residential Update

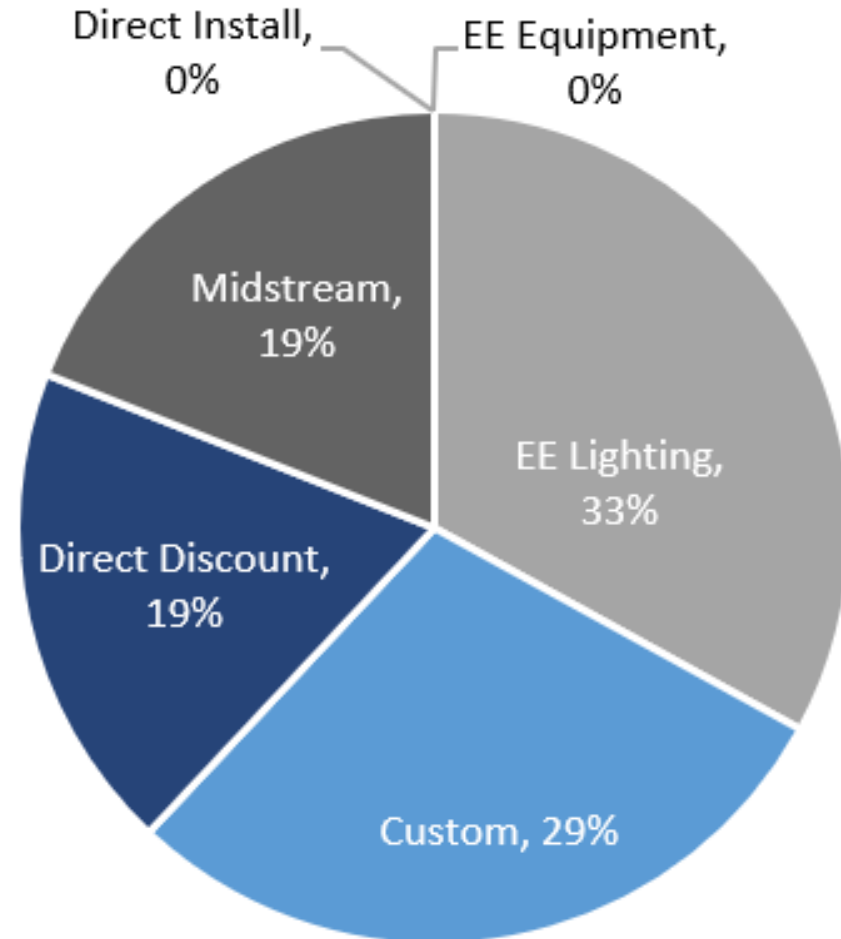


Non-Residential Program

Building on PY13 – 126,597 MWh/yr.



Energy Savings by Sector – PY13



Energy Savings by Applications – PY13



Non-Residential Program: Efficient Equipment Downstream

Savings Summary

MWh
PY13: 41,772 PY14: 15,132
PTD: 56,904

MW
PY13: 6.68 PY14: 2.8
PTD: 9.48

PY13 verified energy savings by project type:

Lighting

- 272 projects
- 41,359 MWh/yr.
- 6.6 MW/yr.

Equipment

- 16 projects
- 413 MWh/yr.
- 0.08 MW/yr.

PY14 reported energy savings by project type:

Lighting

- 113 projects
- 13,757 MWh/yr.
- 2.6 MW/yr.

Equipment

- 46 projects
- 1,378 MWh/yr.
- 0.2 MW/yr.

- **\$4,471,614 Incentives**



Non-Residential Program: Efficient Equipment Direct Discount

Savings Summary

MWh

PY13: 23,514

PY14: 9,628

PTD:

33,142

MW

PY13: 2.9

PY14: 1.5

PTD:

4.4

- Direct Discount accounts for approximately 26% of Efficient Equipment savings in PY13
 - Lighting verified savings 22,445 MWh/yr.
 - Refrigeration verified savings 1,069 MWh/yr.
- **\$4,965,810 Incentives**



Non-Residential Program: Small Business Direct Install

Savings Summary

MWh
PY13: 19 PY14: 34 PTD: 53
MW
PY13: 0.0 PY14: 0.0 PTD: 0.0

- Targeted to small businesses (peak demand of 200 kW/month or less).
- Program energy advisor completes an optional assessment and no-cost Direct Install measures.



Non-Residential Program: Efficient Equipment Midstream

Savings Summary

MWh
PY13: 24,025 PY14: 9,462
PTD: 33,487

MW
PY13: 4.7 PY14: 2.2
PTD: 6.9

- 28 distributors and 96 locations in PY13
- 4,793 PY13 projects
- Lighting reported PY14 savings of 9,123 and 2.1 MW
- Ag reported savings PY14 savings 339 MWh and 0.1MW
- **\$2,037,504 Incentives**



Non-Residential Program: Custom

Savings Summary

MWh

PY13: 37,267

PY14: 36,395

PTD:

73,662

MW

PY13: 6.3

PY14: 5.5

PTD:

11.8

- 2 CHP projects included in PY13
- Pace of custom increased in PY14
- **\$4,567,694 Incentives**



PJM Forward Capacity Market Update



PJM Forward Capacity Market Service

- Submitted first bid to CSP in mid-April 2022 for measurement & verification to qualify into PJM
- Submitted the resource for the PJM Delivery Year 22/23
 - PPL Electric and CSP bid 1.4 MWs
 - Have begun collecting revenue to return to customers
- Bid the same resource for 23/24 and 24/25 PJM Delivery Year Auctions
- Will submit new resource MWs for PJM Delivery Years 23/24, 24/25, and 25/26
 - MWs will begin to stack

Questions & Answers



Thank you!

Tom McAteer

Manager – Energy Efficiency

tjmcateer@pplweb.com

Chris Schoemaker

Supervisor – Program Managers

crschoemaker@pplweb.com

Sean Pressman

Low-Income Program Manager & PJM FCM

sdpressmann@pplweb.com

