



2014 Plan-Year Report Performance

Presentation to the EEAC by the PAs

June 29, 2015





Statewide Wrap-Up

2014 Plan-Year

- Best year yet for annual and lifetime savings and benefits
- Evaluated results for savings and benefits higher than preliminary data reported in Q4

2013-2015 Three-Year Goals

- Gas – on track to exceed 2013-2015 portfolio goals
- Electric – strong commitment to meet 2013-2015 portfolio goals

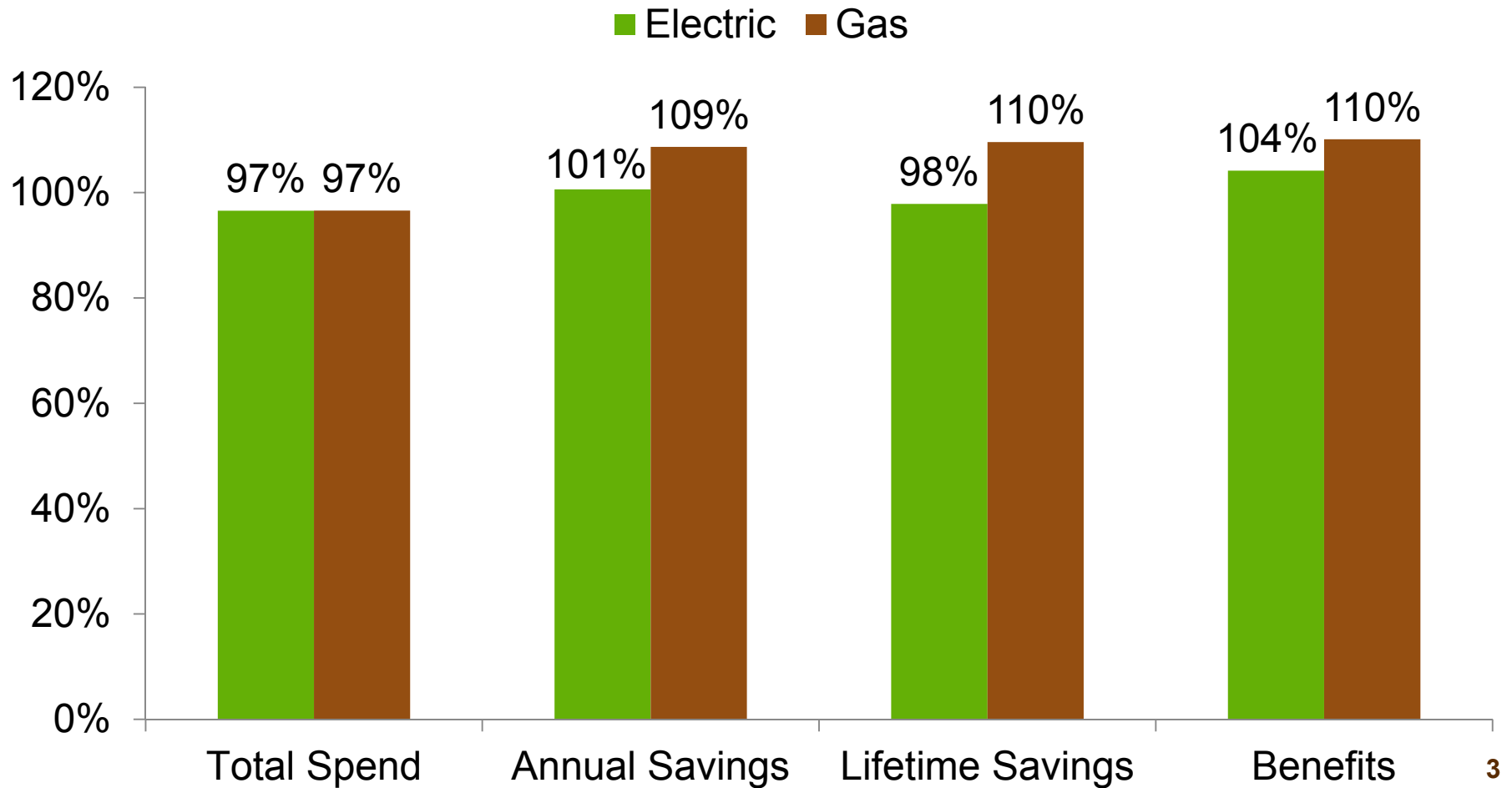
2014 Unique Elements

- Large C&I Project
- Residential lighting was up, C&I lighting was down



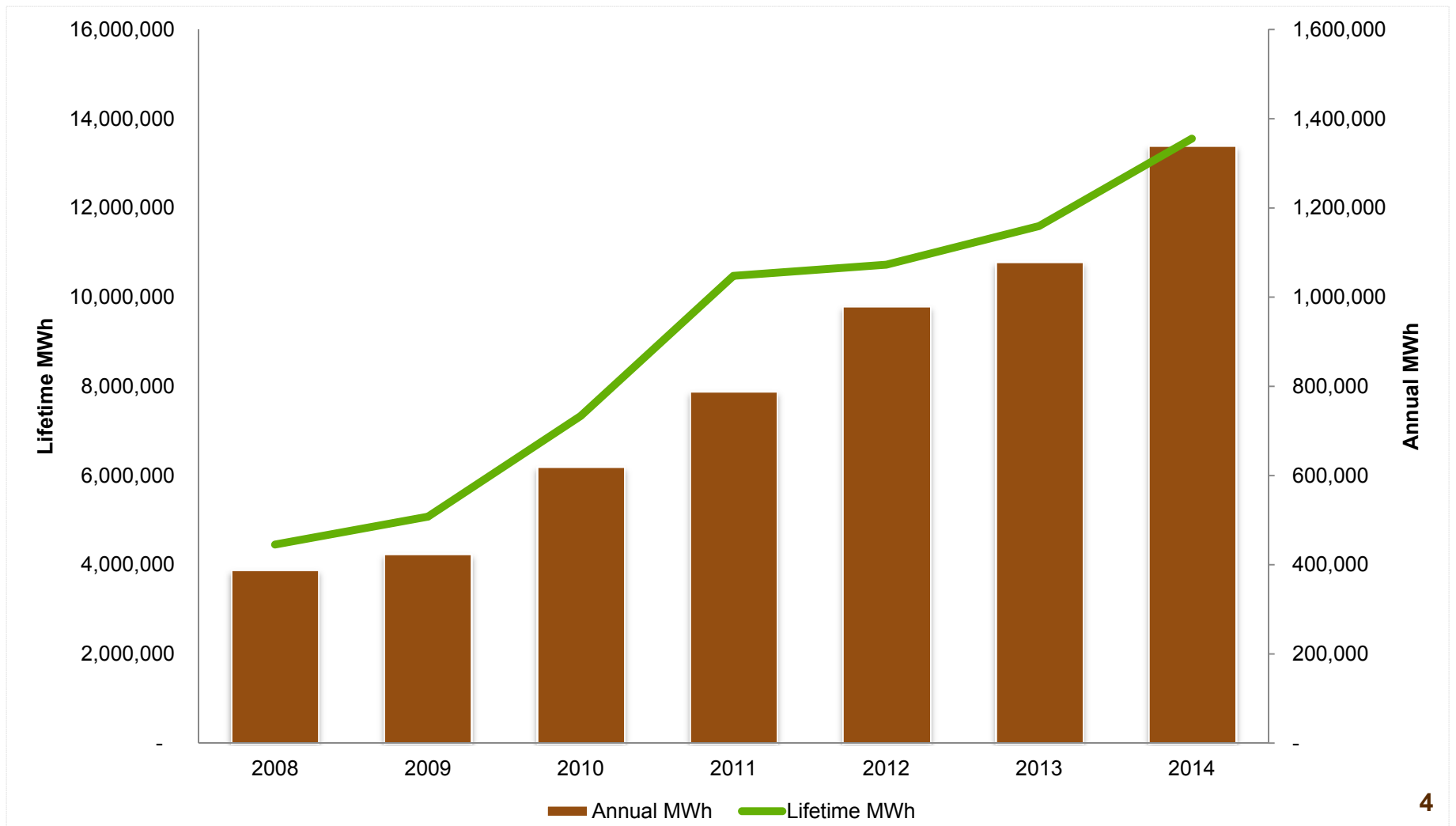
Three-Year Statewide Progress to Goals: Comparing Actuals* to Plan

