



2013 Q4 Year-End Results: Consultant Review & Trend Analysis

EEAC Consultants
February 25, 2014 (rev. draft)





Outline of Presentation

- Summary of Consultant Findings Based on Analysis
- Overall Results, Statewide and by PA, and Implications
 - Electric
 - Gas
 - Oil
- 2013 Program Performance is Analyzed in Two Ways:
 - Preliminary results compared to the Plan goals
 - Energy savings as a % of retail energy sales (consistent indicator across PAs)
- C&I Findings
- Residential/Low Income Findings

Note: Some PAs plan to make corrections to 2011 and 2012 data in the DPU proceedings on the Annual Reports. We did not make any such corrections here.



Summary of Consultant Findings

- Some programs and PAs have performed well in some areas... *however*, not all programs and PAs have performed well in all areas
- Residential and Low Income sectors exceeded the statewide goals – very good performance
- C&I sector fell far short of goal (79% of electric annual goal and 77% of gas annual goal) for the third straight year, which is a critical concern
- Exceeding the Residential and Low Income goals is not going to make up for underperformance on electric C&I
- Large variations in performance across the PAs indicate that higher and more consistent performance statewide is possible if all PAs implement the best practices
- Better data will result in better performance



Critical Problems Remain

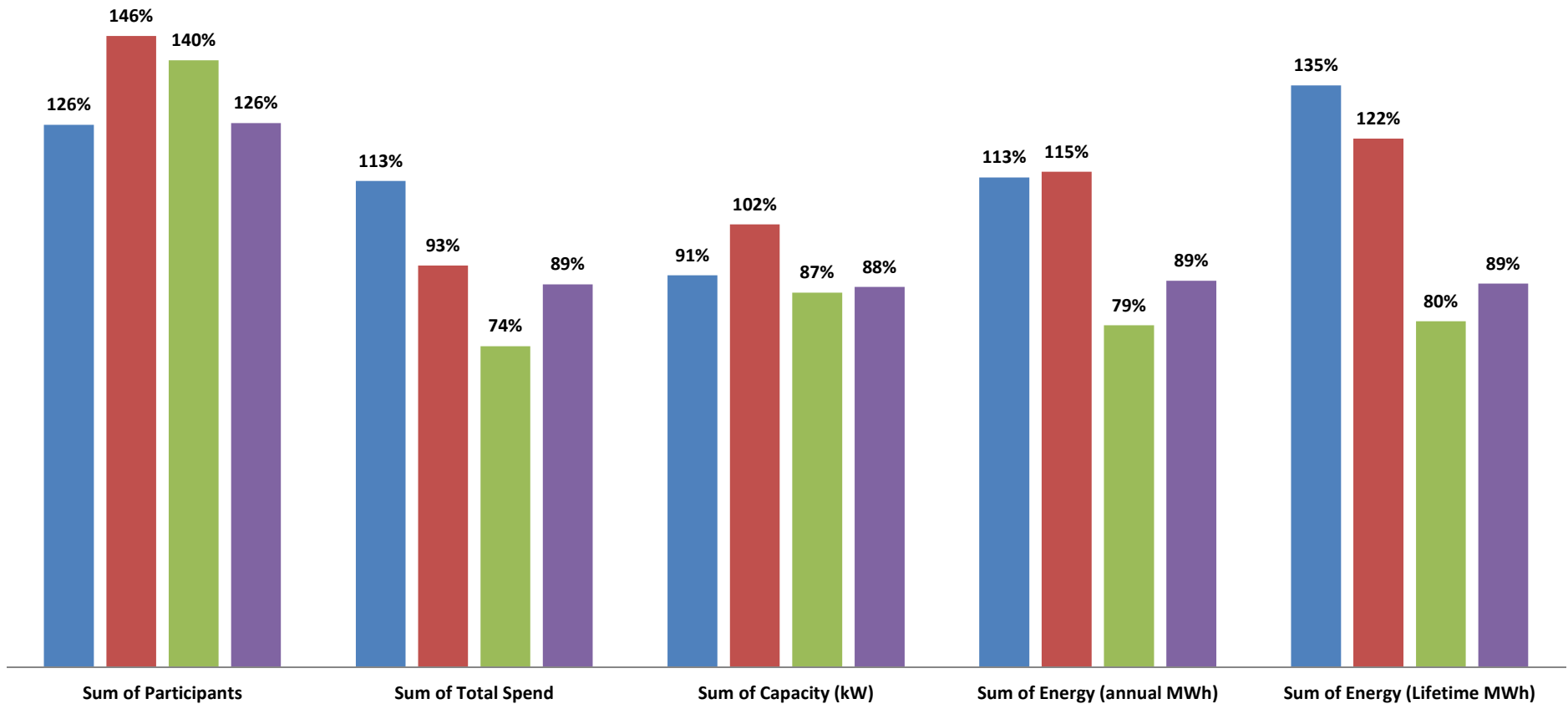
- Missing the C&I electric and gas savings goals significantly for three years in a row
- Some individual PA goals are lower than the statewide goals
- Not achieving better and more consistent PA performance overall (much variability, some lagging in performance across the PAs)
 - Not using the best practices of some PAs to achieve best performance consistently across all PAs in all programs
- The PAs not having or providing adequate data to analyze the EE programs in greater depth (measure- and project-level data) and for the consultants to assess where improvements are possible
- Need for continued emphasis on and increased achievement of deeper savings – the high benefit/cost ratios and customer concerns continue to indicate that the programs are not capturing all cost-effective potential



Statewide Results – 2013 Q4 Year-End Electric

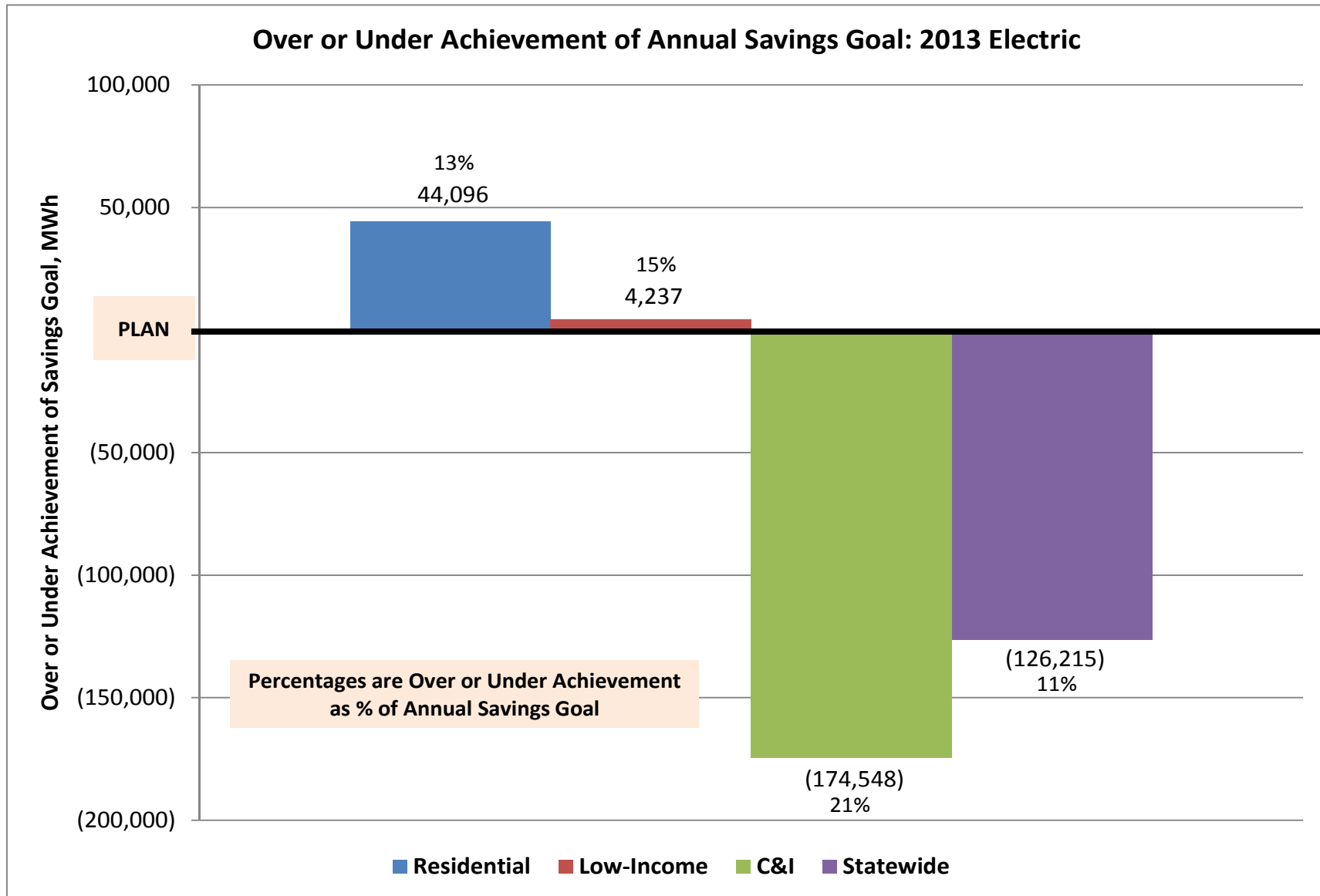
2013 Q4 Year-End Preliminary Actuals as a Percent of Plan Goal

