



PPL Stakeholder Meeting – Energy Efficiency & Conservation

February 21, 2024

Agenda

- **Safety Message**
- **Important Updates**
- **Portfolio Overview**
- **Program and Components**
 - Residential Update
 - Low Income Update
 - Non-Residential Update
 - PJM Forward Capacity Market Update
- **Q&A, Discussion**
 - You will be muted during the meeting, please use chat
- **Wrap Up**



Commitment to Safety

Spring Forward Safety

- Be mindful of fatigue and tiredness
- Check smoke detectors and carbon monoxide monitors
- Consider 10-year lithium detectors or plug-in versions
- Test detectors regularly



Important Updates

Second Revision of EE&C Plan

- Only impacts incentive reserves – there are no program changes to participation, measures, costs, or savings

Home Energy Reports (HERs)

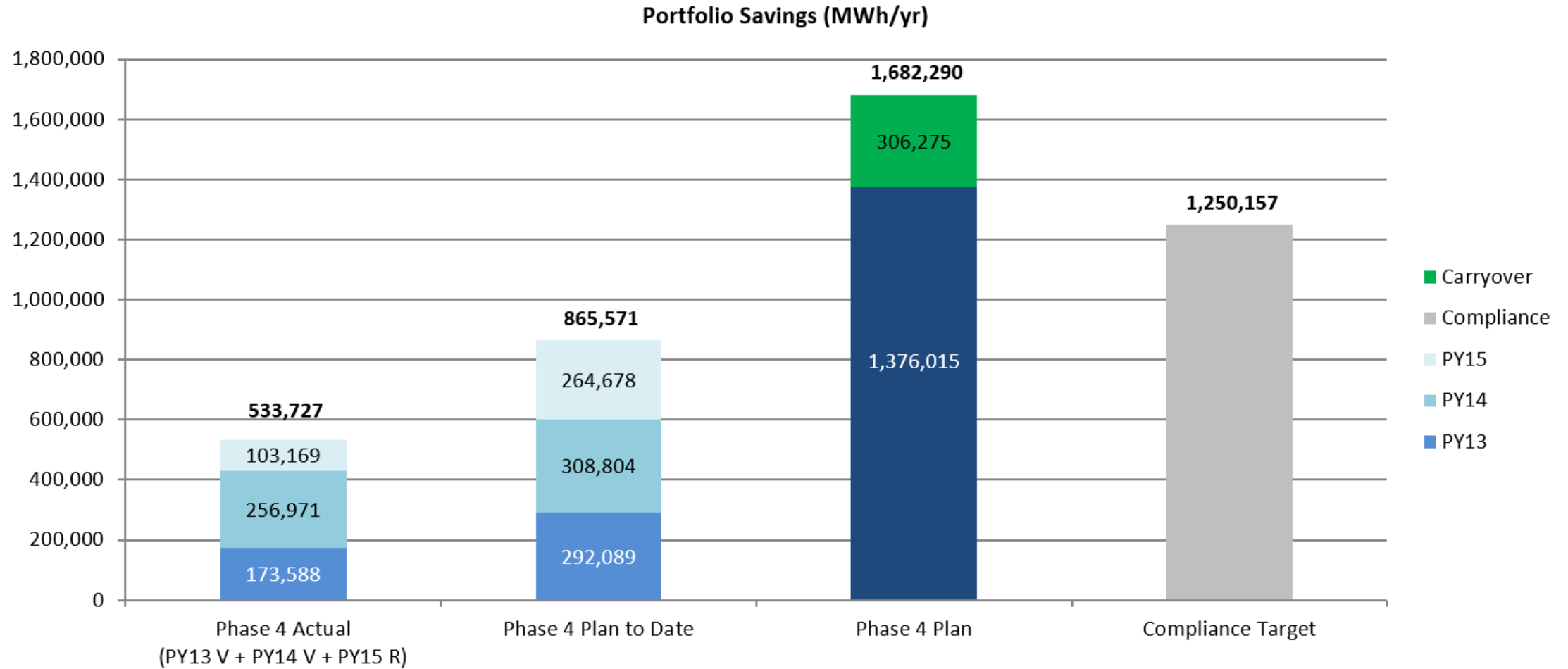
- PPL is launching HERs in PY16 to support customers with more insight into their energy usage