* Actuals = 2013 Evaluated + 2014 Evaluated + 2015 Planned



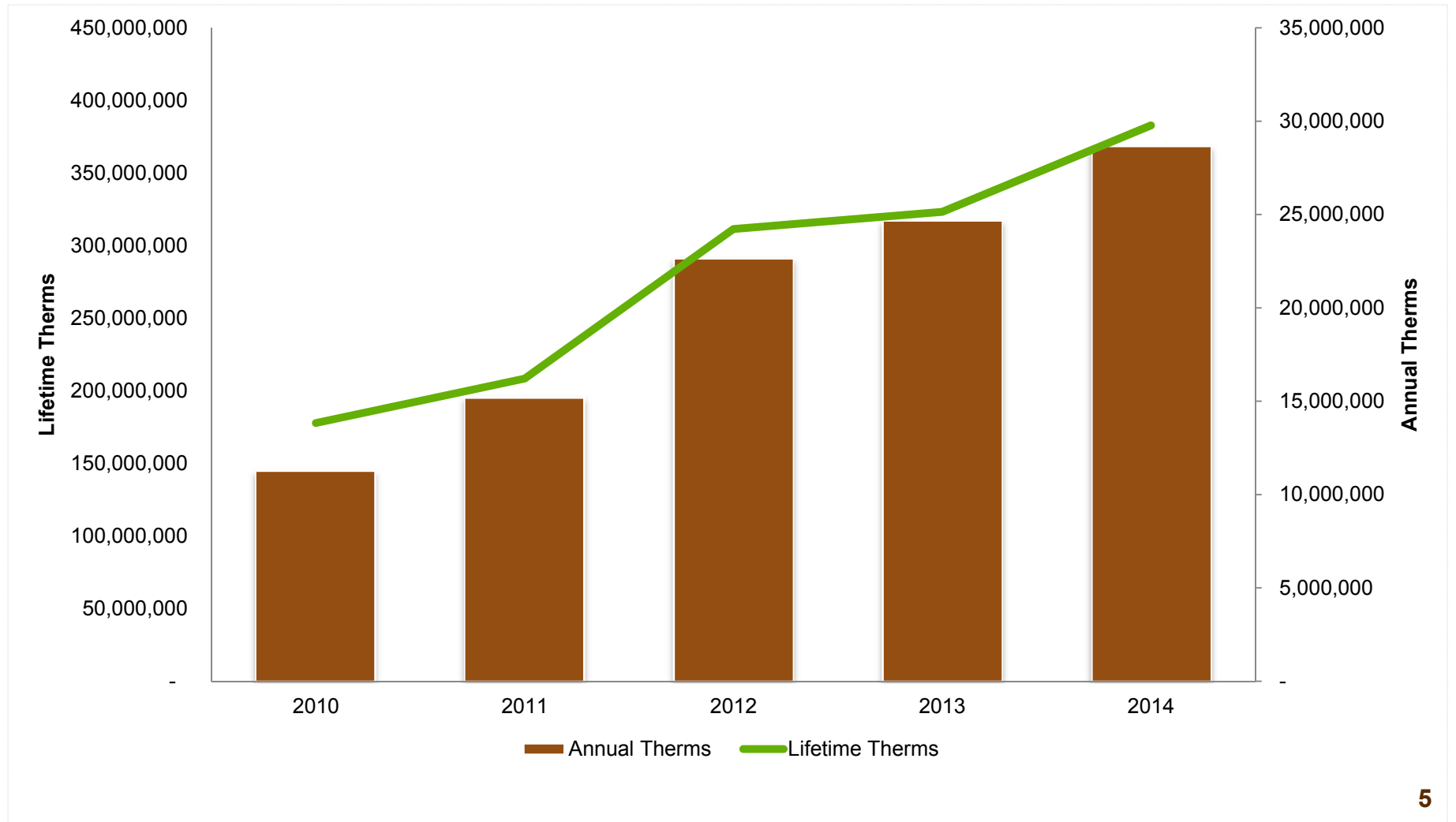


Electric Annual and Lifetime Savings



