



PPL Energy Efficiency Update
PPL Stakeholder Meeting
July 13, 2022
Virtual Format

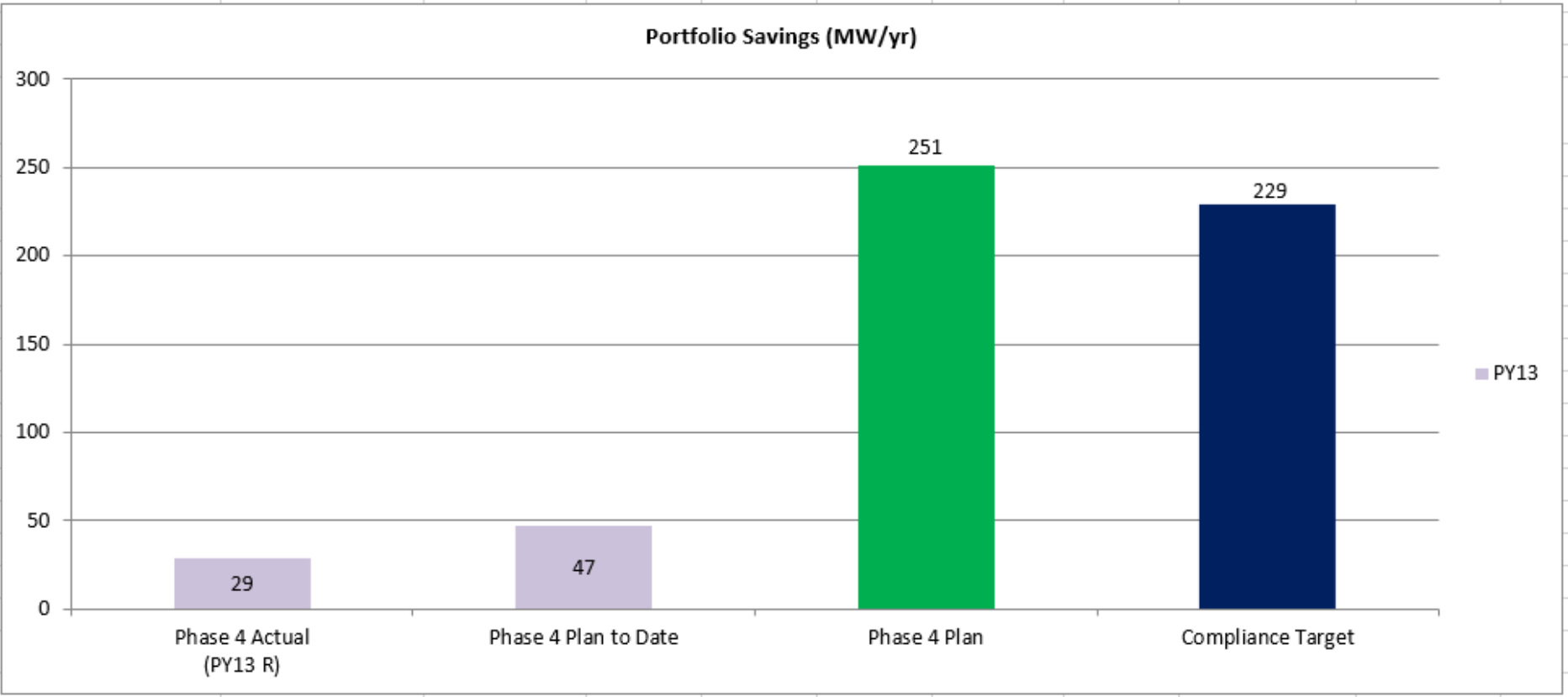
Please Note:

- Audience is muted
- We will unmute for Q&A Session at end of webinar

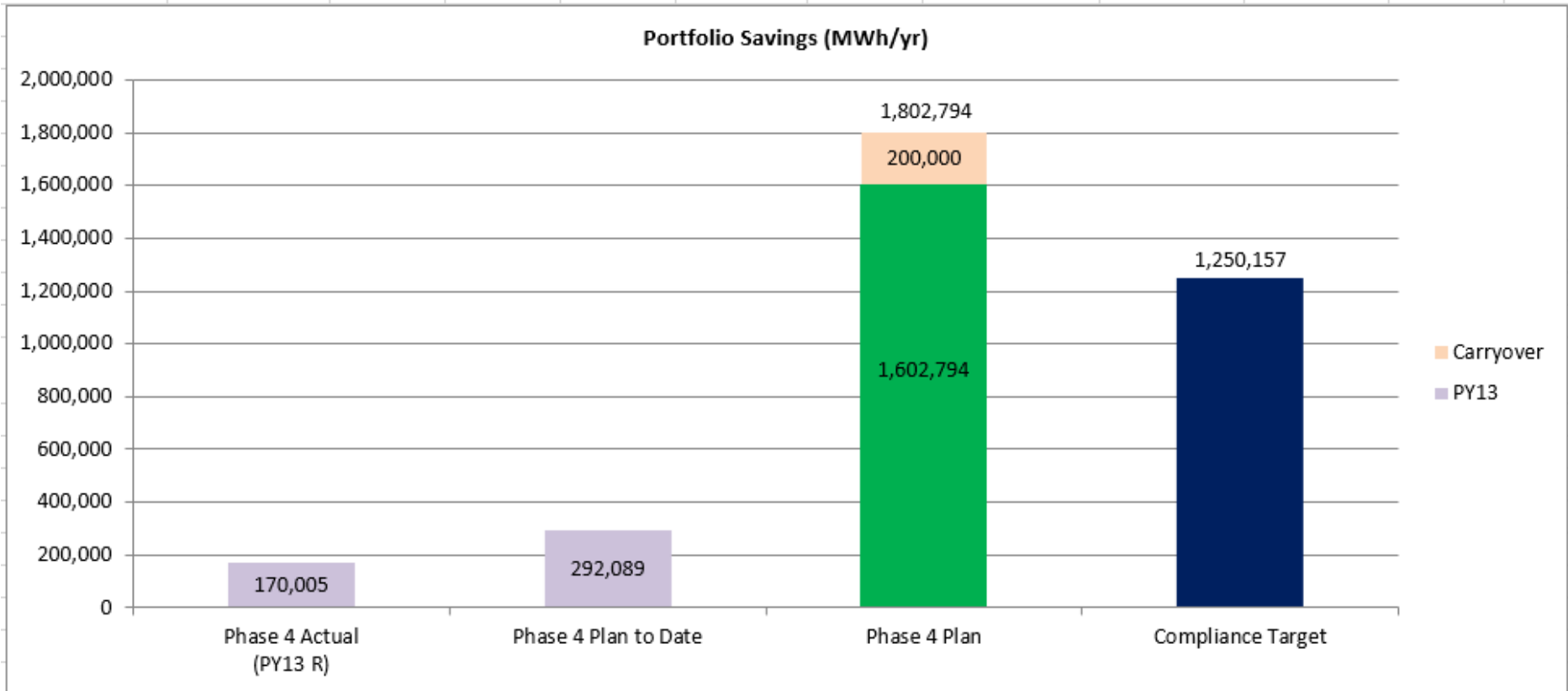
Agenda

- **Overview:** Chris Schoemaker
- **Residential Update:** Mary Ann Kelly-Merenda
- **Low Income Update:** Sean Pressmann
- **Non-Residential Update:** Heather Bash
- **PJM FCM Update:** Sean Pressmann
- **Question and Comment Period:** All
- **Closing:** Chris Schoemaker