ENERGY STAR Awards - Residential

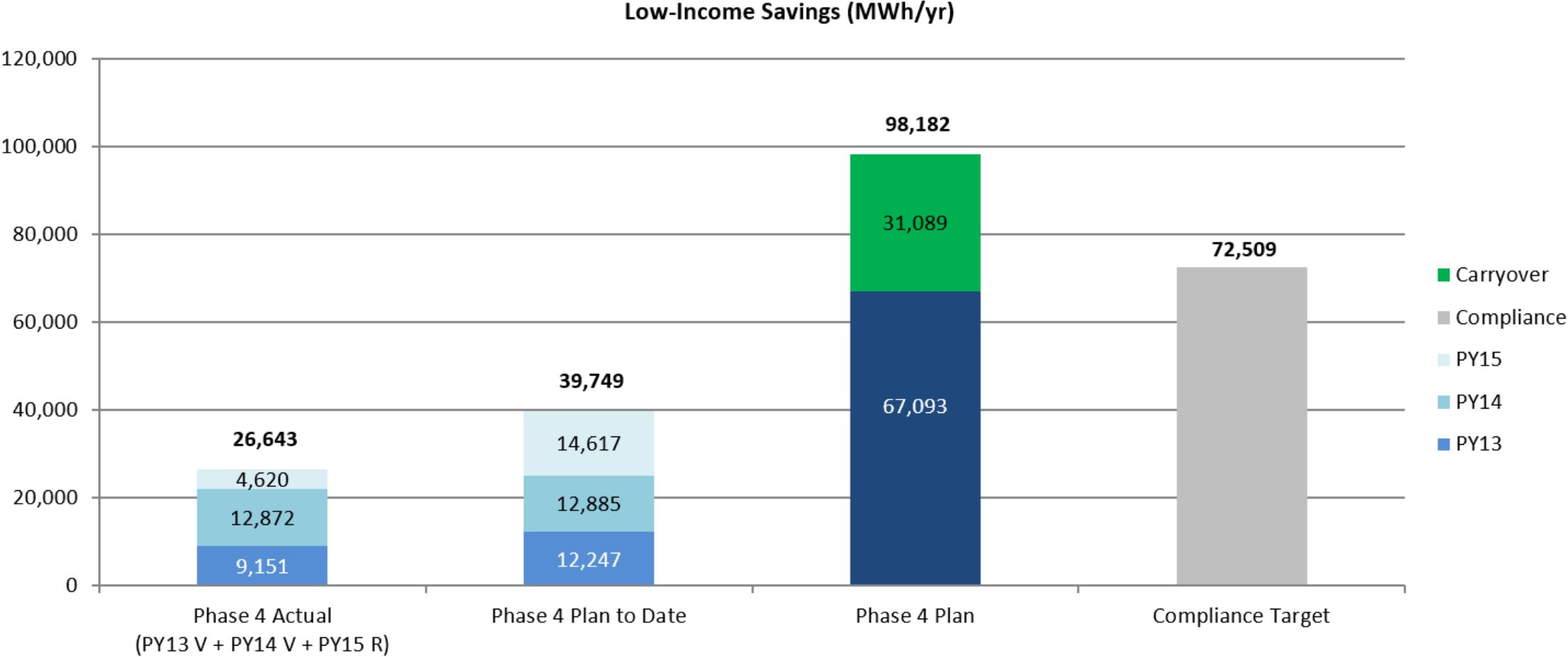
- PPL won 2023 Partner of the Year: Sustained Excellence
 - Submitted for 2024, waiting for official notification

Portfolio Overview

Overview: Portfolio Savings (MWh)

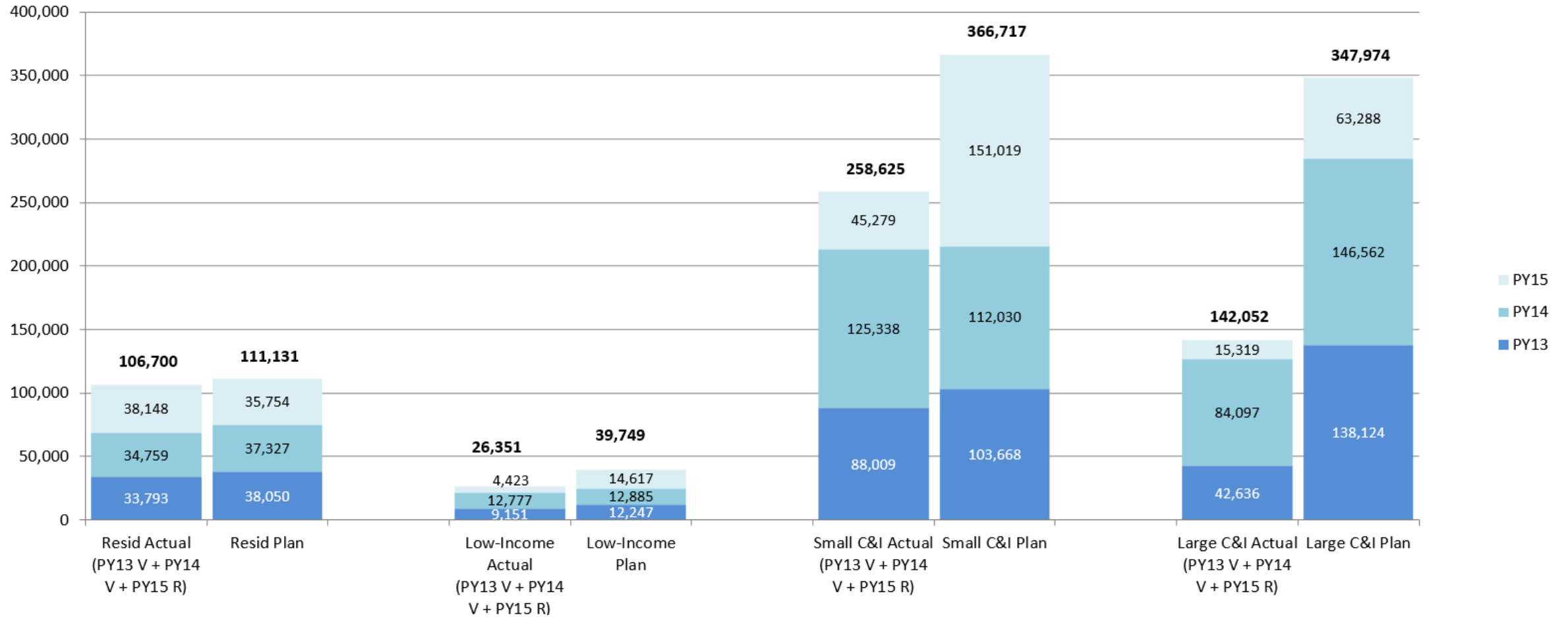


Overview: Low-Income Savings (MWh)