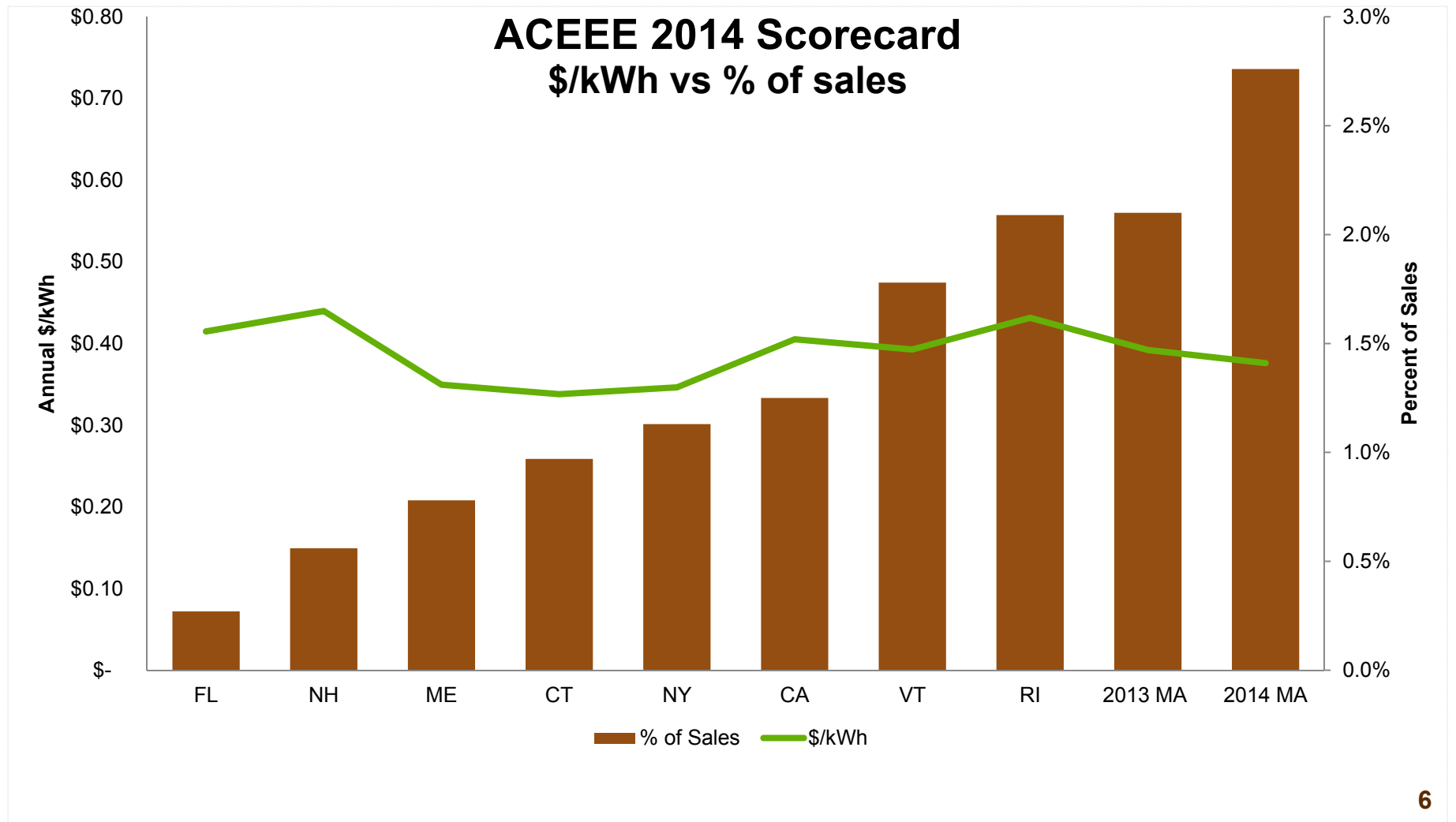


Gas Annual and Lifetime Savings





Energy Efficiency Savings in MA Far Ahead of Other States - At Similar Cost Rates