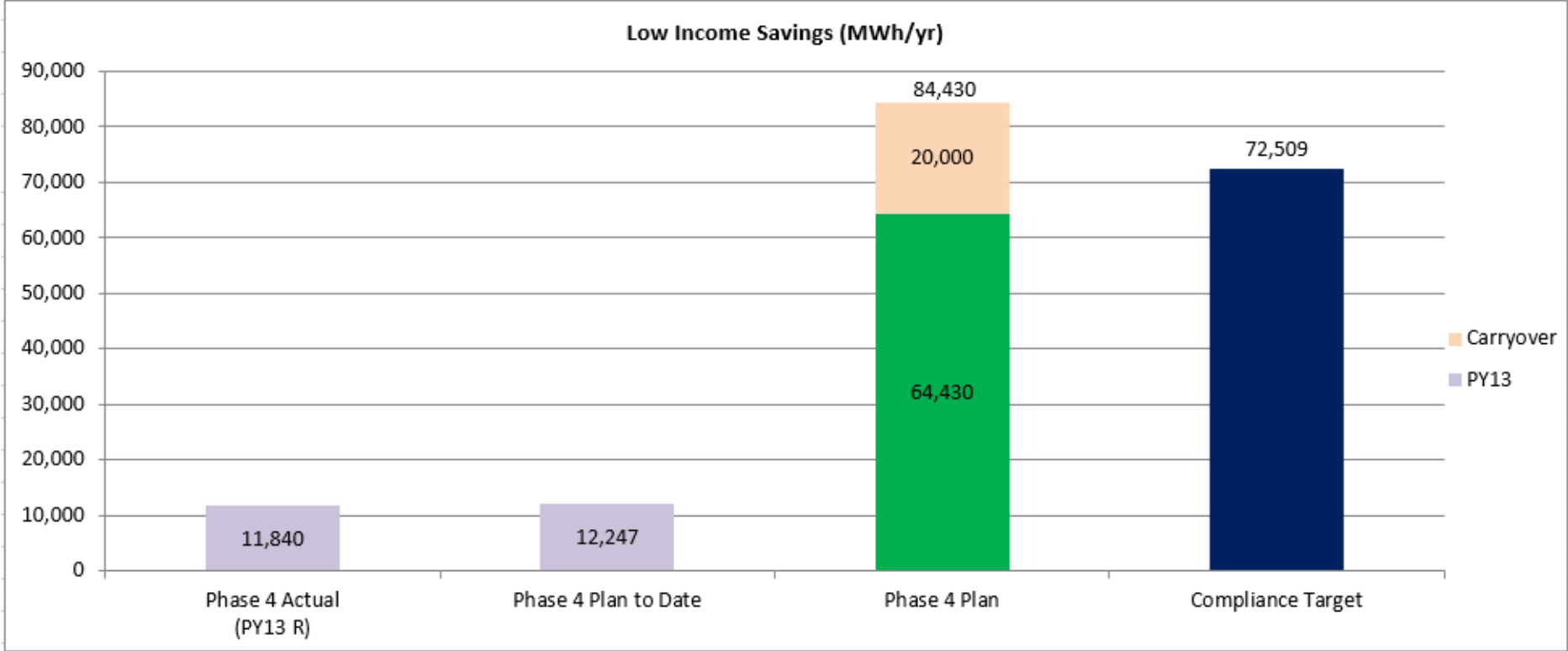
Overview: Portfolio Savings



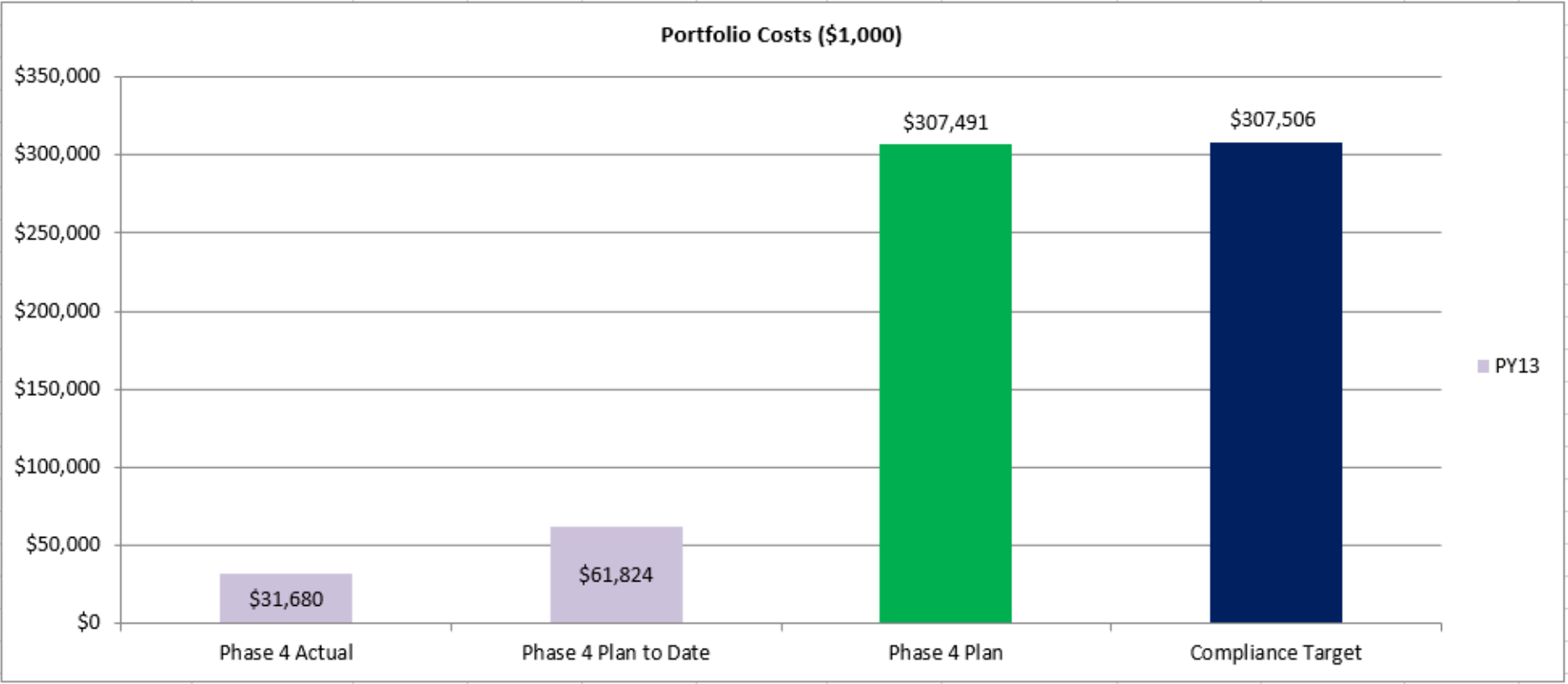
Overview: Portfolio Savings



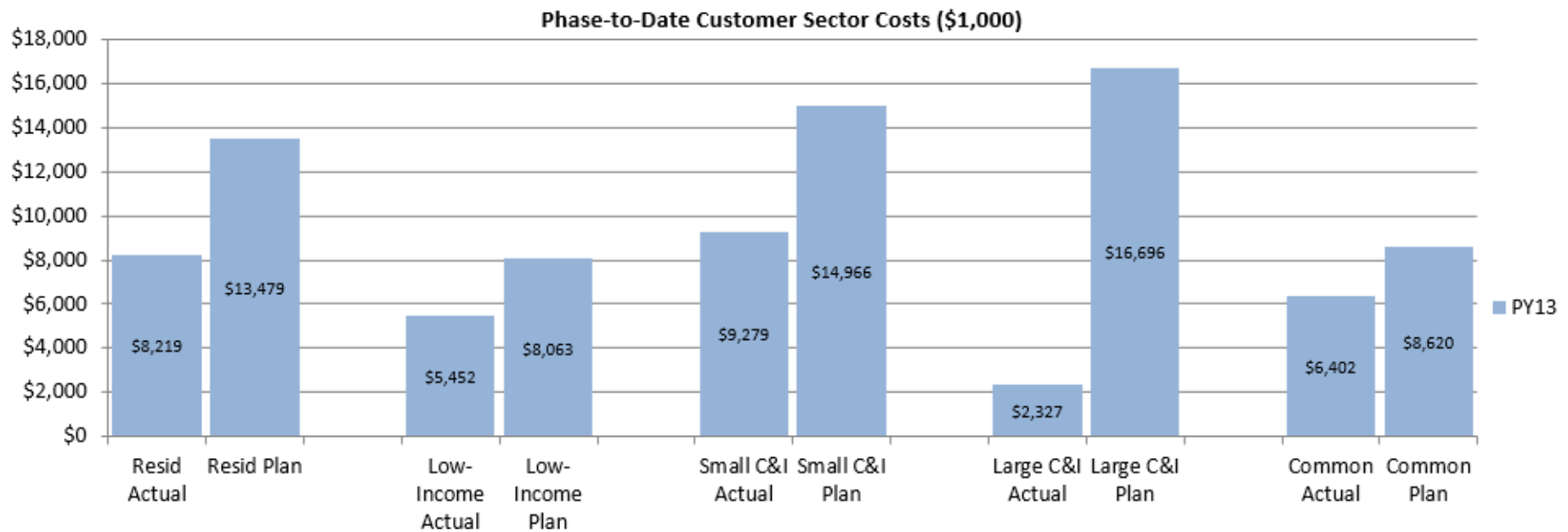
Overview: Low Income Savings



Overview: Portfolio Costs

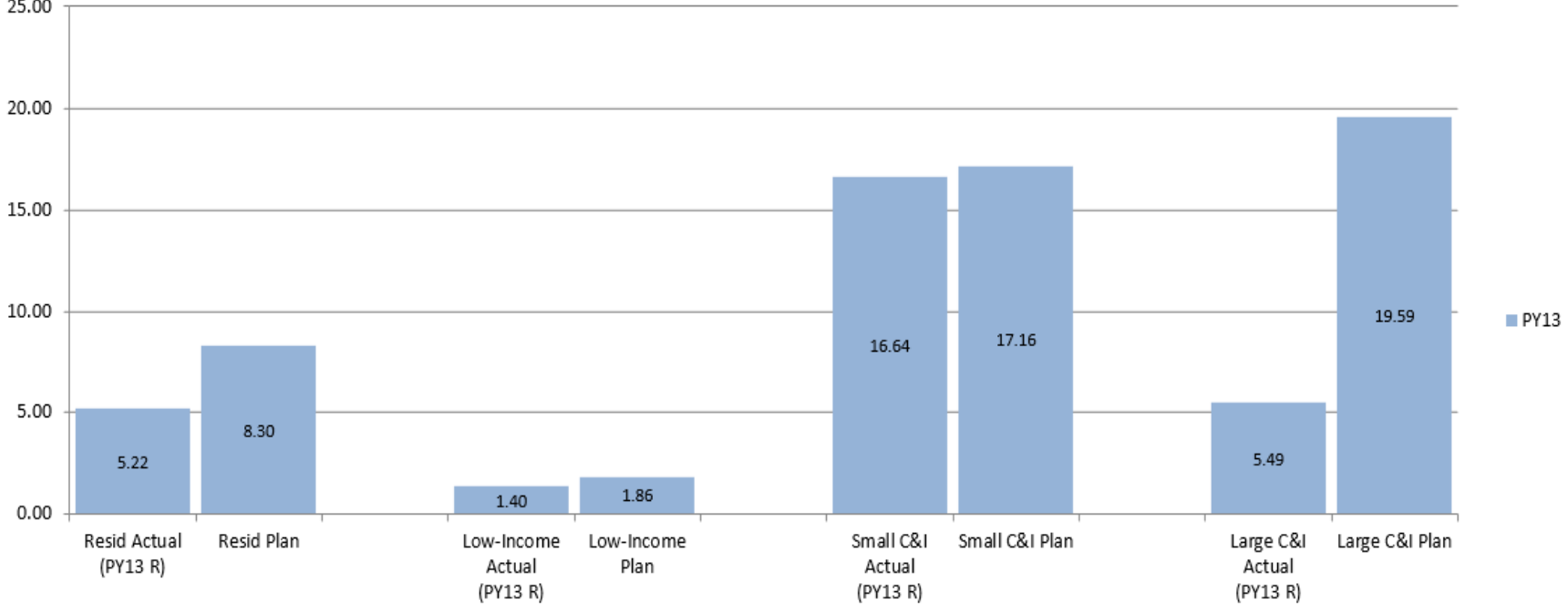


Overview: Phase-to-Date Costs

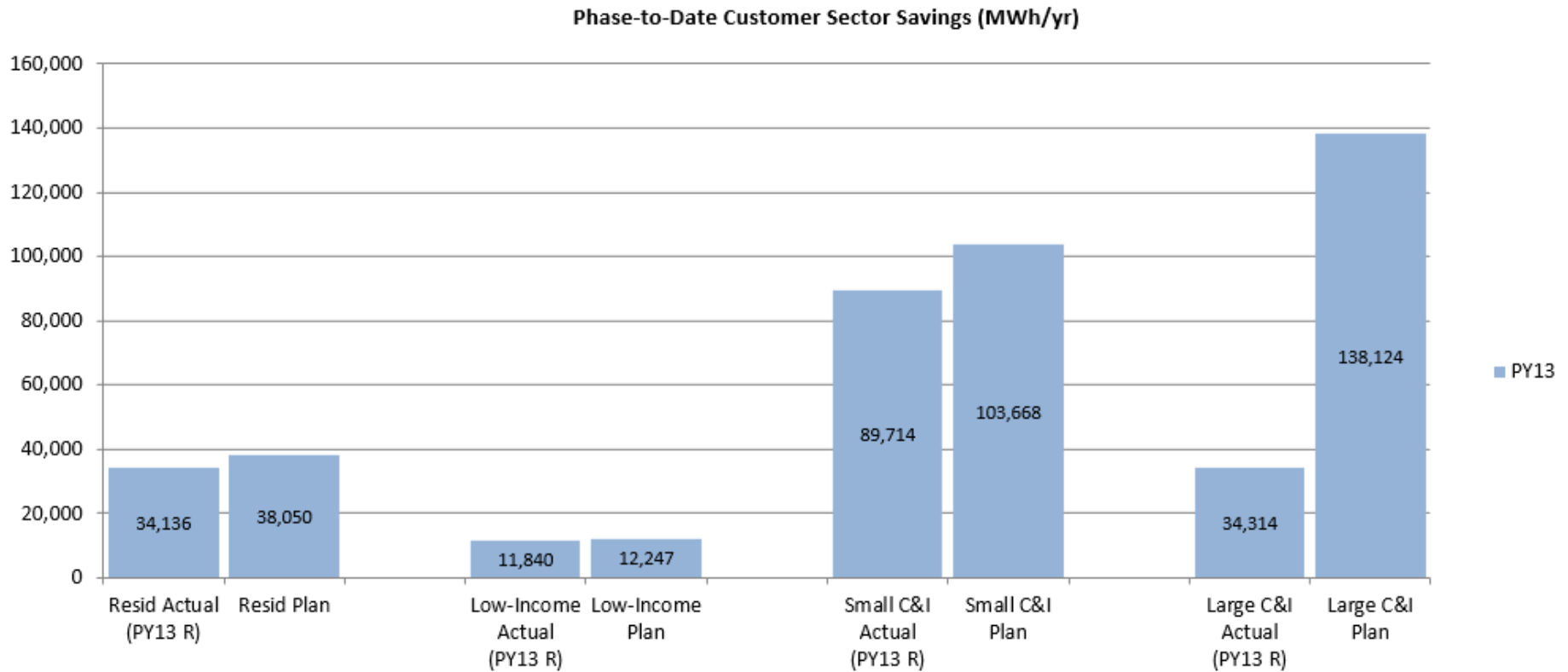