■ Residential ■ Low-Income ■ Commercial & Industrial ■ Total



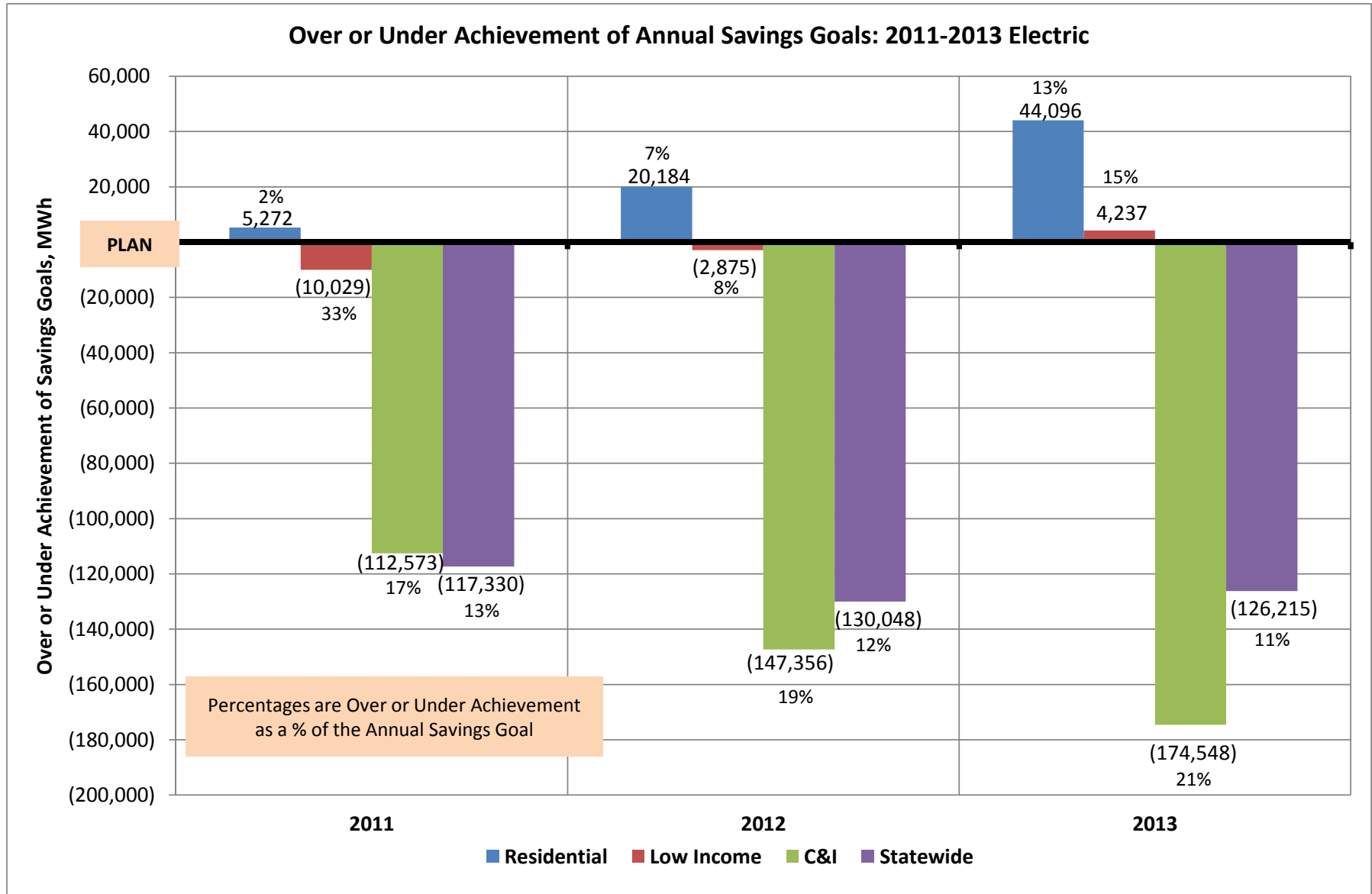


2013 Annual Savings by Sector: Missed Annual Savings in C&I





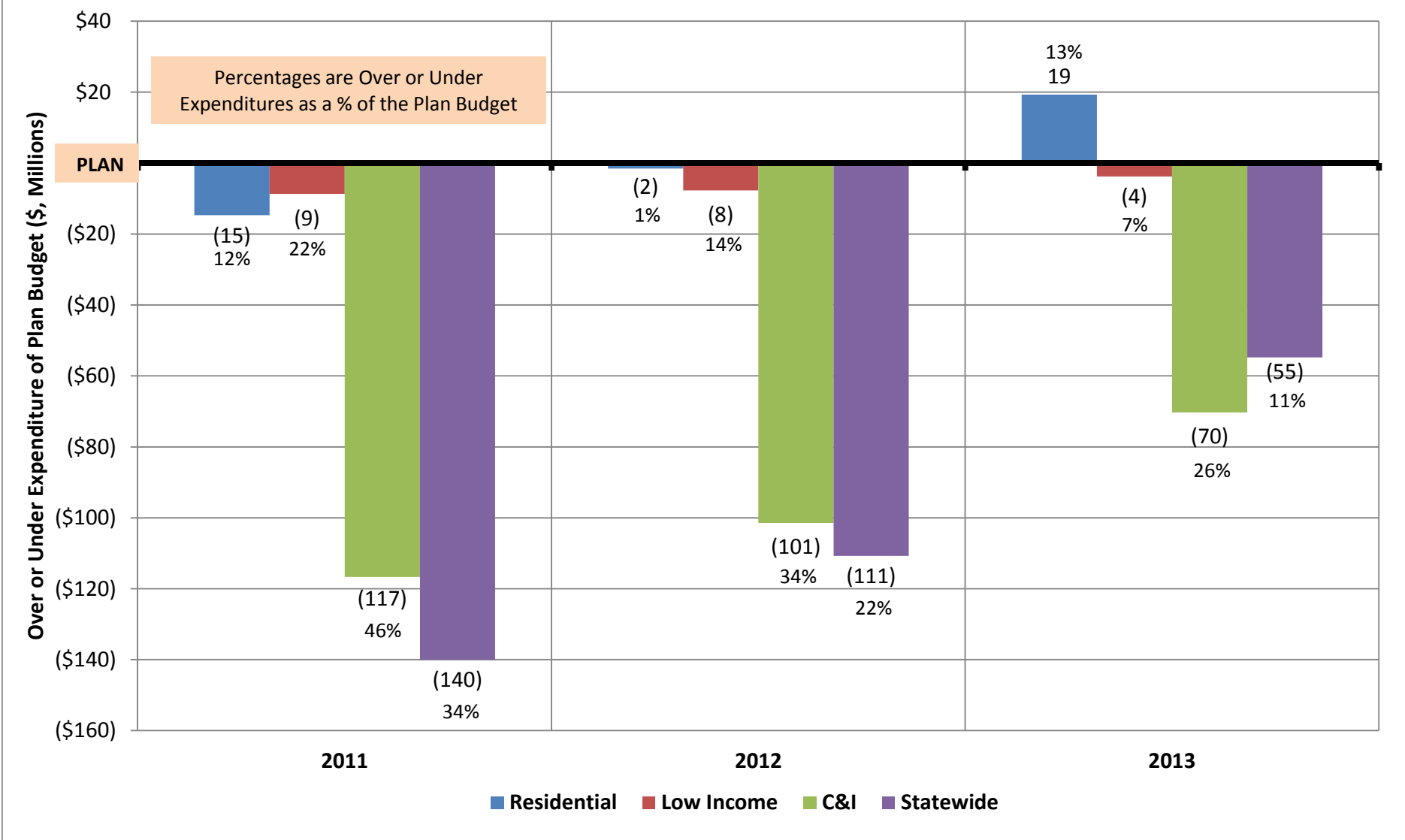
Trends: Some Sector Improvements But Still Missed Savings in C&I





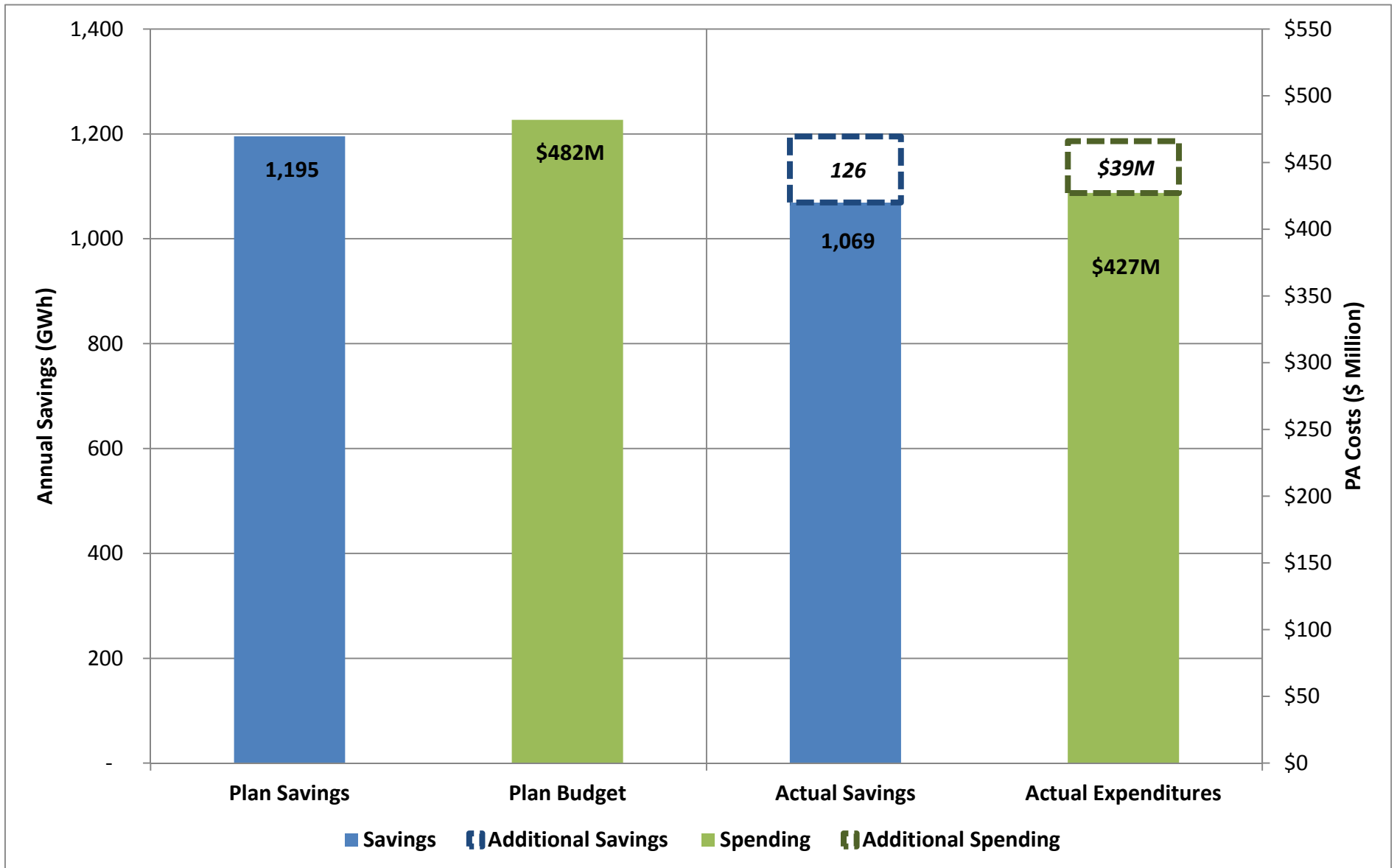
2013 Expenditures vs Budget; Continued Trend in the C&I Sector