Changes Between Q4 & Plan-Year Report- Evaluation and QA/QC

Evaluation Results

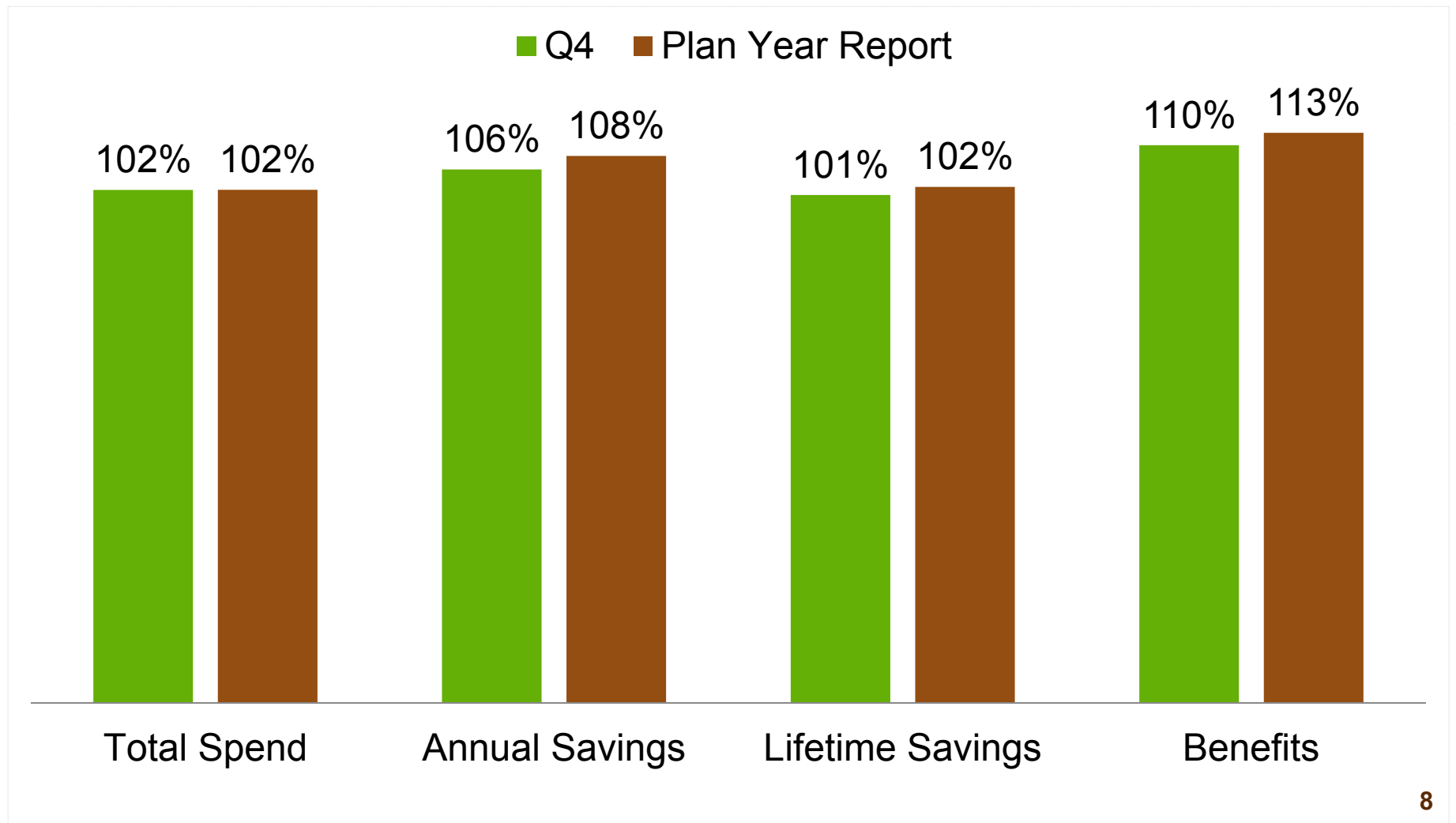
- Updated residential lighting annual and lifetime savings and measure lives based on market adoption model
- Updated residential gas heating and combination system savings and baselines
- Minimal positive impact to C&I upstream lighting savings

General QC

- Savings: Held common assumptions meetings and made adjustments to ensure consistency among PAs and with TRM
- Costs: No significant adjustments made to total spend