Overview: Phase-to-Date Sector Savings

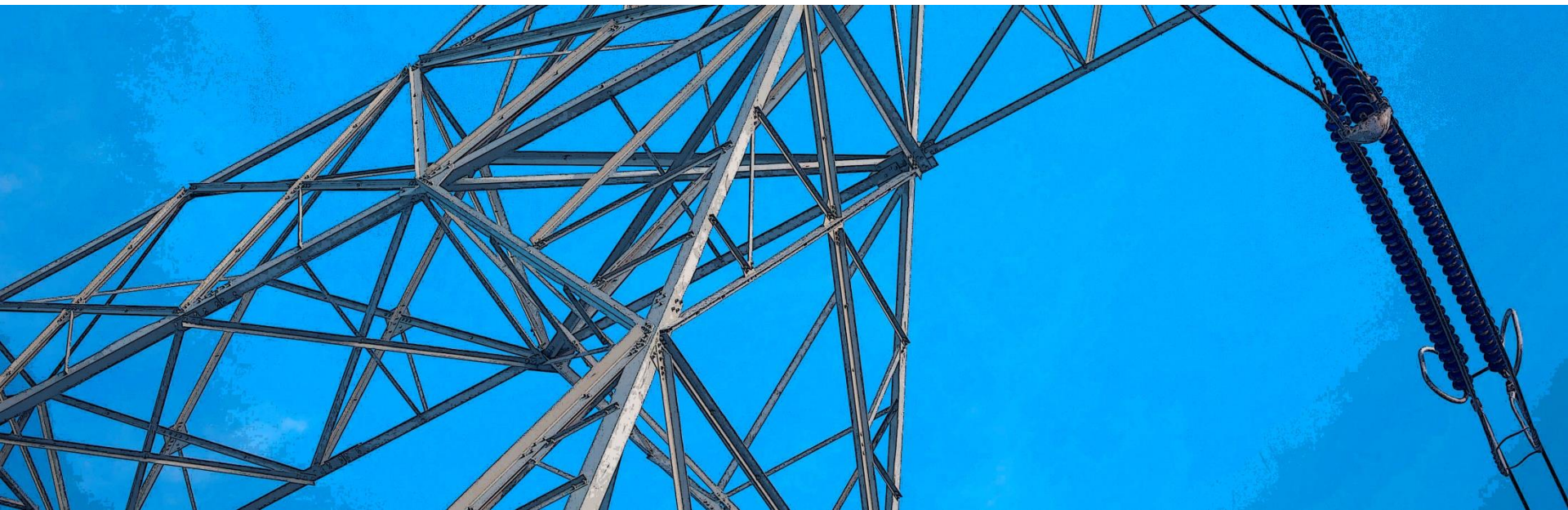
Phase-to-Date Customer Sector Savings (MW/yr)



Overview: Phase-to-Date Sector Savings



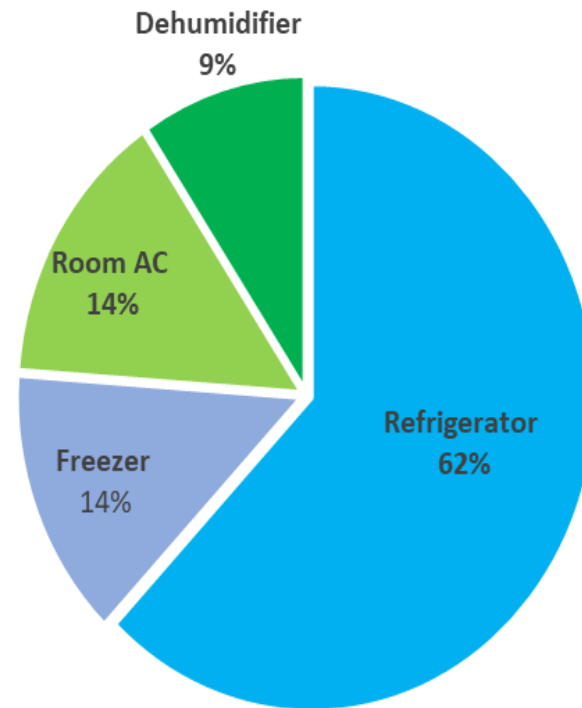
Residential Programs



Residential Program: Appliance Recycling

PY13 Units Collected

Appliance	PY13
Refrigerator	7,032
Freezer	1,578
Room AC	1,634
Dehumidifier	1,063
Total	11,307



**Units collected in PY13*

Residential Program: Appliance Recycling

3 Small Appliance Recycling Events

- Hazleton – September 18, 2021
- Allentown – April 23, 2022
- Montoursville – May 21, 2022

	Hazleton	Allentown	Montoursville
Customers	39	399	179
ACs	54	360	215
DHs	13	301	111
Total	67	661	326