Over or Under Expenditure of Plan Budget: 2011-2013 Electric





Spending Only a Portion of the Underinvestment Would Achieve Goals



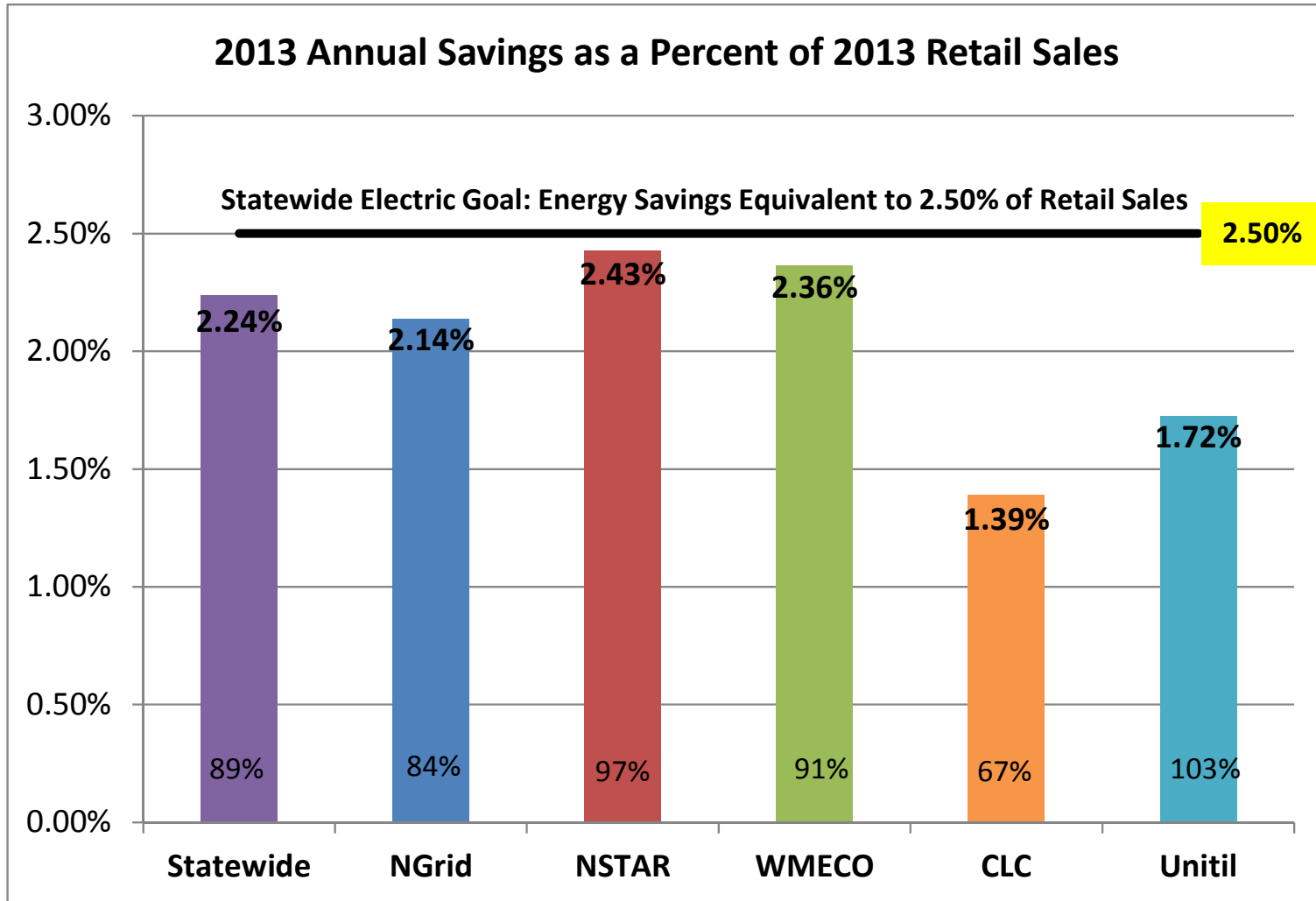


Summary: Electric Findings

- The C&I sector fell far short of its electric goal (79% of annual savings goal) for the third straight year; a critical problem considering the large C&I contribution to goals
- Exceeding the Res. and Low Income goals is very good, but it is not going to make up for shortfalls in electric C&I
- Underinvestment of the 2013 C&I budget (only 74% of budget spent) contributed to the shortfall in C&I savings goals – a continued trend (but with a more accurate budget in 2013)
- About 92% of the C&I savings shortfall was in the C&I Retrofit initiative – a huge program with a total 2013 budget of \$143 million (30% of the total EE budget)
- The PAs and consultants cannot effectively determine the best practices across PAs and identify solutions without detailed and comparable measure- and project-level data



2013 Electric Annual Savings as a % of Retail Sales



% values at the bottom of the columns show savings as % of individual PA goal





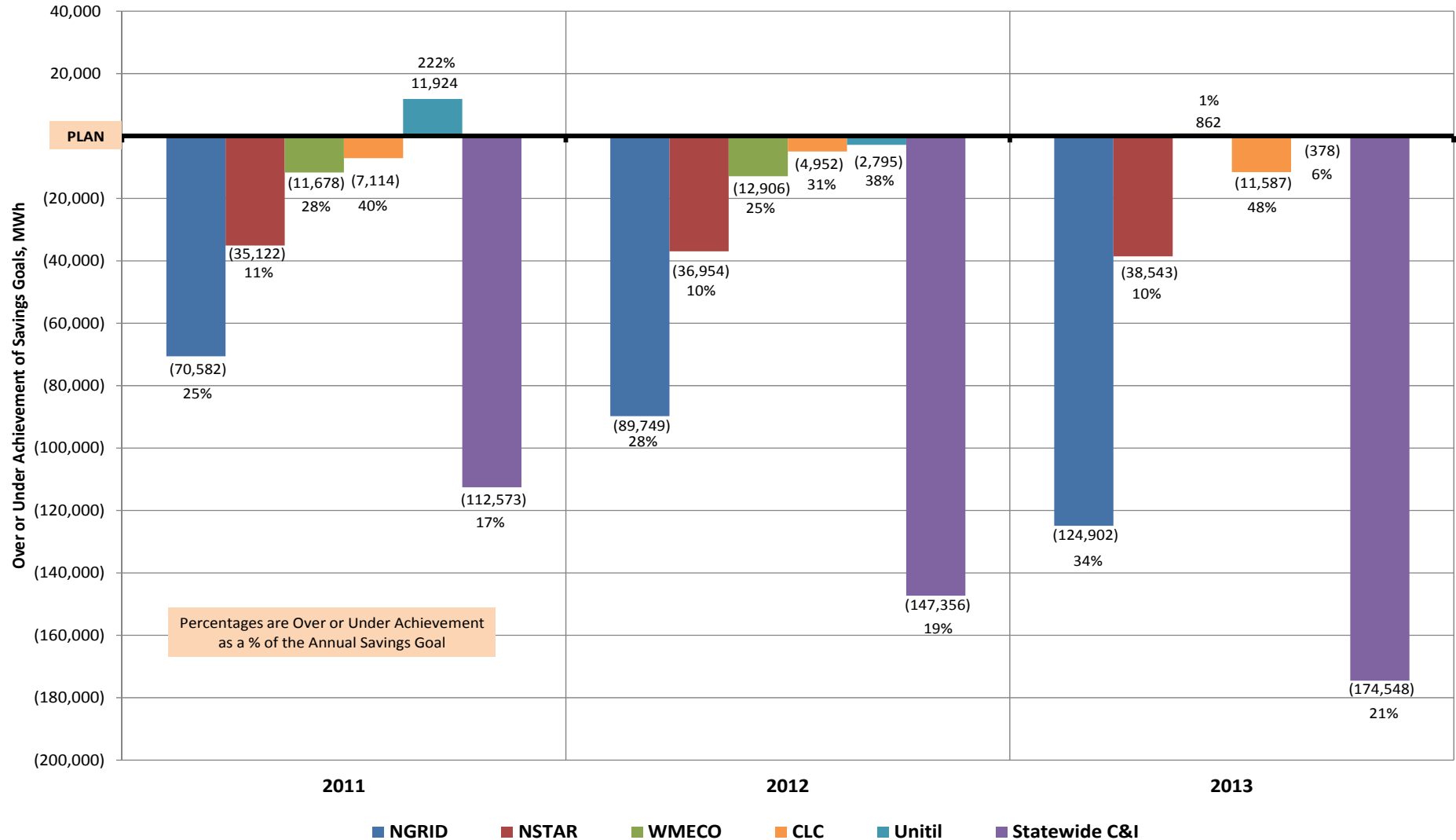
2013 Savings as % of Sales: Variations Across PAs

Row Labels	National Grid	NU (NSTAR)	NU (WMECo)	UNITIL	CLC	Grand Total
Electric						
Goal	2.53%	2.51%	2.60%	1.68%	2.08%	2.50%
Residential	2.19%	1.96%	2.58%	0.85%	1.55%	2.09%
Low-Income	1.20%	2.52%	1.48%	0.37%	2.41%	1.51%
Commercial & Industrial	2.87%	2.72%	2.75%	2.36%	2.69%	2.78%
Q4	2.14%	2.43%	2.36%	1.72%	1.39%	2.24%
Residential	2.65%	2.31%	1.97%	1.29%	1.12%	2.37%
Low-Income	1.20%	3.49%	0.81%	0.42%	6.33%	1.74%
Commercial & Industrial	1.89%	2.44%	2.79%	2.22%	1.40%	2.20%
% of Goal	84%	97%	91%	103%	67%	89%
Residential	121%	118%	76%	151%	72%	113%
Low-Income	100%	138%	54%	115%	262%	115%
Commercial & Industrial	66%	90%	101%	94%	52%	79%



Achievement of Electric C&I Annual Savings Goals by PA

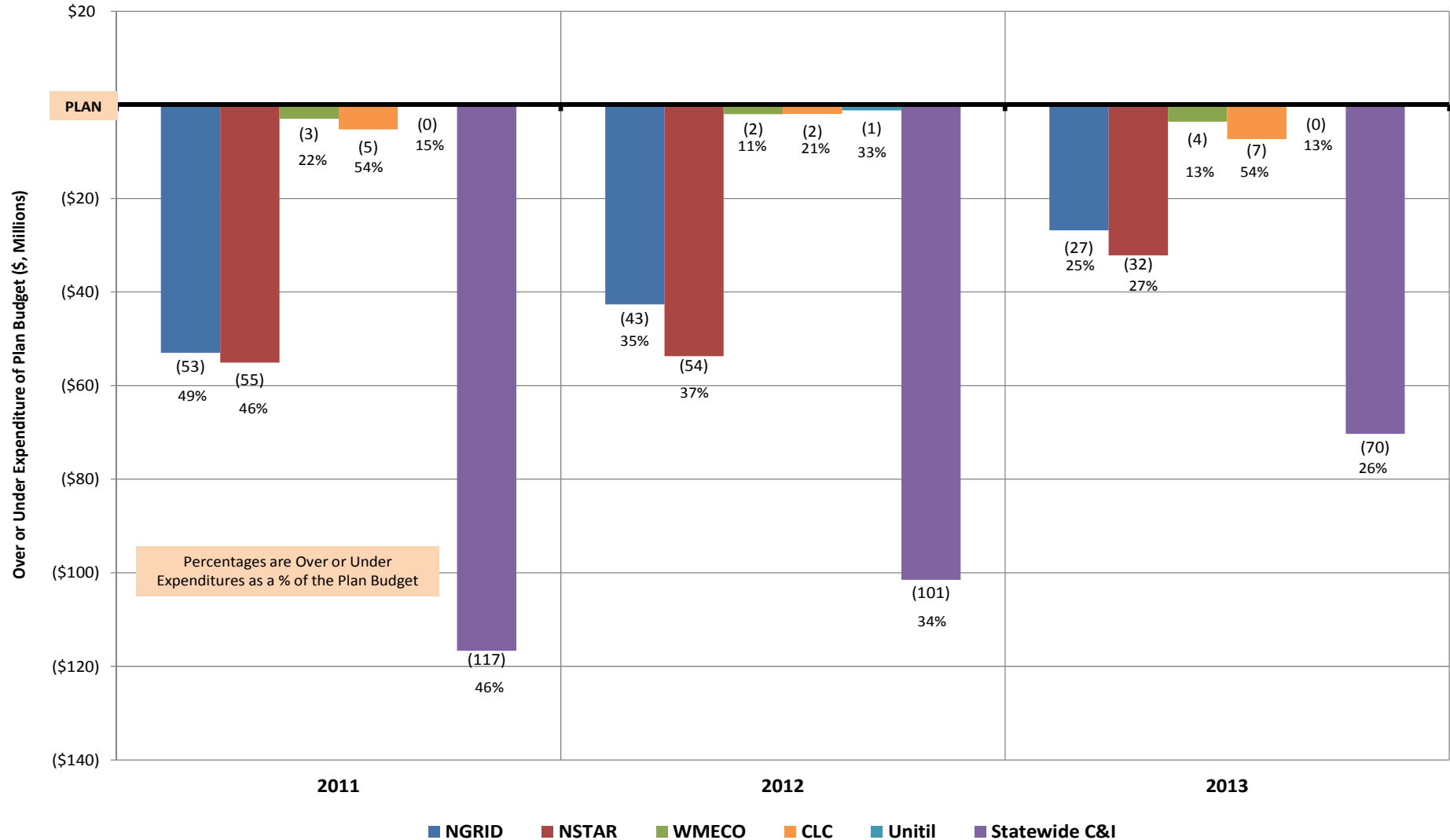
Over or Under Achievement of C&I Annual Savings Goals: 2011-2013 Electric by PA