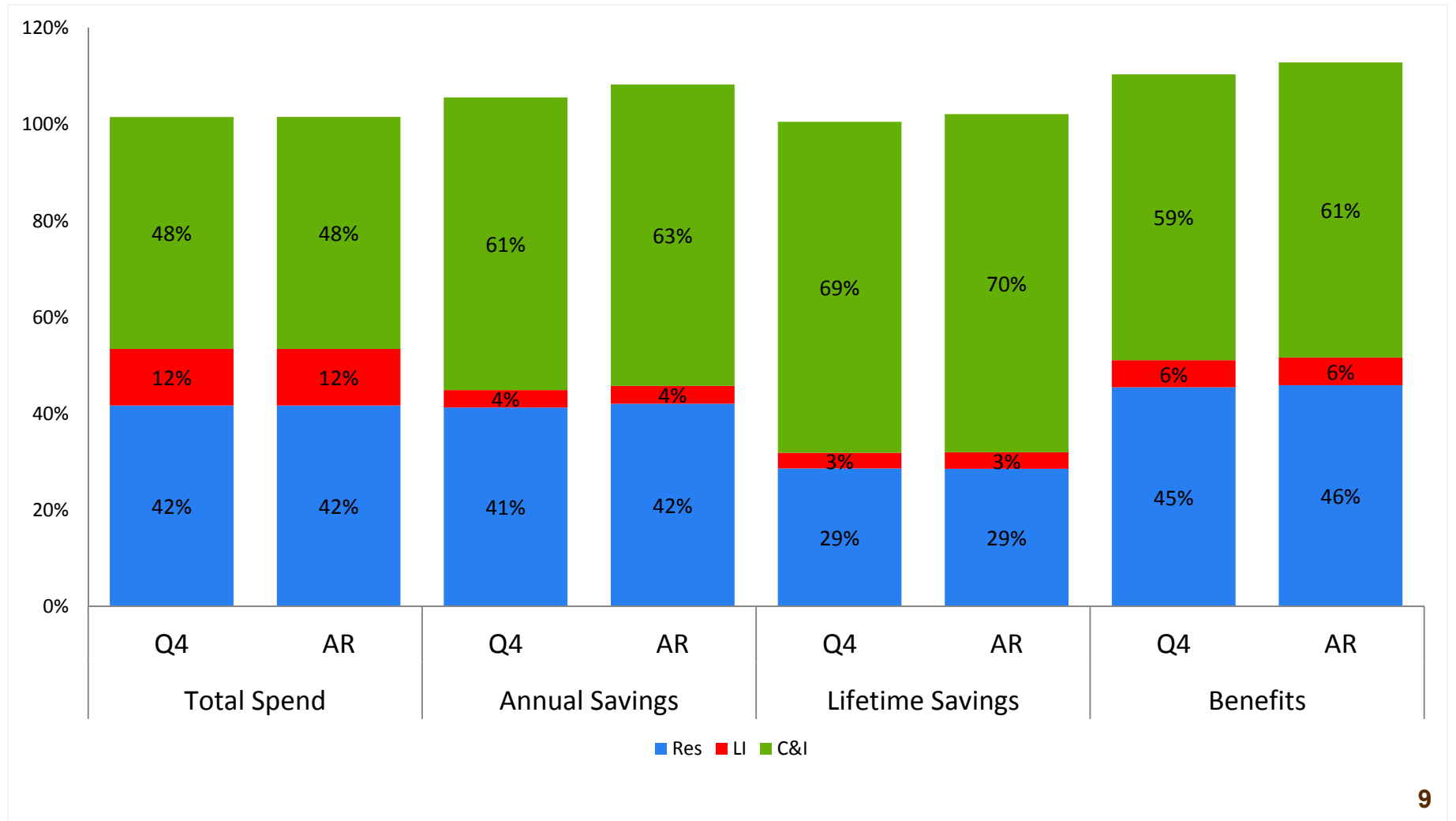


Q4 Report vs. 2014 Plan-Year Report – Statewide Electric



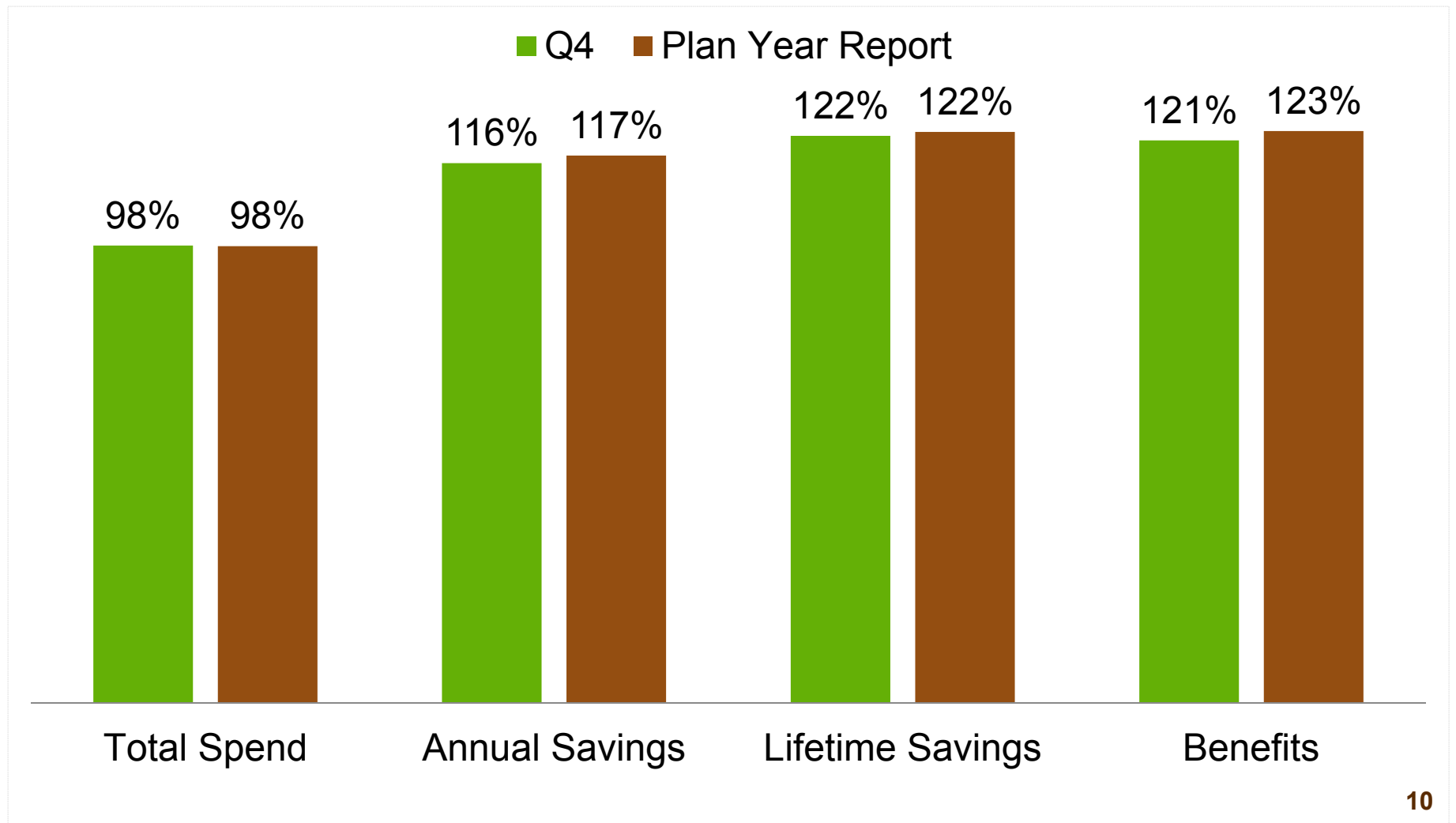


Q4 Report vs. 2014 Plan-Year Report – Statewide Electric by Sector



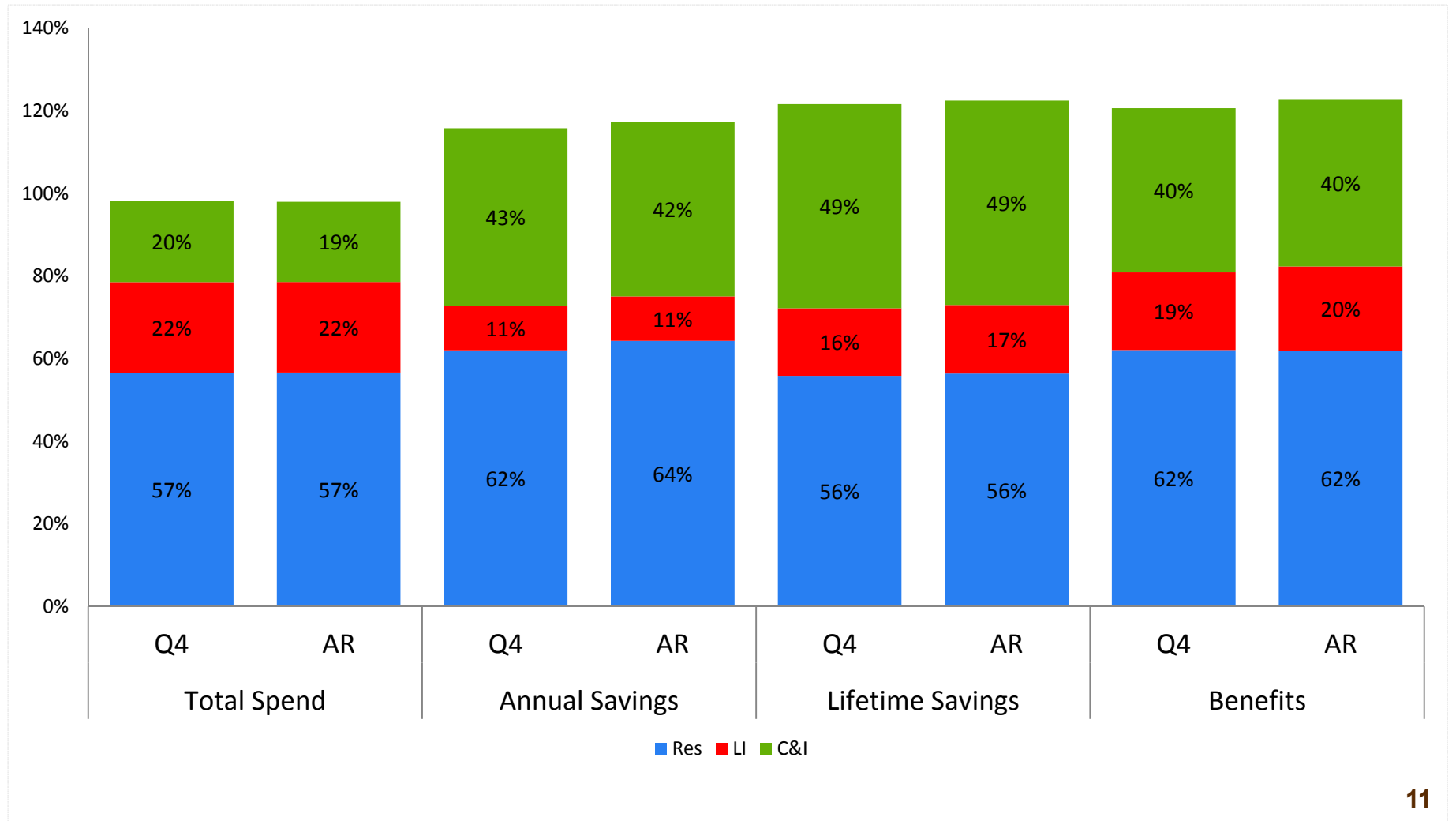


Q4 Report vs. 2014 Plan-Year Report – Statewide Gas





Q4 Report vs. 2014 Plan-Year Report – Statewide Gas by Sector





Most Significant Evaluation Studies

- **High Efficiency Heating Equipment Impact Evaluation**
 - Differences in annual heating loads between equipment types
 - Installation practices for some high-efficiency boilers can be optimized to maximize potential savings
 - Early retirement gas furnaces and boilers have not declined in performance
- **Massachusetts LED Market Effects: Baseline Characterization**
 - First phase of a two-phase study to determine the market effects resulting from LED lighting
 - For residential, excellent baseline for future research of LED market effects
 - For C&I, MA much more advanced than the comparison area
- **2013 C&I Customer Profile Report**
 - Annual publication that analyzes the PAs' billing and tracking data in order to identify notable trends



Most Significant Evaluation Studies

- **Top Down Modeling Methods Study**