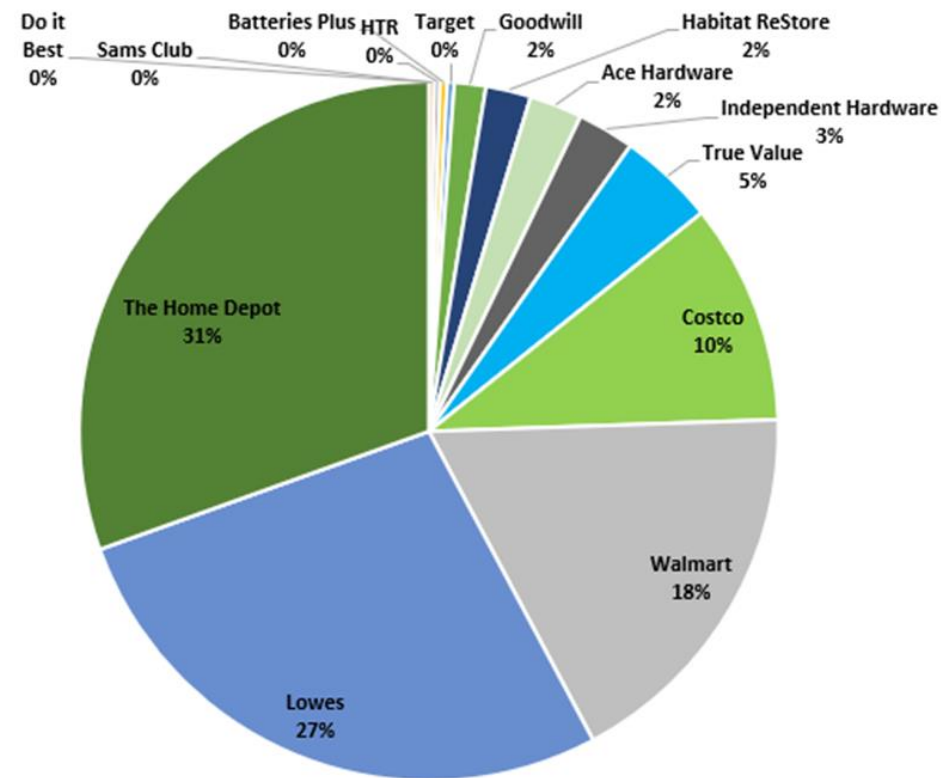
Residential Program: EE Lighting

- 775,814 LEDs in PY13
- Savings over 4,000 MWh/yr.
- Ensured LEDs available to customers in all areas at a variety of retailer types

Residential Program: EE Lighting

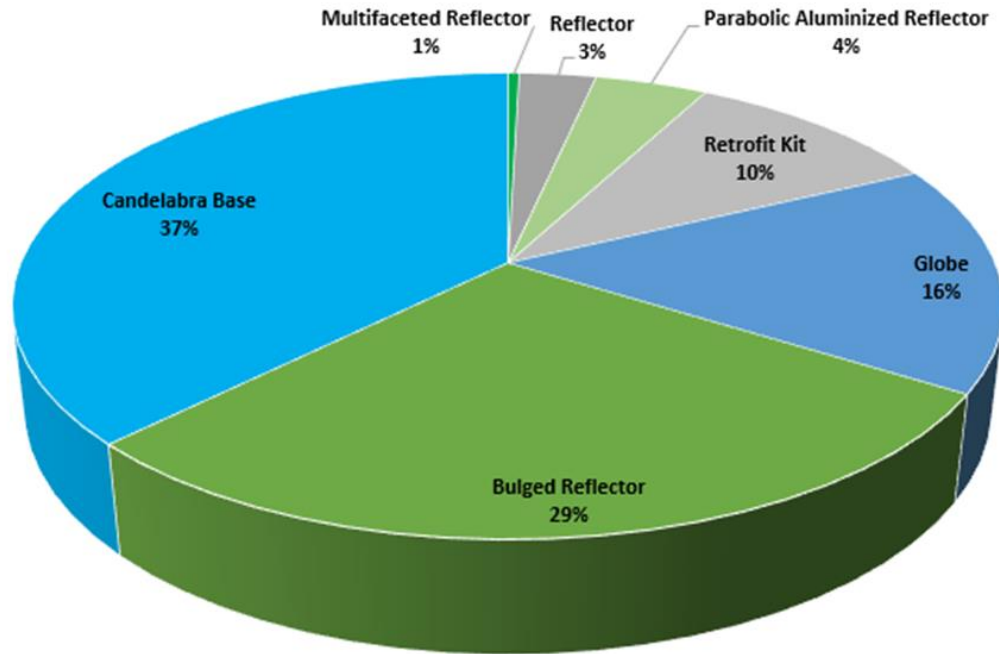
Retailer	Label	Units
The Home Depot	Big Box	236,435
Lowes	Big Box	211,891
Walmart	Big Box	137,668
Costco	Big Box	79,198
True Value	Independent	34,680
Independent Hardware	Independent	20,440
Ace Hardware	Independent	18,954
Habitat ReStore	Independent	16,198
Goodwill	Independent	11,304
HTR	Independent	2,052
Target	Big Box	2,520
Batteries Plus	Independent	2,480
Do it Best	Independent	1,988
Sams Club	Big Box	6
Total		775,814