Underinvestment of Electric C&I Budgets by Individual PA

Over or Under Expenditure of C&I Plan Budget: 2011-2013 Electric by PA



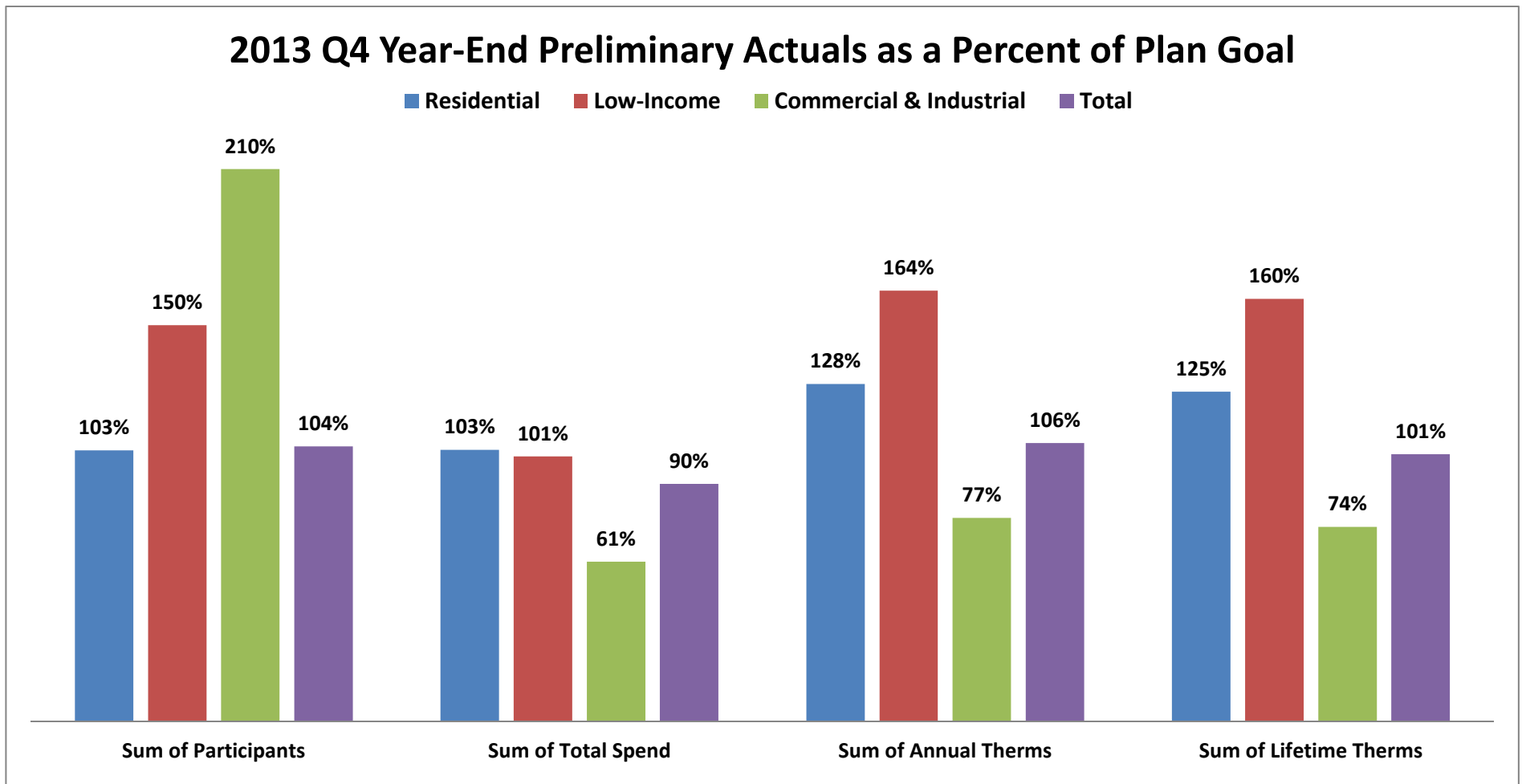


Individual PA Performance – 2013 Electric Savings

- There are very wide variations in electric performance across the PAs, in actual savings as a % of goal, and in savings as a % of retail sales
- High C&I savings are achievable; WMECo achieved 2.79% of C&I retail sales and NSTAR achieved 2.44%
- NGrid achieved 66% of its C&I electric annual goal and C&I savings of 1.89% of retail sales; NGrid accounted for 72% of the C&I savings shortfall
- Large variations in performance across the PAs indicate that higher and more consistent C&I performance is possible if all PAs implement the best practices
- Again, it is not possible to determine the specific problems and solutions without measure- and project-level data

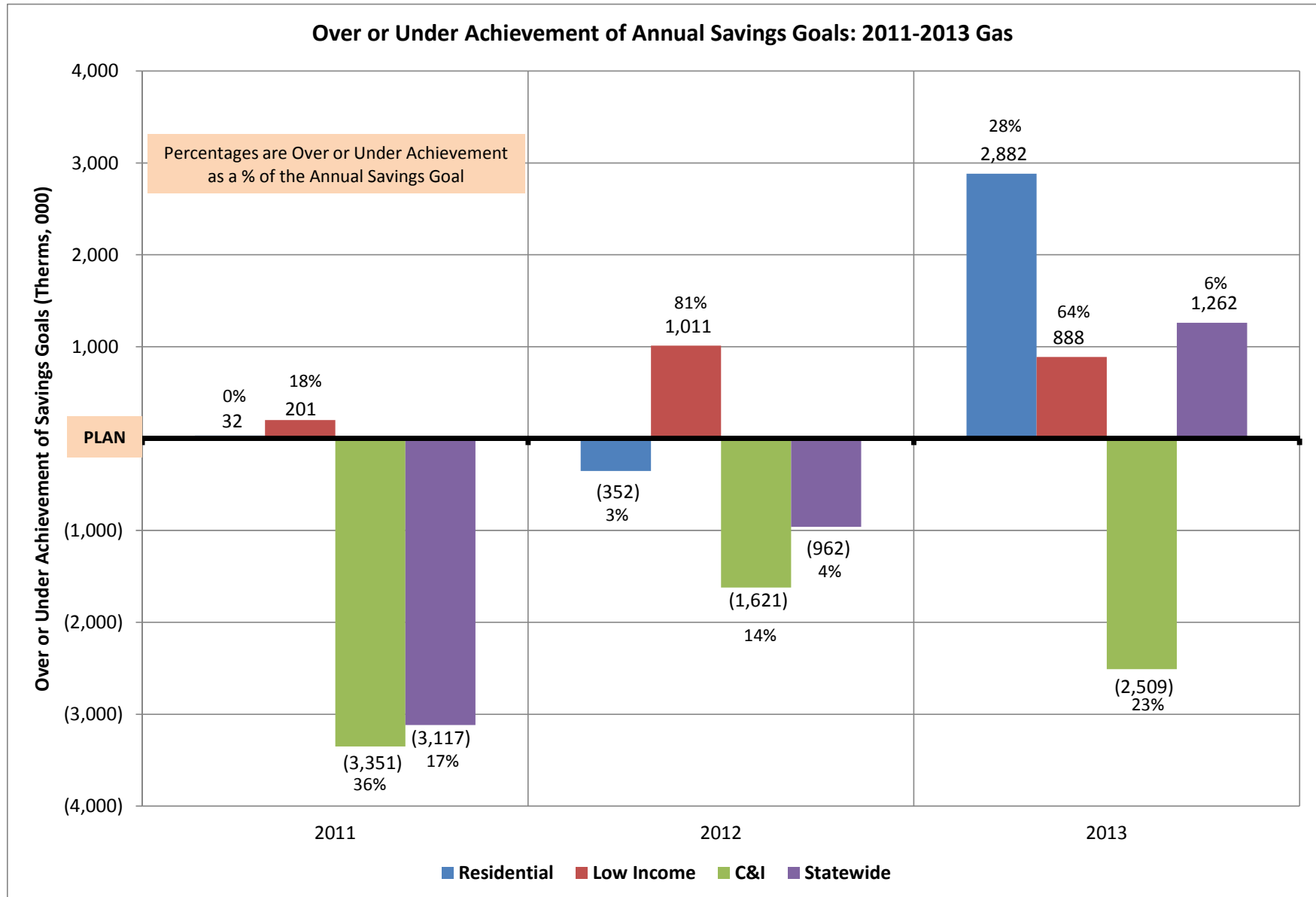


Statewide Results – 2013 Q4 Year-End Gas





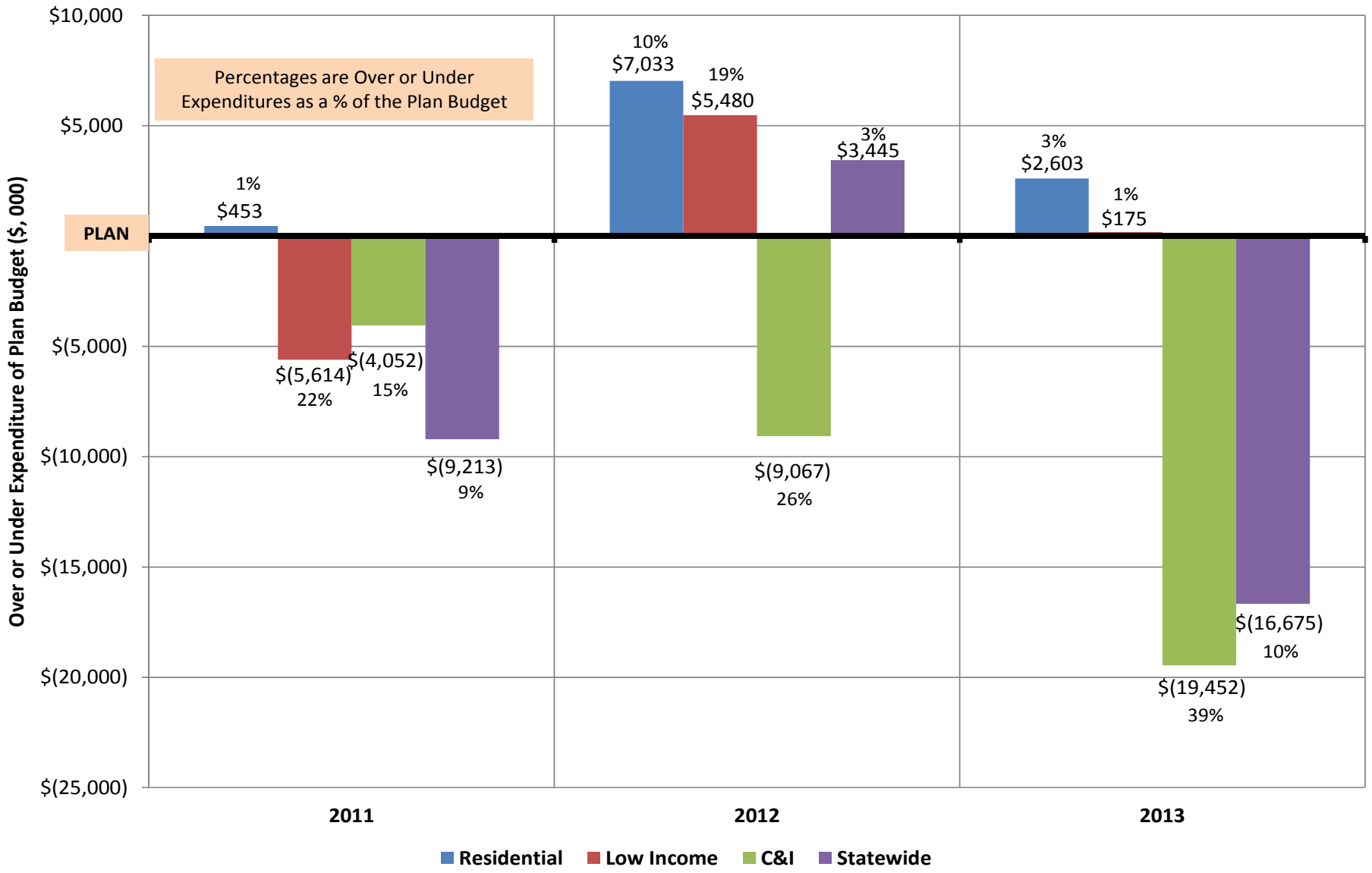
2013 Gas Annual Savings vs Plan; Trends Over 2011-2013