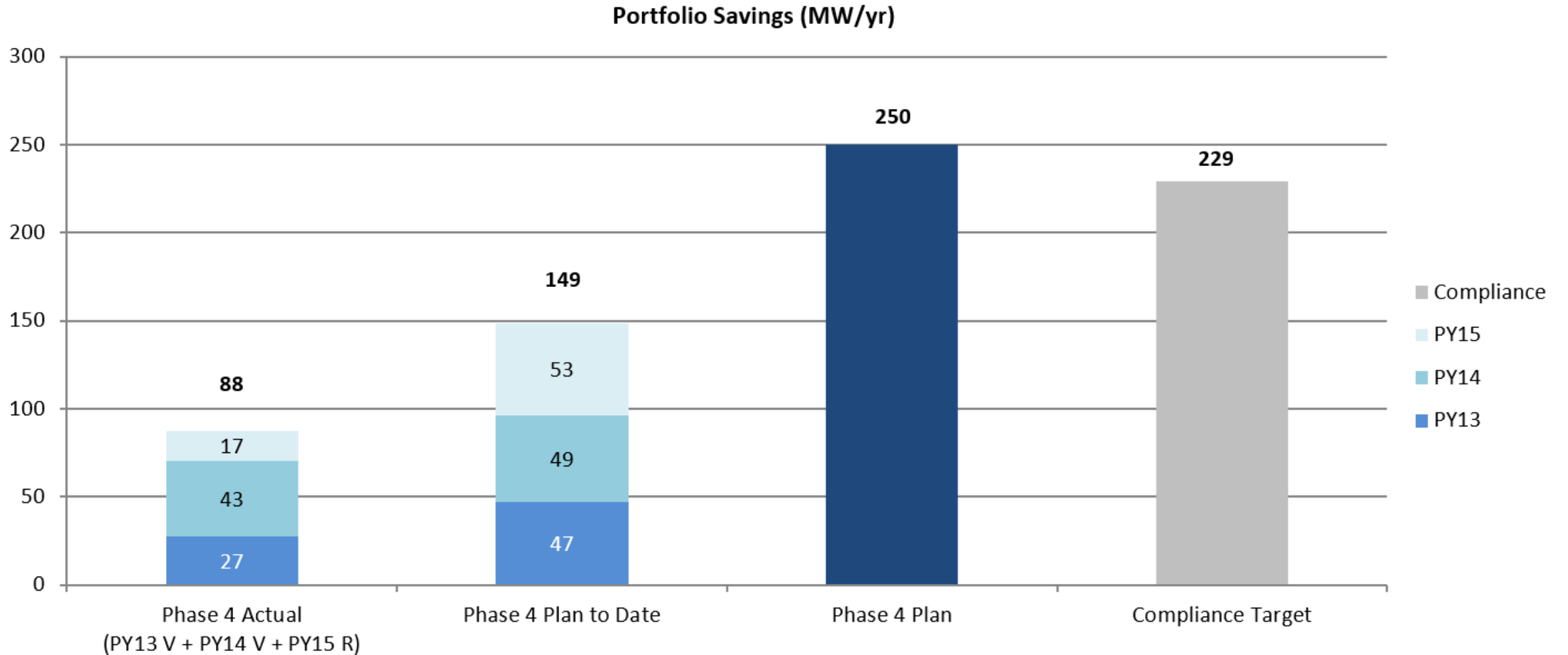


Overview: Sector Savings (MWh)