PY13 LEDs by Retailer



Residential Program: EE Lighting

PY13 Bulb Mix



Residential Programs: New Homes

PY13

- 1,242 homes
- 2,933 MWh/yr. in savings
- Over \$877,000 in incentives

Key Successes

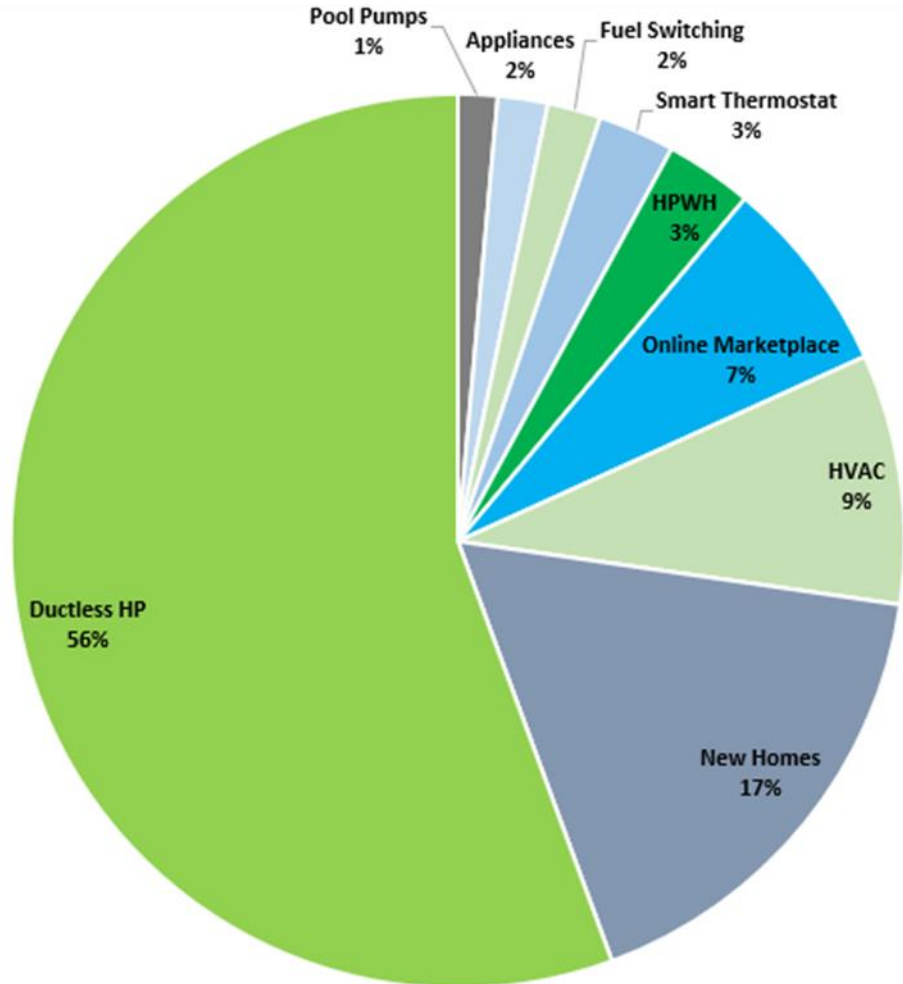
- 2,300 kWh/yr. per home
- Up to \$4,500 incentive per home
- 76 Builders currently in the program

Residential Program: New Homes



Residential Program: Energy Efficient Homes

PY13 MWh Savings by Measure Category



PY13

- 17,124 MWh/yr.
- 2.14 MW/yr.

Residential Program: Energy Efficient Homes

PY13

- Ductless HP and Appliance (Refrigerator) most popular measure types rebated followed by HVAC (CAC)
- Ductless HP: 5,630 units or over 2,100 projects
- Online Marketplace: 3,383 kits (Welcome + Purchase)
- ASHP/CAC: 1,829 units
- Comprehensive Bonus measure had uptake of 77 rebates, 86% being Tier 1 with two qualifying measures

Measure Category	Total MWh/Yr.	Total MW/Yr.
Efficient Equipment	12,971.98	0.81
New Homes	2,933.16	1.22
Online Marketplace	1,218.49	0.11
Total	17,123.62	2.14

Residential Program: Energy Efficient Homes

- **New for Phase 4**
 - Comprehensive Retrofit Bonus
 - Virtual Assessments
 - Welcome Kits

Residential Program: Energy Efficient Homes



Residential Program: Energy Efficient Homes

New Pilots

- **Deep Energy Retrofits**
 - Identify barriers to participation
 - Offer comprehensive measure packages
 - Test delivery approaches
- **Net Zero Energy Homes**
 - Provide financial and technical support to construct 1-3 homes
 - Demonstrate implementation of residential new construction standards

Residential Program: Student Energy Education

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

PY13

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

Residential Program: Student Energy Education

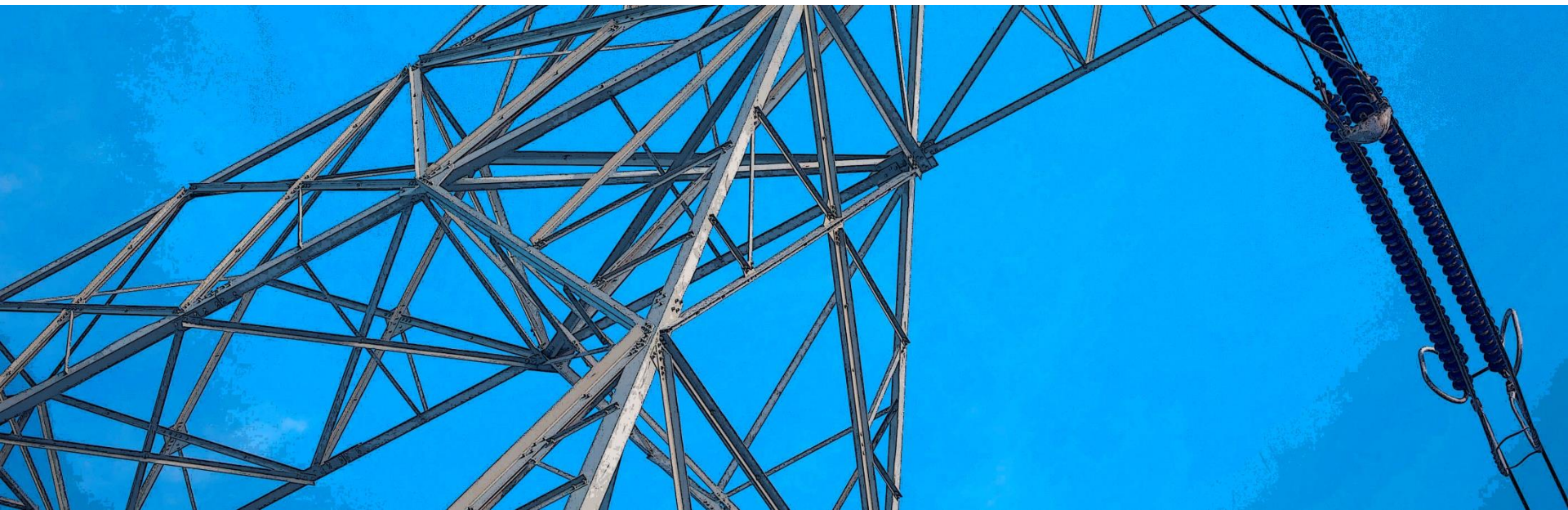


Poster Contest



Innovation
Challenge

Low Income Programs



Low Income Program: Assessment

Goal	Achieved
10,735	7,240

- **3 Channels**
 - Remote Energy Assessment (REA)
 - In-Home Assessment
 - Welcome Kits

Low Income Program: Assessment

- **PY13 Results – 7,240 Assessments***
 - Single Family Homes: 5,223
 - Multifamily: 1,938
 - Manufactured/Other: 89
 - Low-Cost/Baseload Job Ratio: ~ 3/2