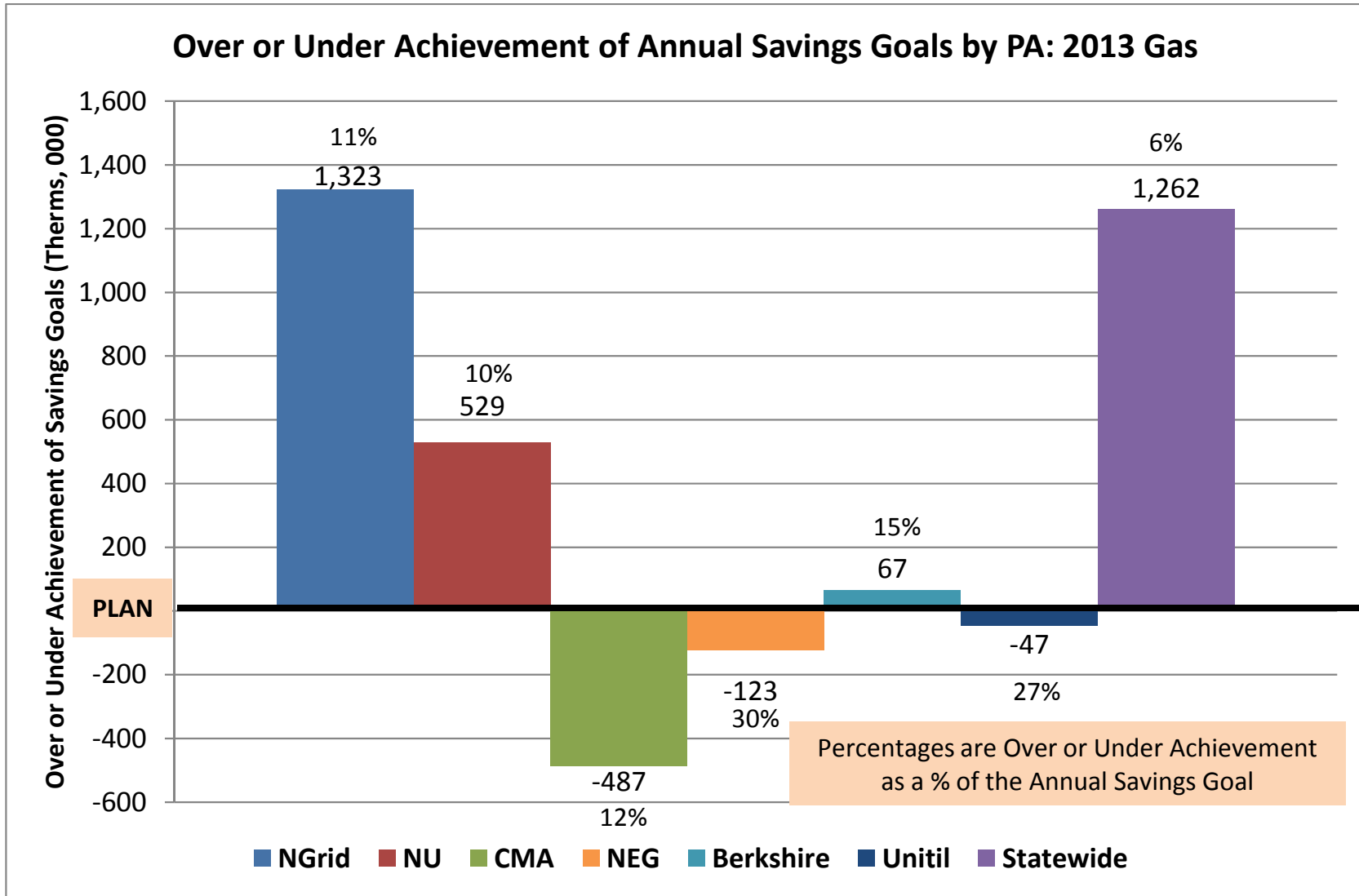


Gas Expenditures vs. Budget

Over or Under Expenditure of Plan Budget: 2011-2013 Gas

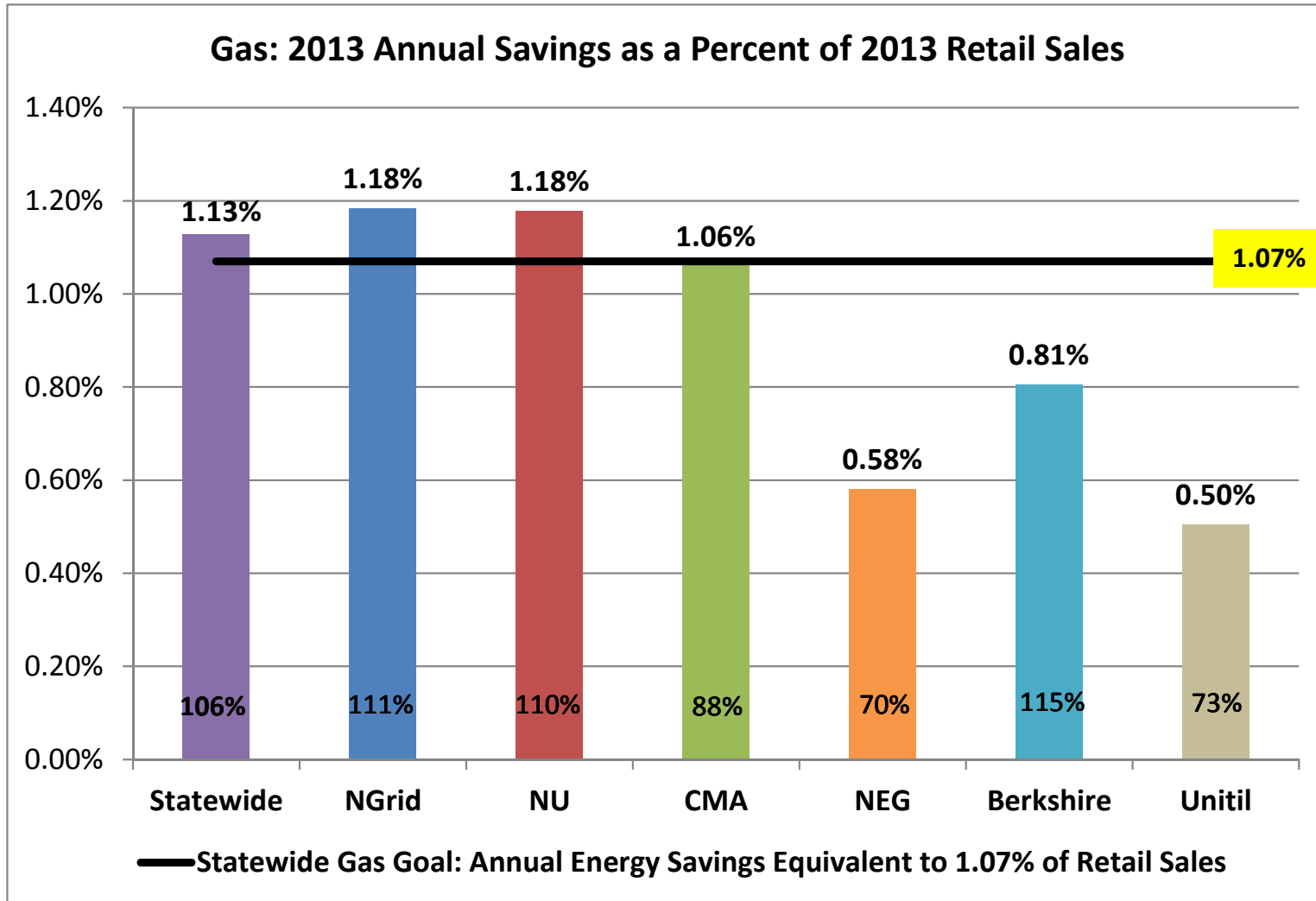


Achievement of Gas Annual Savings Goals by PA





2013 Gas Annual Savings as a % of Retail Sales



% values at the bottom of the columns show savings as % of individual PA goal



2013 Savings as % of Sales: Variations Across Gas PAs

Row Labels	National Grid	NU	CMA	BERKSHIRE	UNITIL	NEG	Grand Total
Gas							
Goal	1.07%	1.07%	1.21%	0.70%	0.69%	0.83%	1.07%
Residential	1.07%	0.93%	0.85%	0.89%	0.39%	0.73%	0.98%
Low-Income	2.01%	1.29%	0.76%	1.00%	0.71%	0.33%	1.28%
Commercial & Industrial	1.00%	1.15%	2.12%	0.56%	0.84%	1.46%	1.14%
Q4	1.18%	1.18%	1.06%	0.81%	0.50%	0.58%	1.13%
Residential	1.57%	1.19%	0.61%	0.94%	0.71%	0.38%	1.26%
Low-Income	3.78%	1.68%	1.07%	1.51%	0.82%	0.36%	2.09%
Commercial & Industrial	0.57%	1.13%	2.05%	0.65%	0.35%	1.23%	0.88%
% of Goal	111%	110%	88%	115%	73%	70%	106%
Residential	147%	128%	71%	105%	183%	53%	128%
Low-Income	188%	130%	141%	152%	115%	108%	164%
Commercial & Industrial	57%	98%	96%	117%	41%	84%	77%