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

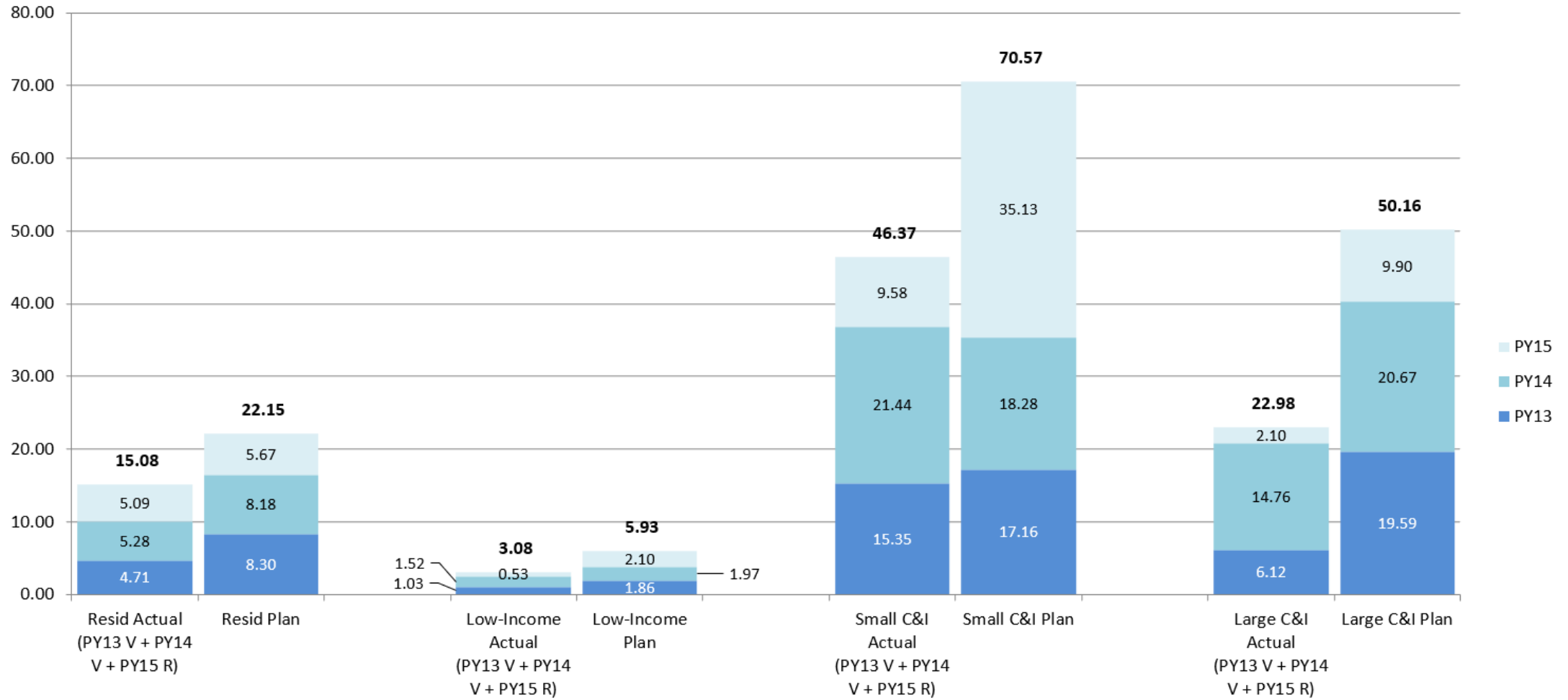


Overview: Portfolio Savings (MW)



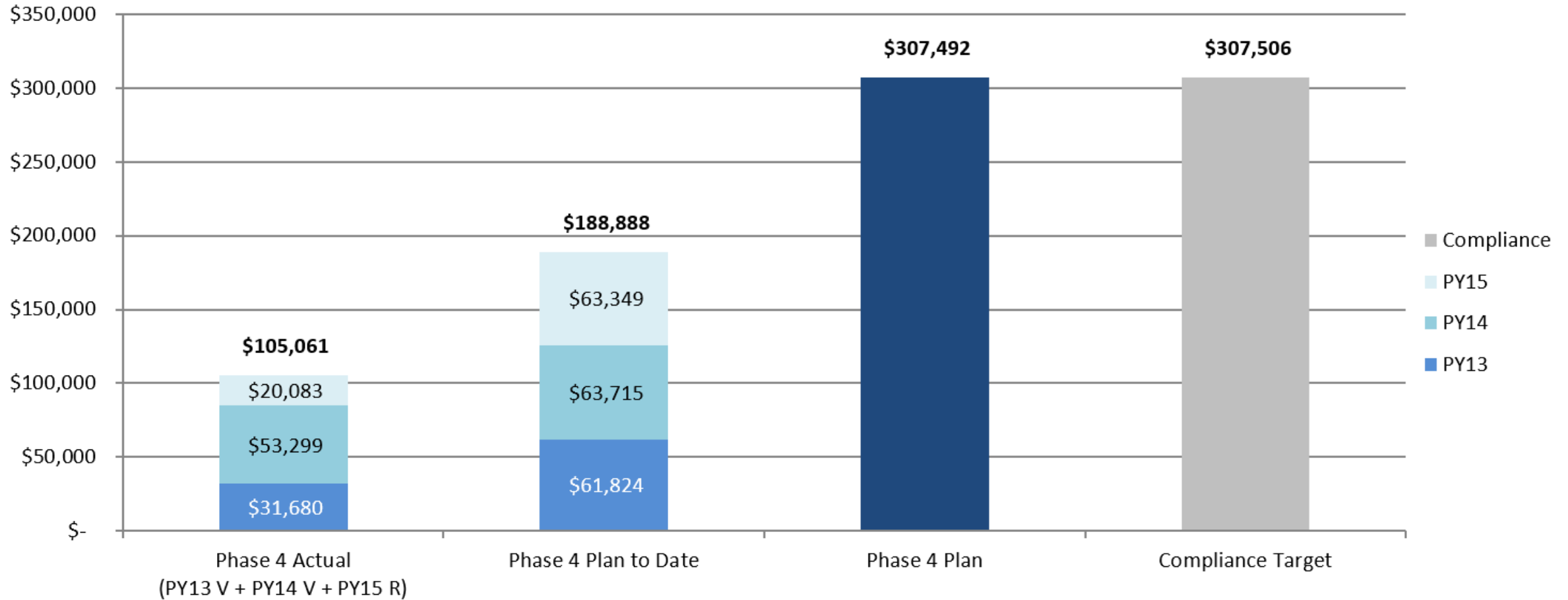
Overview: Sector Savings (MW)