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

Low Income Program: Welcome Kits



Goal	Achieved
16,807	21,639



Low-Income Program: Multifamily / Coordination

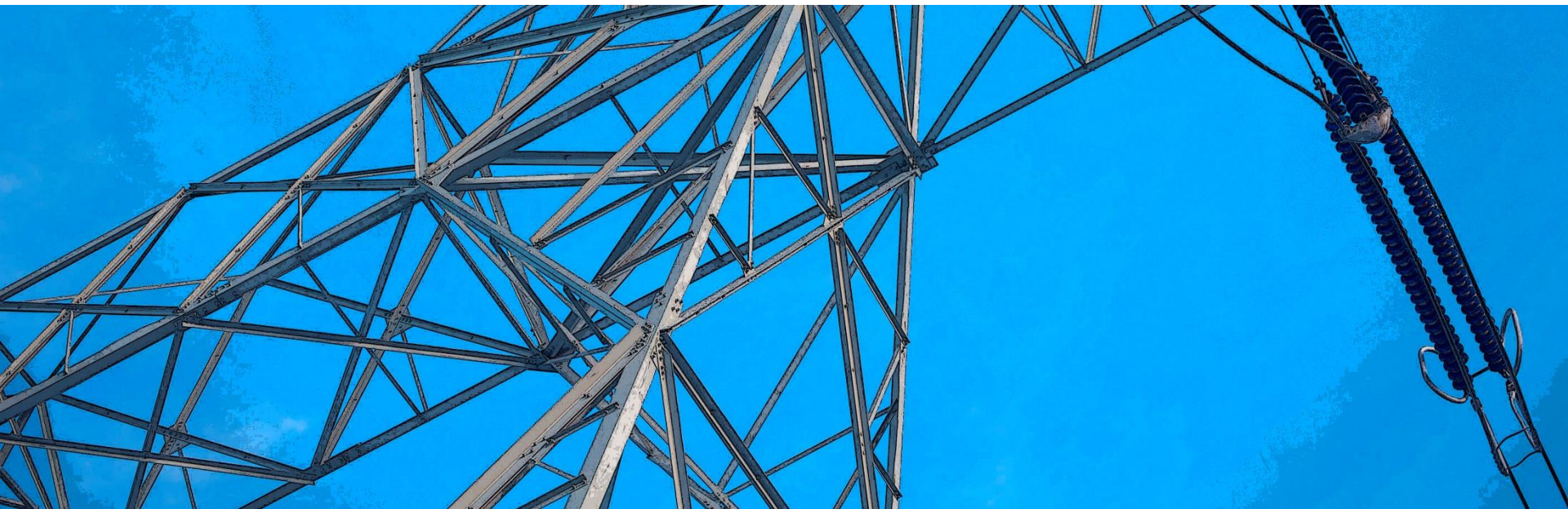
Re-engagement

- 1,938 individual units served
- Re-engaging MF property owners and working with stakeholders to identify properties
- Applying holistic approach as done in Phase III
- Coordination efforts
 - NGDC
 - LIURP
 - Stakeholders

Carveouts and Pilots

- **Comprehensive Measures**
 - Started on In-Home work in PY13
- **Master Meter Multifamily**
 - Engaged property owners and targeted 6 jobs
- **Health and Safety Pilot**
 - No health and safety pilot dollars spent in PY13

Non-Residential Programs



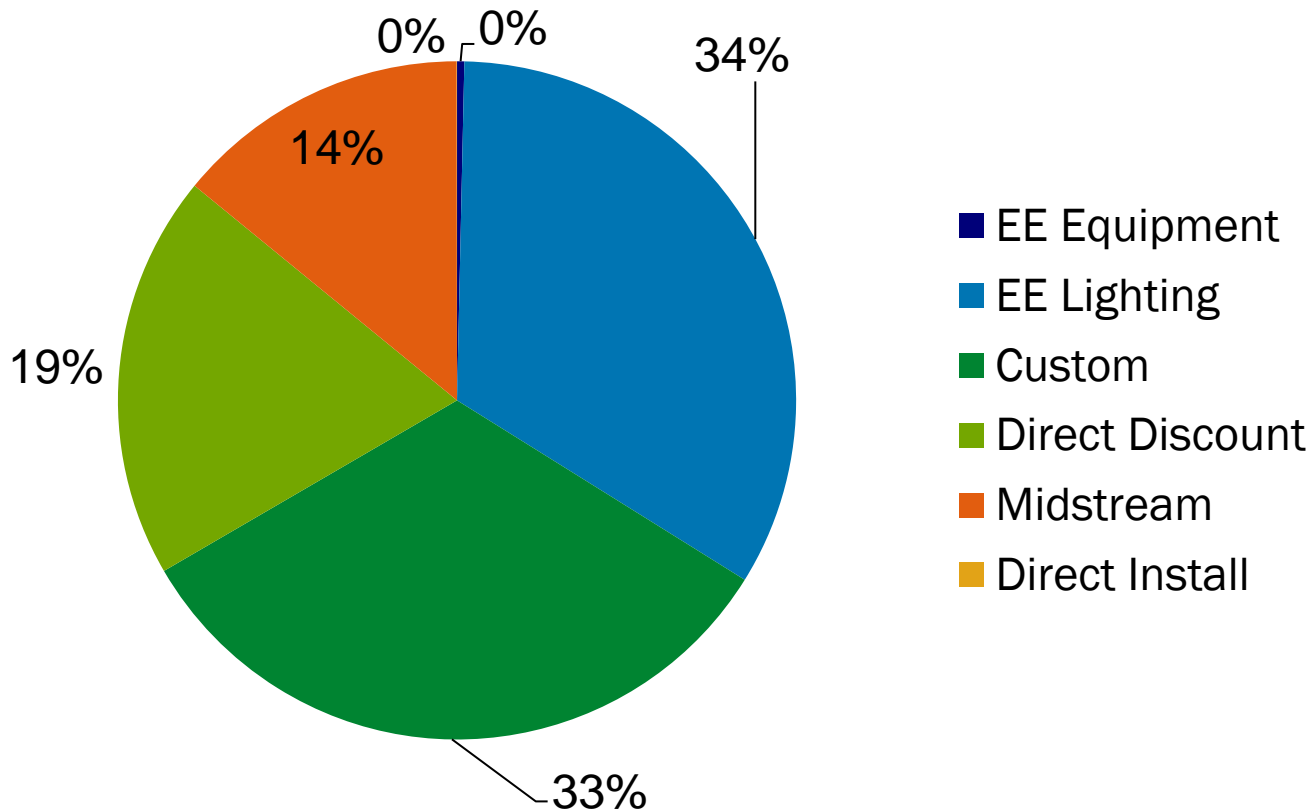
Non-Residential Programs

PY13 Program achievements

- 123,157 MWh/yr.
- 20 MW/yr.
 - GNE Sector Savings 14,761 MWh/yr. 2.5 MW/yr.
- \$6,345,515 incentives
- 5,317 total projects
 - 4,793 midstream projects