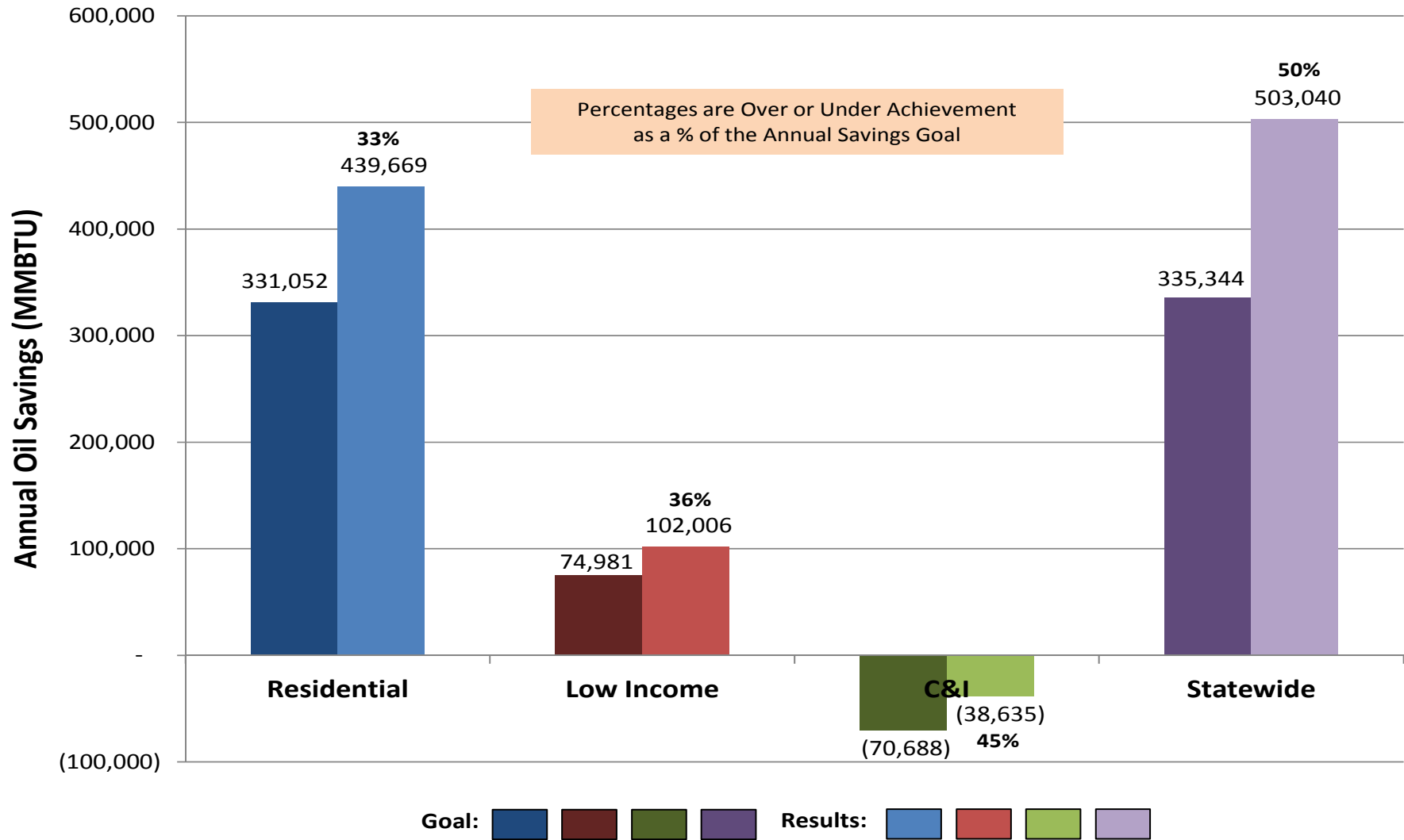
Summary: Gas Findings

- Residential and Low Income sectors exceeded the statewide gas goals – with improved gas performance over the last three years
- NGrid and NU led the way at 111% and 110% of goal, with annual savings at 1.18% of gas retail energy sales
- However, the C&I sector fell far short of its gas goal (77% of annual savings) for the third straight year
- Continued underinvestment of the gas C&I budgets
- Wide variations in performance across the PAs
- And wide variations within a PA (e.g., NGrid achieved gas savings of 1.18% of sales overall, but 0.57% in C&I)
- Better data will result in better performance



2013 Statewide Results – Oil

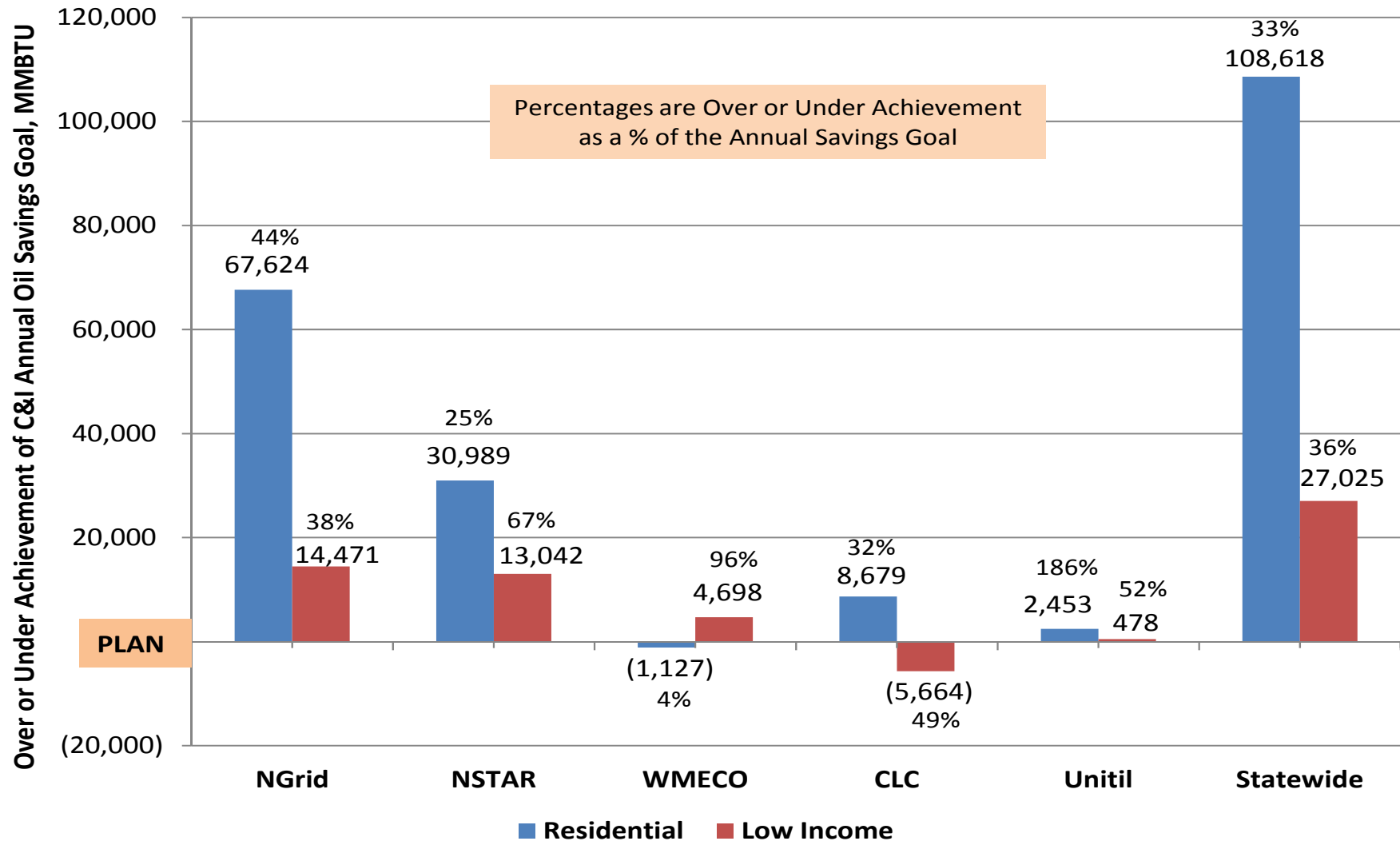
Over or Under Achievement of Annual Savings Goal: 2013 Oil





2013 Oil Savings by PA

Over or Under Achievement of Annual Savings Goals by PA
in the Residential & Low Income Sectors: 2013 Oil



Summary: Oil Findings

- More detailed look at oil (compared to the usual quarterly reports) in response to requests from the Council
- Programs achieved 150% of the oil annual savings goal, a very positive result
- Most oil savings are in the Residential and Low Income sectors
- Almost all PAs exceeded their Residential and Low Income oil savings goals
- High performance in 2013 suggests and supports continued ramp up of oil savings goals
- Also very wide variations in oil savings performance across the PAs, which could be informed with better data

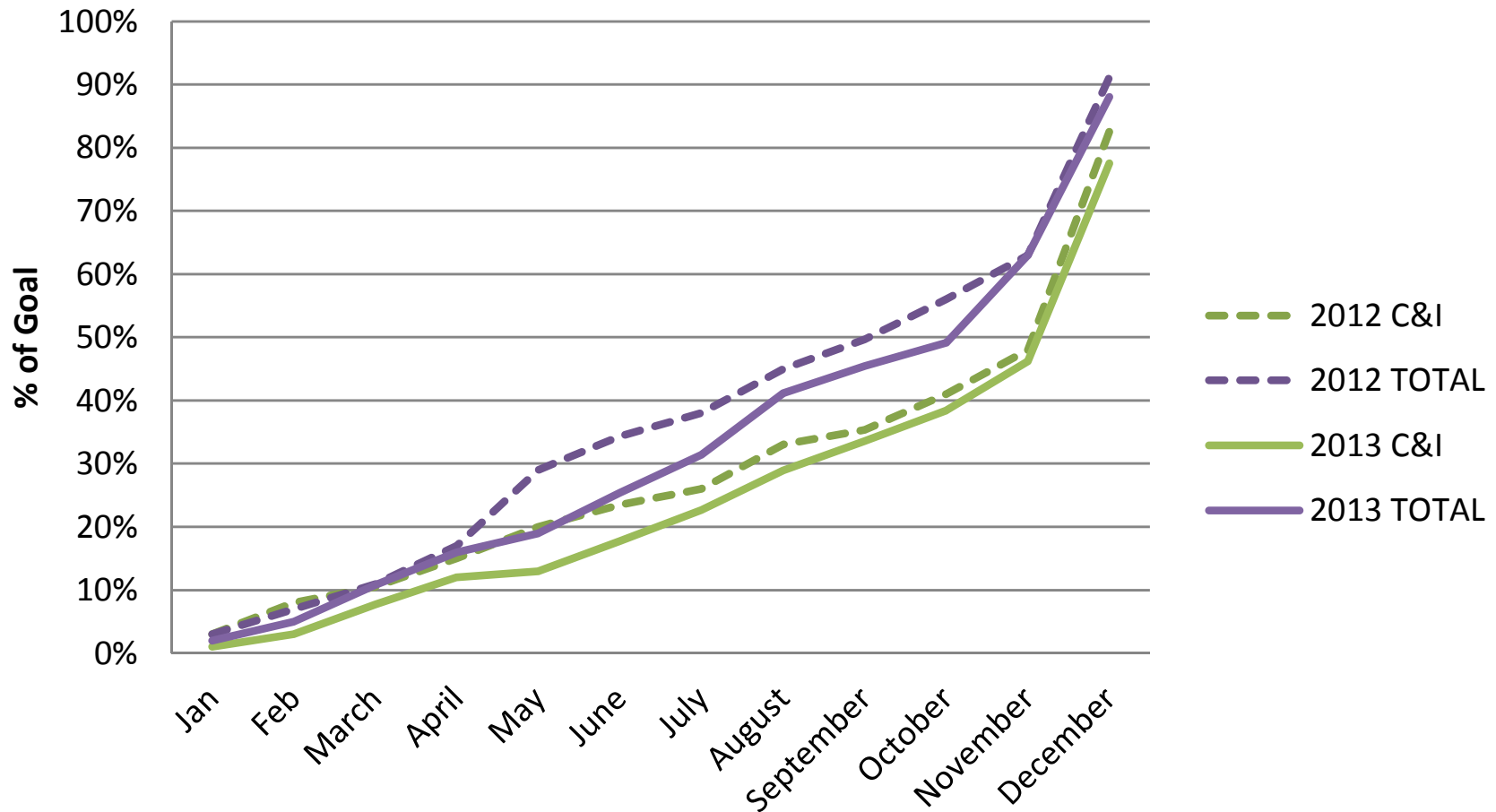


Improving Statewide C&I Performance Requires Better Data

- Huge variation in C&I electric and gas performance
- Why? What did the PA that achieved 117% of the gas C&I goal do differently from the PA that achieved 41%?
- Requires detailed, comparable data on the projects and measures that each PA did
- Statewide database envisioned to provide these data but PAs have raised concerns about statewide database and deeper data on measures and projects
- How can we get these data and start using the data?
- This issue is of fundamental importance to improve the statewide performance of the C&I programs

Concerted Efforts Needed to Reduce the C&I “Hockey Stick”