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



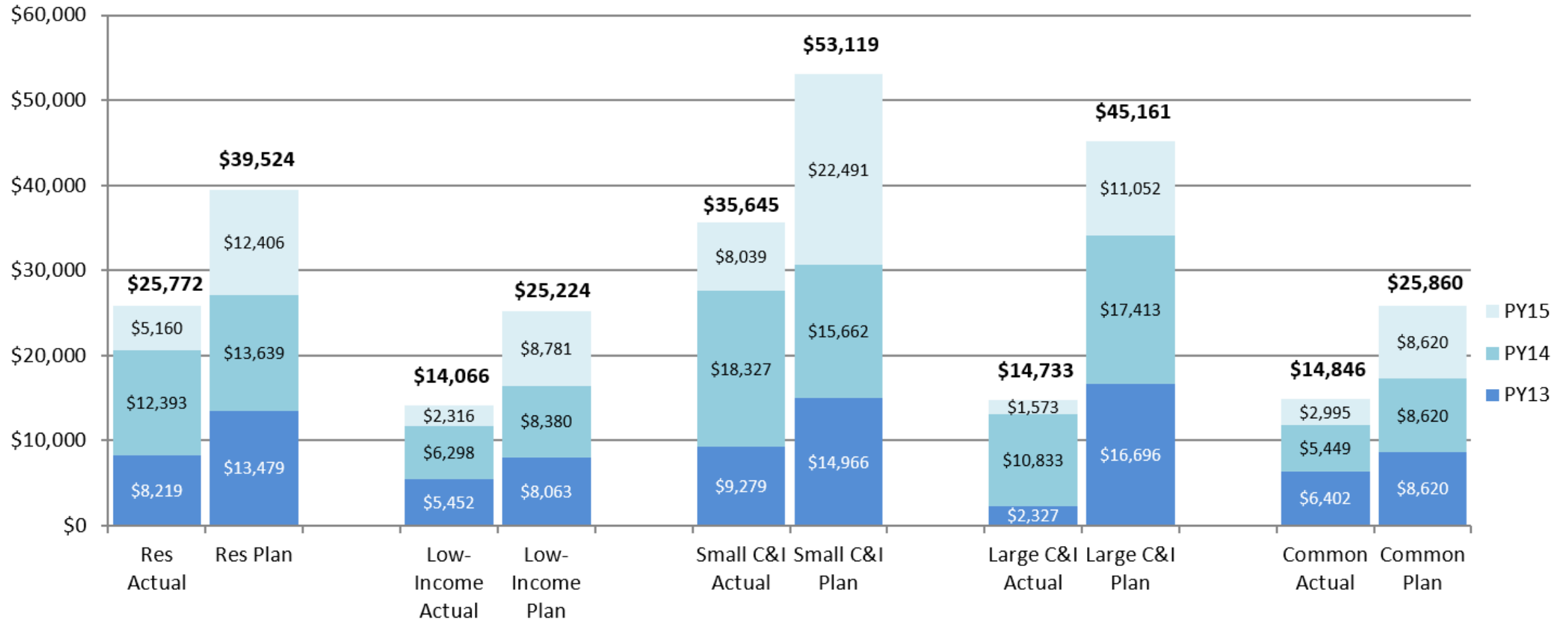
Overview: Portfolio Costs

Portfolio Costs (\$1000)



Overview: Sector Costs

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



Programs and Components: Residential Update

Residential Program Components

Efficient Homes



Energy Savings

PY13-14: 39,150
PY15: 25,569

PTD:

64,719 MWh

Peak Demand

PY13-14: 4.22
PY15: 2.47

PTD:

6.68 MW

Appliance Recycling



Energy Savings

PY13-14: 16,470
PY15: 4,862

PTD:

21,332 MWh

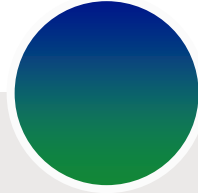
Peak Demand

PY13-14: 4.00
PY15: 1.32

PTD:

5.31 MW

EE Lighting



Energy Savings

PY13-14: 8,575
PY15: 385

PTD:

8,960 MWh

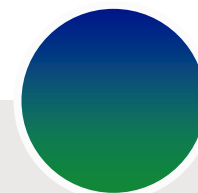
Peak Demand

PY13-14: 1.35
PY15: 0.06

PTD:

1.41 MW

Student Energy Ed



Energy Savings

PY13-14: 4,797
PY15: 5,434

PTD:

10,231 MWh

Peak Demand

PY13-14: 0.47
PY15: 0.56

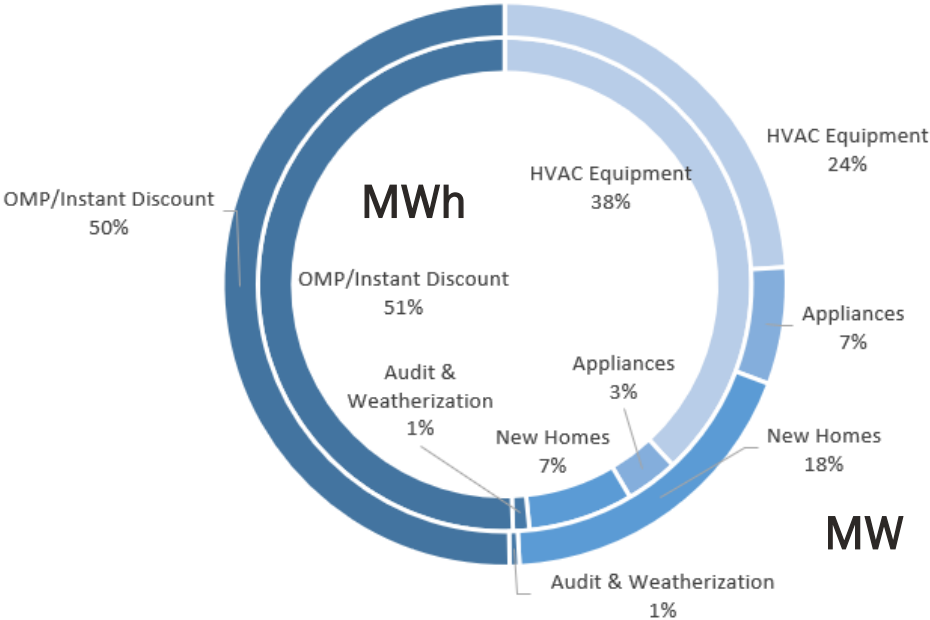
PTD:

1.03 MW

PY15 values include any prior year unverified

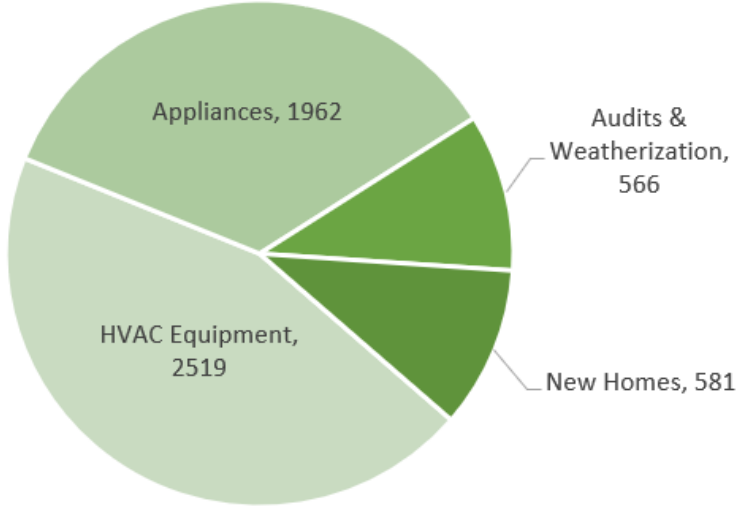
Residential Program: Energy Efficient Homes

PY15 Savings by Category



Category	MWh	MW
HVAC Equipment	8,065	0.43
Appliances	730	0.12
New Homes	1,457	0.33
Audit & Weatherization	227	0.01
OMP/Instant Discount	10,705	0.9
Total	21,185	1.8

PY15 Participation By Category



Category	n	%
HVAC Equipment	2,519	44.8%
Appliances	1,962	34.9%
Audits & Weatherization	566	10.1%
New Homes	581	10.3%
Total	5,628	

Participation does not include 38,900 products purchased through Instant Discounts/OMP



Residential Program: EE Homes – New Homes Subcomponent



Energy Savings

PY13-14: 6,989

PY15: 1,457

PTD:

8,446 MWh

Peak Demand

PY13-14: 1.82

PY15: 0.33

PTD:

2.15 MW

Home Built PY15

- 581 homes built
- Over \$441K in incentives

There are currently 88 builders participating in the program.

Residential Program: EE Homes – New Homes Subcomponent

Feature Build



Spotlight Home - Indian Run Road, Millersville.
Constructed by Landmark Homes

- Ground source heat pump/instantaneous water heater
- Projected to save 8,821 kWh per year, with kW savings of 0.972
- This home is 41% more efficient than a home built to minimum code requirements and achieved a HERS score of 48.
- \$2,646.30 in incentives

Residential Program: Energy Efficient Homes

Pilots

Deep Energy Retrofits

- Identifying barriers to participation and testing approaches to offering comprehensive measure packages and whole home solutions
- Single lead contractor as point of contact
- Offering monthly webinars
 - In-Home Audit
 - Combining with IRA

Deep Energy Retrofit Bonus



Updates

- Updating program design to complement existing comprehensive retrofit bonus
- \$500 incentive bonus for the customer
 - In Home Audit
 - Install a combination of three shell and a mechanical treatment
- Contractor will receive a \$500 bonus for each completed project

Residential Program: Energy Efficient Homes

Pilots

Net Zero Energy Ready Homes

- Demonstrating implementation of residential new construction standards
- Homes satisfy the DOE Zero Energy Ready Home certification and providing financial and technical support to 5 new construction homes
- Conducting virtual and in-person tours on each home and webinars on “behind the wall” upgrades and educational video

Updates

- 5 pilot model homes
 - Alden Homes – Mt. Joy
 - **R. W. Buff – Buck Hill Falls**
 - McNaughton Homes – Enola
 - McNaughton Homes – Mechanicsburg - All Electric
 - Susquehanna Valley Builders – Mechanicsburg - almost completed; Tour in March
- Tours available for each home with customer provided features, price, etc.

Residential Program: Energy Efficient Homes

Pilot Home #2 – RW Buff

Model home



Rater, builder, and owners



Model home tour



Residential Program: Appliance Recycling



Energy Savings

PY13-14: 16,470
 PY15: 4,862

PTD:

21,332 MWh

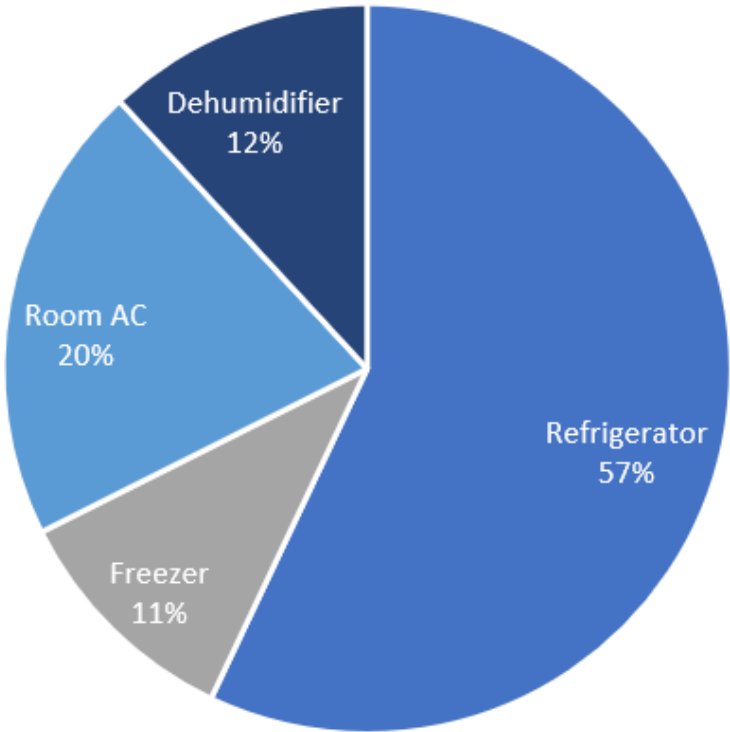
Peak Demand

PY13-14: 4.00
 PY15: 1.32

PTD:

5.31 MW

Units Collected PY15



Pick up and recycling of both large and small appliances

Unit Type	Units
Refrigerator	4,190
Freezer	776
Room AC	1,504
Dehumidifier	874
Total	7,344

Residential Program: Appliance Recycling

PY15 Neighborhood Sweeps

- Scranton, Lancaster, Harrisburg, and Quakertown

Category	Total
Customers	331
Room Air Conditioners	404
Dehumidifiers	167
kWh Saved	190,523
KW Saved	143

PY15 Appliance Recycling Events

PY15 Small Appliance Events

- Frackville and Bloomsburg

Category	Total
Customers	200
Room Air Conditioners	234
Dehumidifiers	153
kWh Saved	150,709
KW Saved	93

Residential Program: EE Lighting



Energy Savings

PY13-14: 8,575

PY15: 385

PTD:

8,960 MWh

Peak Demand

PY13-14: 1.35

PY15: 0.06

PTD:

1.41 MW

- 1,588,224 LEDs Phase-to-Date
- Ensured LEDs were available to customers throughout PPL territory at a variety of retailers
- **Program sunset and no longer available**
 - Other instant discount products available including spray foam, smart power strips, etc.

Residential Program: Student Energy Education



Energy Savings

PY13-14: 4,797

PY15: 5,434

PTD:

10,231 MWh

Peak Demand

PY13-14: 0.47

PY15: 0.56

PTD:

1.03 MW

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

- Fully subscribed in PY15
- Over 20,000 kits
- Focus on low-income schools
- Poster contest (K-8th)
- Innovation Challenge

Programs and Components: Low-Income Update

Low-Income Program



Energy Savings

PY13-14: 22,022

PY15: 4,620

PTD:

26,642 MWh

Peak Demand

PY13-14: 2.56

PY15: 0.55

PTD:

3.11 MW

3 Channels – 20,343 Assessments and 42,765 Kits

Single Family – 12,850 Assessments

- Remote Energy Assessment (REA) – 9,730 Assessments
- In-Home Assessment – 3,135 Assessments
 - In-Home Assessments are now approximately 75% of assessments

Multifamily – 7,417 Assessments

- Virtual Energy Assessment – 1,552
- In-Home Assessment – 5,873

Welcome Kits – 42,765



Low-Income Program: Multifamily

Multifamily Engagement

- Continued engagement of multifamily property owners and building operators to provide needed services to low-income tenants
- Applying holistic approach in Phase IV Completed: **9** (IMMF:4/MMMF:5)
- Increase in Master Metered Projects

Master Metered Multifamily Focus

- Completed 5 locations with 20 buildings
- Queue: 7 additional locations
- Updated marketing materials as per Settlement Agreement

Low-Income Program: Carveouts & Pilots

Comprehensive Measures

- Strong pace of comprehensive projects
- Budget forecasted to expire in PY17
- >\$1M spent phase-to-date

Health and Safety Pilot

- Health and Safety Pilot dollars spent as bridge to comprehensive measures
- Approximately \$109K spent phase-to-date
 - Plumbing repairs, stair repairs, expansion tanks, etc.

Coordination Efforts

- Natural Gas Distribution Companies (NGDC) – 35 appointments complete in Phase
- Continue to coordinate with PPL OnTrack, LIHEAP, other CAP program participants
 - Targeted marketing for OnTrack customers

Programs and Components: Non-Residential Update

Non-Residential Program Components

Efficient Equipment Downstream



Energy Savings

PY13-14: 93,798
PY15: 19,425

PTD:

113,223 MWh

Peak Demand

PY13-14: 14.81
PY15: 3.27

PTD:

18.08 MW

Efficient Equipment Midstream



Energy Savings

PY13-14: 56,096
PY15: 8,729

PTD:

64,824 MWh

Peak Demand

PY13-14: 10.66
PY15: 2.14

PTD:

12.80 MW

Efficient Equipment Direct Discount



Energy Savings

PY13-14: 53,786
PY15: 12,950

PTD:

66,736 MWh

Peak Demand

PY13-14: 7.31
PY15: 1.63

PTD:

8.94 MW

Custom



Energy Savings

PY13-14: 135,810
PY15: 21,196

PTD:

157,006 MWh

Peak Demand

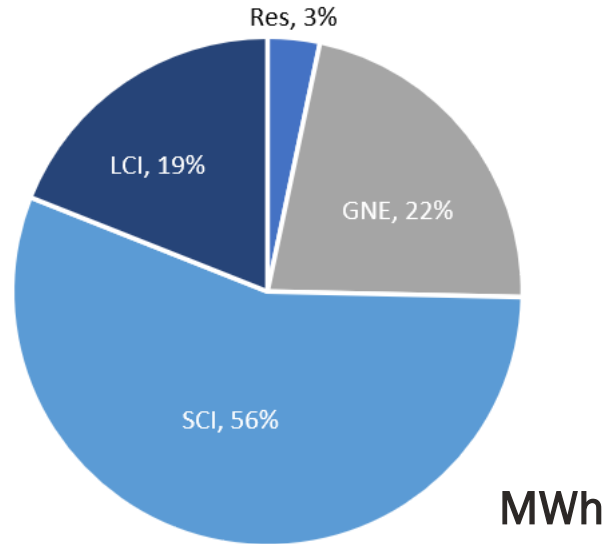
PY13-14: 24.85
PY15: 5.30

PTD:

30.15 MW

PY15 values include any prior year unverified

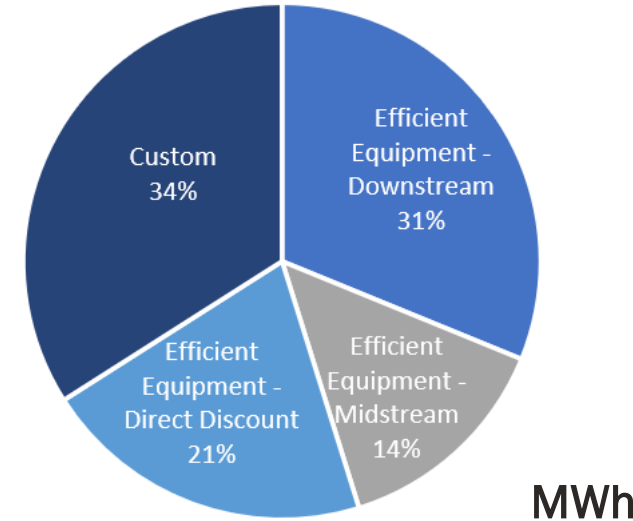
Non-Residential Program: Summary



MWh

Category	MWh	MW
Res	2063	0.65
GNE	13728	2.98
SCI	34691	7.14
LCI	11817	1.56
Total	62300	12.34

PY15 Energy Savings by Sector



MWh

Category	MWh	MW
Efficient Equipment - Downstream	19425	3.27
Efficient Equipment - Midstream	8729	2.14
Efficient Equipment - Direct Discount	12950	1.63
Custom	21196	5.30
Total	62300	12.34

PY15 Energy Savings by Component

PY15 values include any prior year unverified



Non-Residential Program: Efficient Equipment Downstream



Energy Savings

PY13-14: 93,798

PY15: 19,425

PTD:

113,223 MWh

Peak Demand

PY13-14: 14.81

PY15: 3.27

PTD:

18.08 MW

PY15 reported energy savings by project type:

Lighting

- 18,653 MWh/yr.
- 3.10 MW/yr.

Equipment

- 772 MWh/yr.
- 0.16 MW/yr.

\$1,386,553 – incentives provided to customers

Non-Residential Program: Efficient Equipment Midstream



Energy Savings

PY13-14: 56,096

PY15: 8,729

PTD:

64,824 MWh

Peak Demand

PY13-14: 10.66

PY15: 2.14

PTD:

12.80 MW

- 23 distributors in PY15
- Lighting reported PY15 savings of 7,663 MWh/yr.
- Ag reported PY15 savings of 1,062 MWh/yr.
- Food Service PY15 reported savings of 3.68 MWh/yr.

\$503,146 – incentives provided to customers

Non-Residential Program: Efficient Equipment Direct Discount



Energy Savings

PY13-14: 53,786

PY15: 12,950

PTD:

66,736 MWh

Peak Demand

PY13-14: 7.31

PY15: 1.63

PTD:

8.94 MW

- Lighting PY15 reported savings of 12,783 MWh/yr.
- Refrigeration PY15 reported savings of 167 MWh/yr.

\$1,987,365 – incentives provided to customers

Non-Residential Program: Custom



Energy Savings

PY13-14: 135,810

PY15: 21,196

PTD:

157,006 MWh

Peak Demand

PY13-14: 24.85

PY15: 5.30

PTD:

30.15 MW

- Commercial Motors projects PY15 reported savings of 3,267 MWh/yr.
- Solar projects PY15 reported savings of 12,328 MWh/yr.
- Process Improvement PY15 reported savings of 3,301 MWh/yr.

\$3,889,668 – incentives provided to customers

Programs and Components: PJM Forward Capacity Market Update

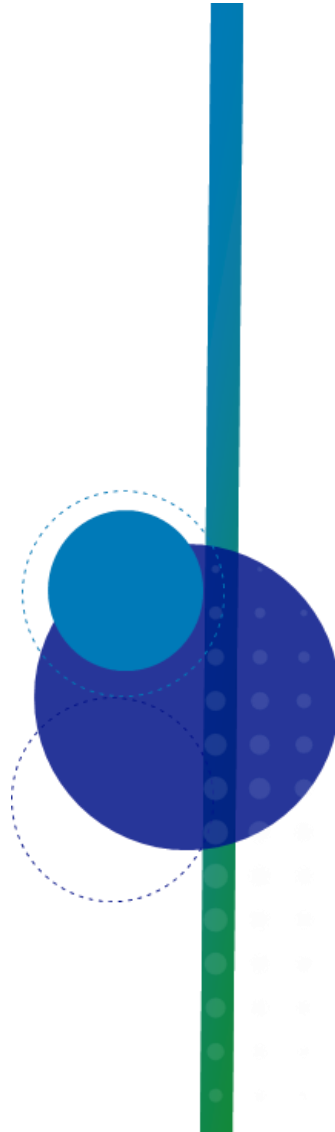
PJM Forward Capacity Market Service

Updates

- Submitted 2nd bid to CSP in mid-April 2023 for measurement & verification to qualify into PJM
 - PPL Electric and CSP bid 1.5 MWs per year
 - New total: 2.9 MWs
 - Added Low-Income measures to the mix of resource
- Will make 3rd bid to CSP this spring and continue consistent approach
 - MWs will continue to stack
- Collected revenue returned to customers
- Will submit new resource MWs for PJM Delivery Years 25/26 and 26/27

Questions & Answers

Thank You!



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