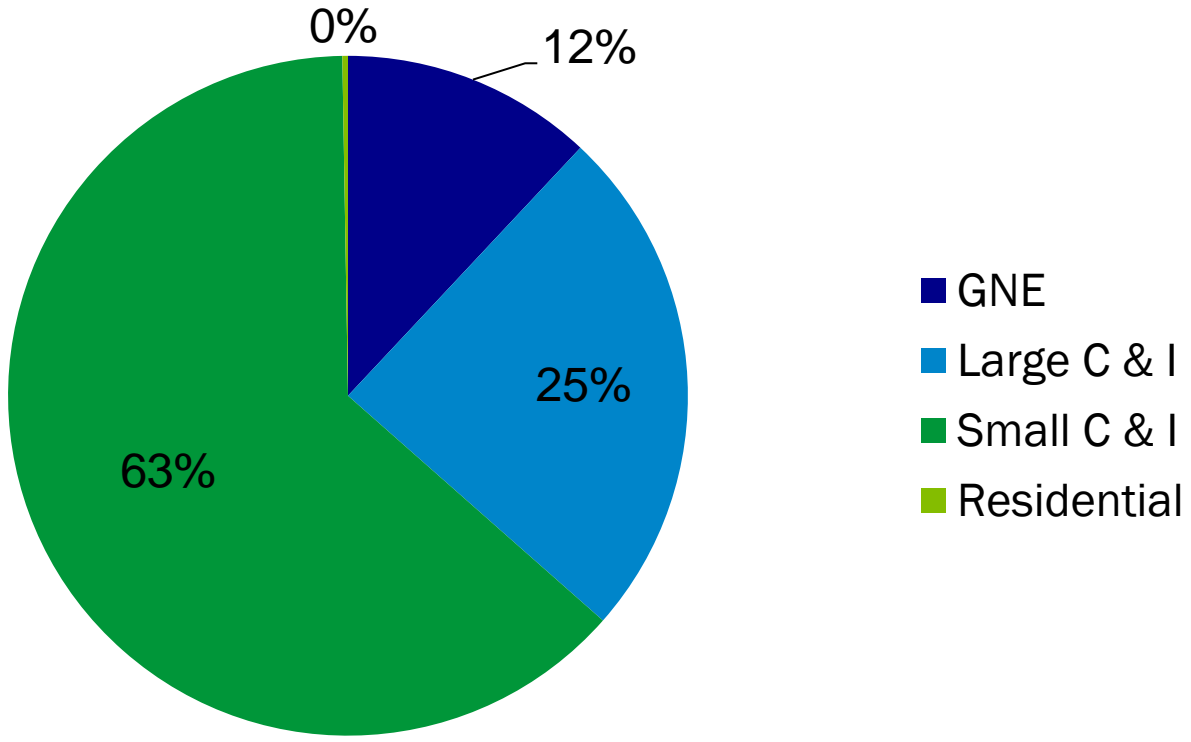
Non-Residential Programs

Energy Savings by Application for PY13



Non-Residential Programs

Energy Savings by Sector for PY13



Non-Residential: Efficient Equipment

PY13 reported savings by project type:

- Lighting
 - 456 projects
 - 63,753 MWh/yr.
 - 9.4 MW/yr.
- Equipment
 - 32 projects
 - 1,760 MWh/yr.
 - 0.2 MW/yr.
- (Includes prescriptive, direct discount and direct install)

PY13 Incentives
\$4,338,697

Non-Residential: Direct Discount



PY13 reported savings for Direct Discount:

- 23,770 MWh/yr.
- 2.9 MW/yr.

PY13 Incentives
\$2,859,294

- Roughly 36% of efficient equipment savings
 - Lighting reported savings 22,447 MWh/yr.
 - Refrigeration reported savings 1,323 MWh/yr.

Non-Residential: Small Business Direct Install

PY13 reported savings for Direct Install:

- 22 MWh/yr.
- 0.0 MW/yr.

PY13 Incentives
\$1,963

- 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: Midstream



PY13 reported savings for Midstream:

- 4,793 projects
- 17,329 MWh/yr.
- 4.4 MW/yr.
- 28 distributors, 96 locations

PY13 Incentives
\$1,003,043

PY14 Midstream expansion for:

- HVAC
- Food Service
- Agriculture

Non-Residential: Custom



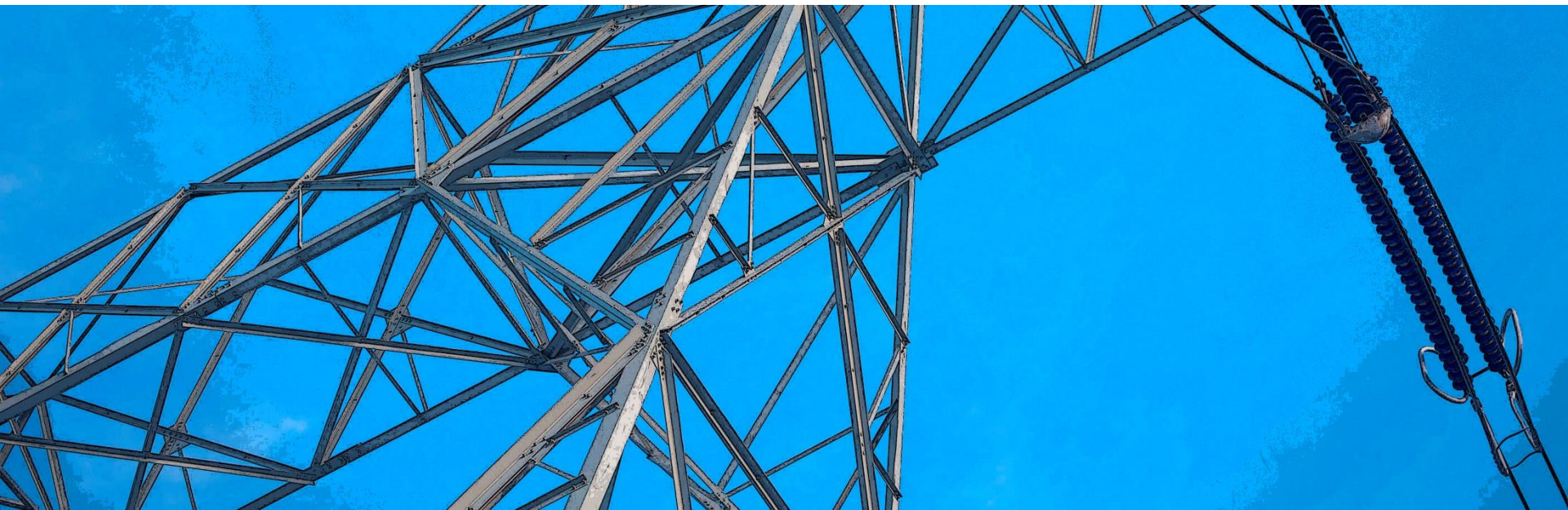
PY13 reported savings for Custom:

- 35 projects
- 40,315 MWh/yr.
- 6.4 MW/yr.

(Included 2 CHP projects)

PY13 Incentives
\$1,003,775

PJM Forward Capacity Market



PJM Forward Capacity Market Service

PJM Forward Capacity Market Service

- Issued an RFP to registered CSPs in Q1 of PY13
- Negotiated a contract that puts all risk and associated costs on the CSP indemnifying ratepayers from any risk
- Submitted first bid to CSP in mid-April for measurement and verification
- Bid 1.4 MWs
- Submitted the resource for the PJM Delivery Year 22/23 and we are analyzing the results

Contacts

- Chris Schoemaker
crschoemaker@pplweb.com; 484-634-3060
- Heather Bash (non-residential)
hmsmeltz@pplweb.com; 484-634-3218
- Mary Ann Kelly-Merenda (residential)
makelly-merenda@pplweb.com; 484-634-3034
- Sean Pressmann (low income & PJM FCM)
sdpressmann@pplweb.com; 484-634-3047

Questions? Comments?

Thank you for participating