Cumulative Electric Savings -- 2013 vs 2012





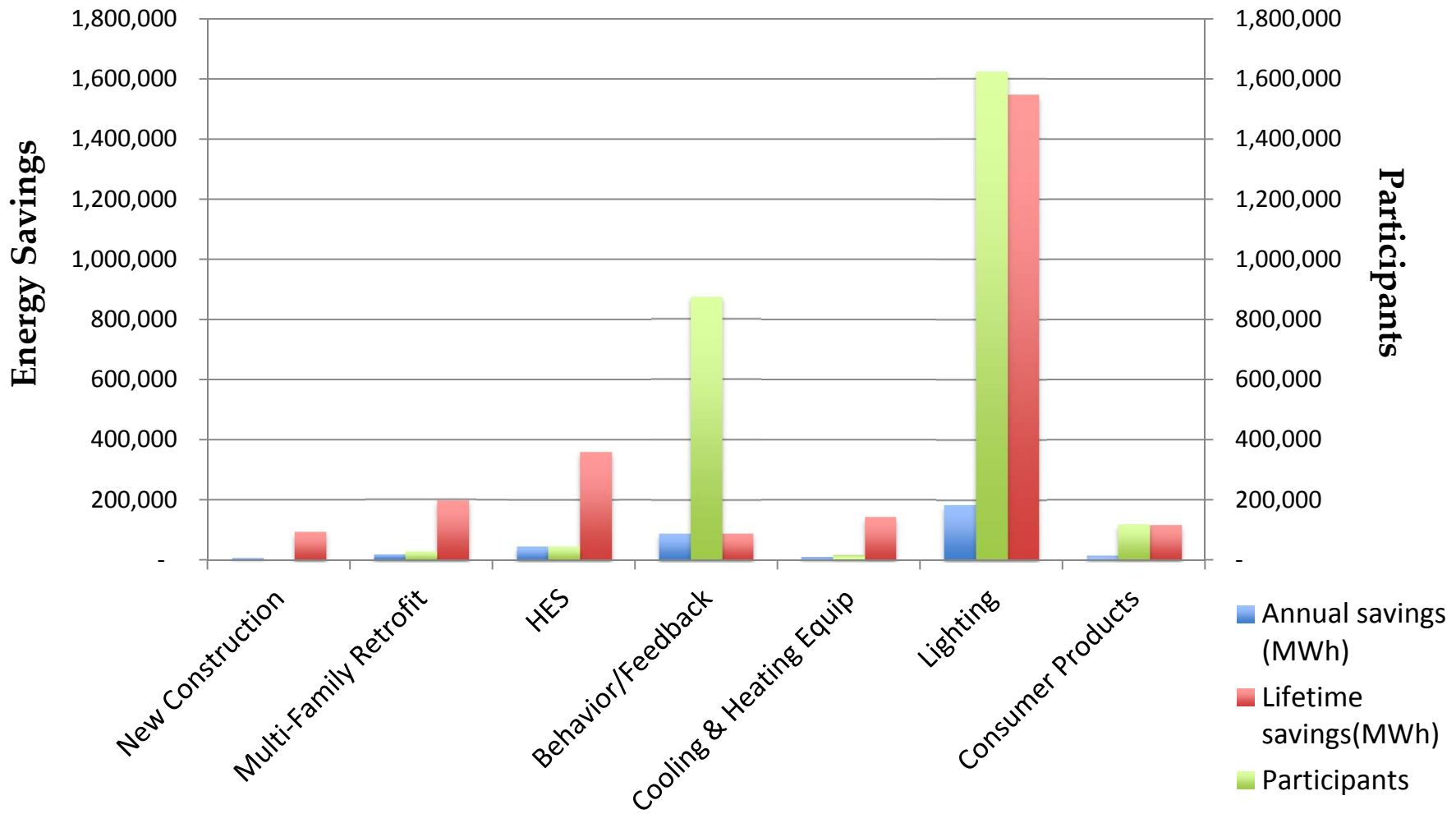
Residential and Low Income Highlights

- Excellent statewide results
 - Statewide savings results exceeded goals for both sectors and for both the Res Whole House and Consumer Products Programs, achieving as much as 164% of goal
 - Total spend ranged from 93% (LI electric) to 113% (Res electric)
- Variations in goal achievement between PAs persist
- Half of the PAs expect to achieve below the Threshold level for the residential deeper savings performance metric
 - Most PAs expect to achieve the Exemplary level for the other residential and two low income performance incentive metrics
- Need for continued focus on data collection and analysis, and on best practice information exchange



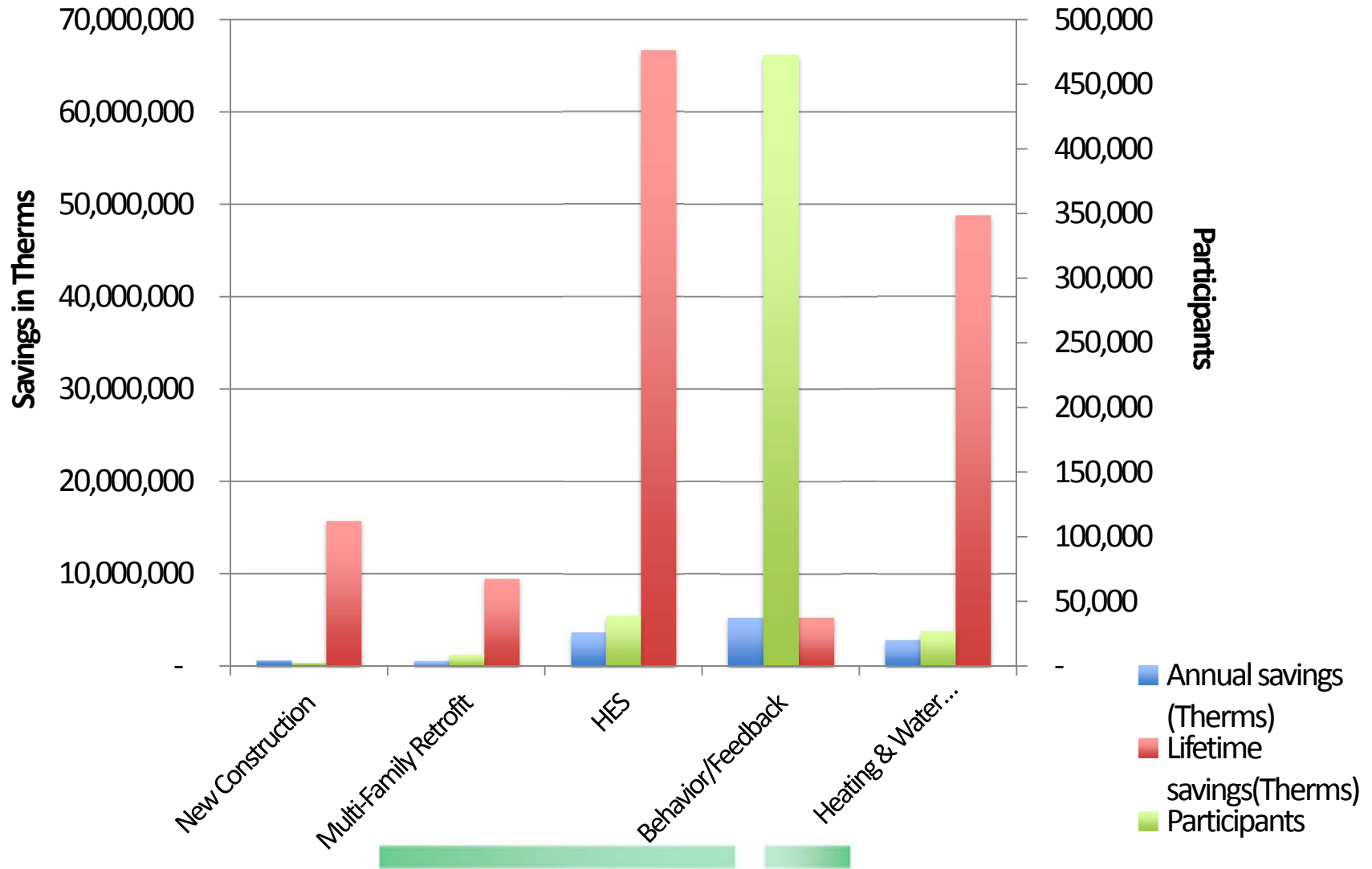


Residential Electric Savings and Participants by Initiative





Residential Gas Savings and Participants by Initiative

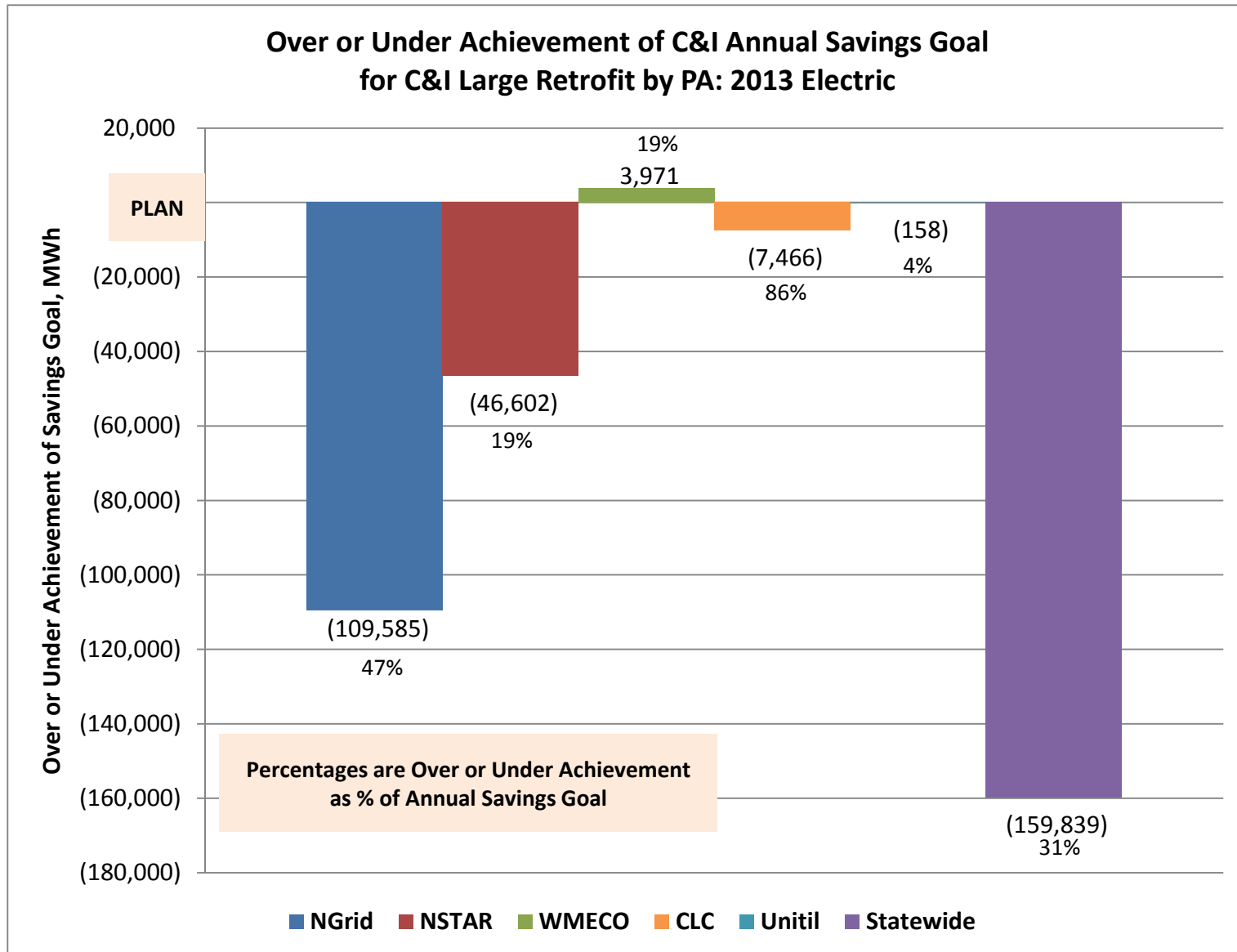


Additional Slides for Reference



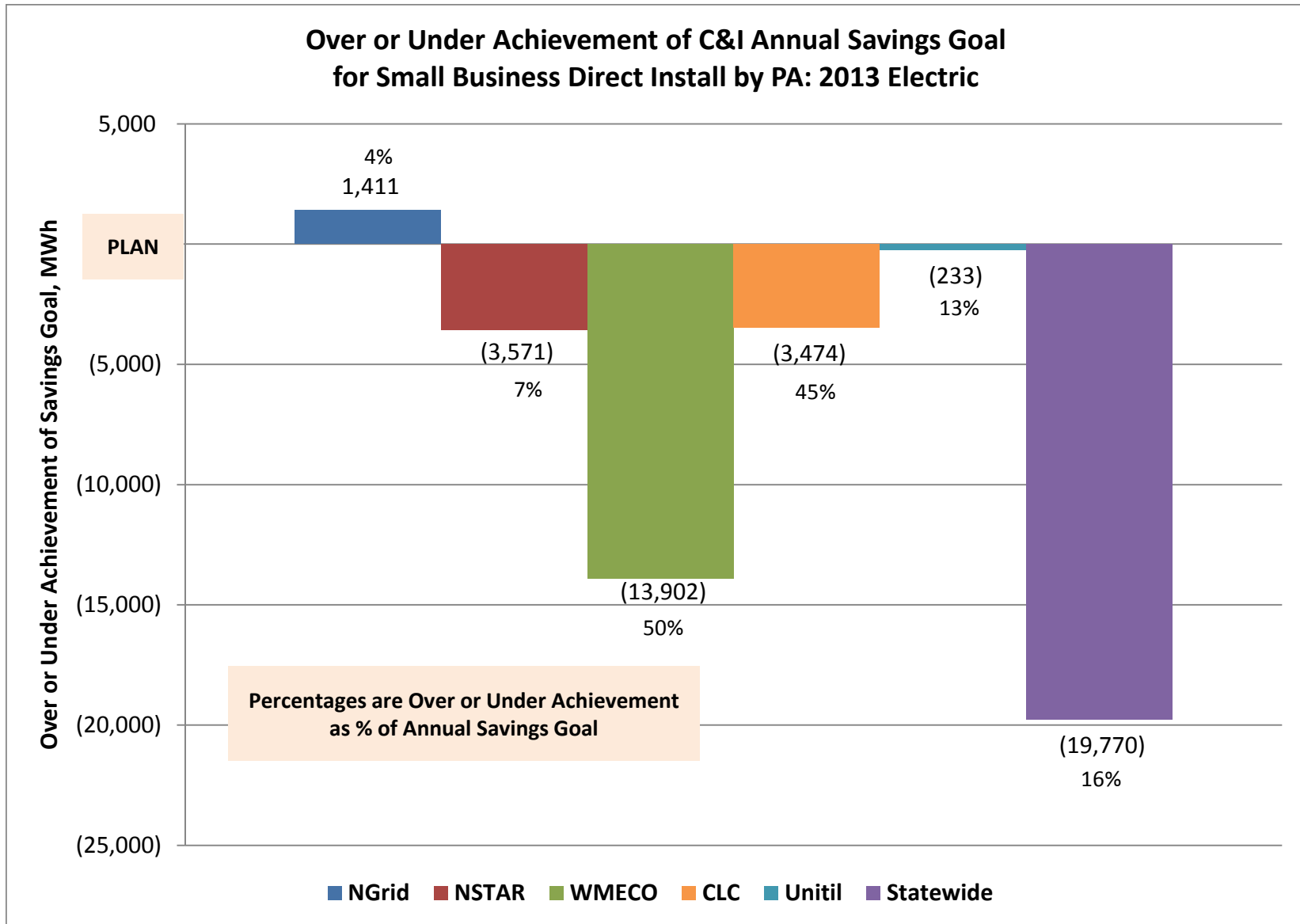


Achievement of 2013 C&I Retrofit Annual Savings Goals by PA



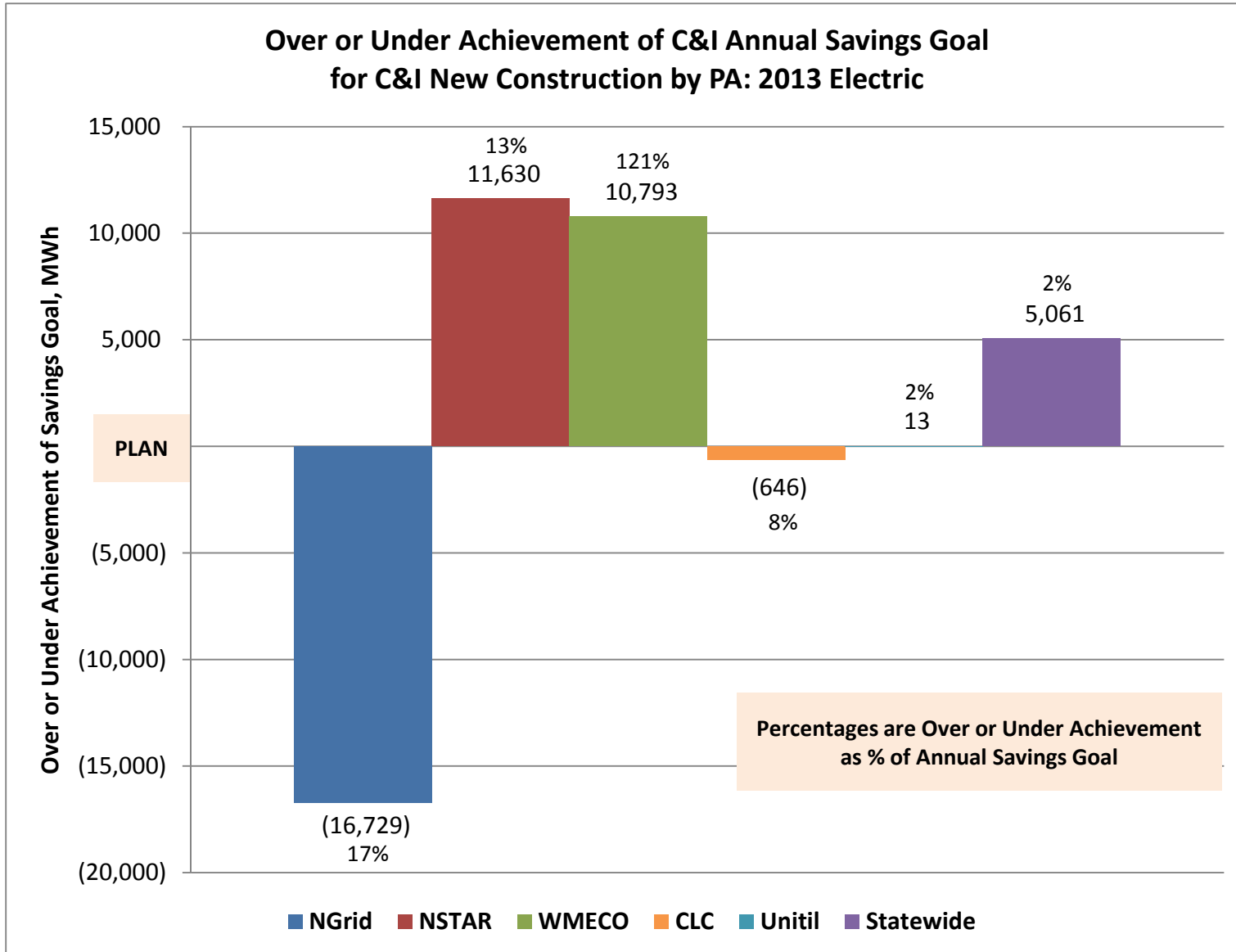


Achievement of 2013 C&I Direct Install Savings Goals by PA

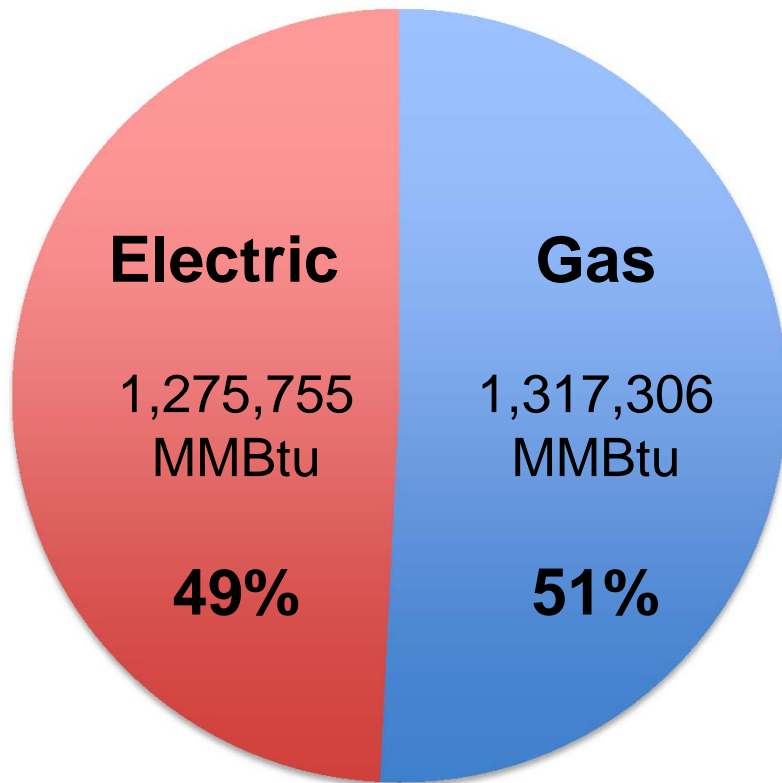




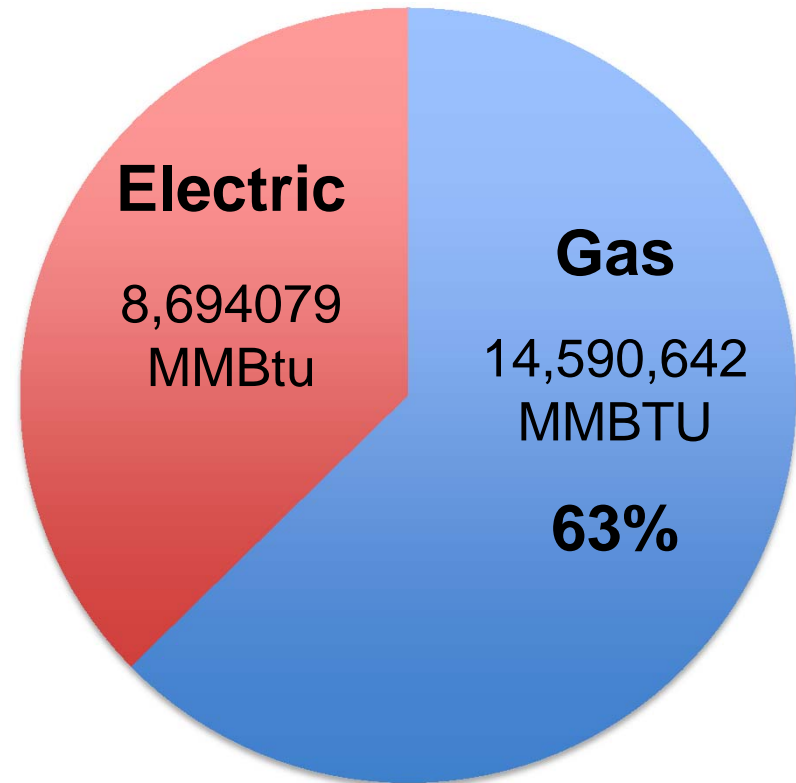
Achievement of 2013 C&I New Construction Savings Goals by PA



Q4 Residential Overview



Annual savings



Lifetime savings





Res YTD as Percentage to Goal

Annual Savings