 - Multi-year initiative designed to assess the utility of top-down modeling as a viable technique for evaluating energy efficiency programs
 - Attempt to correlate with the results of the bottom up analysis
 - Preliminary results indicate a significant decrease in energy consumption when comparing the PA service territory with municipal territory energy consumption
- **Saturation Comparison of MA, CA, and NY**
 - Compares the lighting saturation estimates
 - CA ended support of lighting and market share of efficient lighting declined significantly while MA share remained even
 - Data suggest that PAs proceed with caution as they consider when to reduce their support of efficient lighting



2014 Results Highlights

ELECTRIC

- Residential Lighting- savings greater than planned
 - Evolution of residential LED technology with decline in LED prices
- C&I Lighting- savings less than planned
 - LED Linear technology slow to evolve and fluorescent market becoming saturated with T-8s
- Upstream Lighting- successful in 2013-2015, with evidence of future decline
 - LED A-Line opportunities in 2014, but latest on-sites suggest opportunity declining as market transforms

GAS

- Very Large Projects- heavy impact in 2013-2015, but not replicable
 - National Grid had an extraordinary, totally unique project that greatly impacted savings and cost-efficiency
 - Without this project:
 - Statewide C&I achievement of annual savings would be approximately **78%** instead of **91%**
 - Statewide total achievement would be approximately **110%** instead of **117%**

BASELINES

- Increasing baselines reduce savings that can be claimed
- Early Replacement initiatives had savings greater than planned, but baselines will affect effort going forward
 - Initiative replaced thousands of very old pieces of heating equipment
 - Evaluation showed existing equipment did not degrade; thus higher baselines expected in 2016-2018
- New Construction code held constant, but will face new challenges in the near future
- Penetration of C&I lighting market by PAs leads to increased baseline

2016-2018 Challenges & Opportunities

Building Codes: Reduced opportunity in customer facilities

- PAs are launching Codes and Standards advocacy efforts to ensure code compliance

Equipment Baselines: Increasing baselines decrease savings

- PAs will support new products and new tactics to get to existing equipment (e.g., Upstream EMC pumps, or Early Boiler Replacement)

Lower Avoided Costs: More challenging to achieve cost-effectiveness

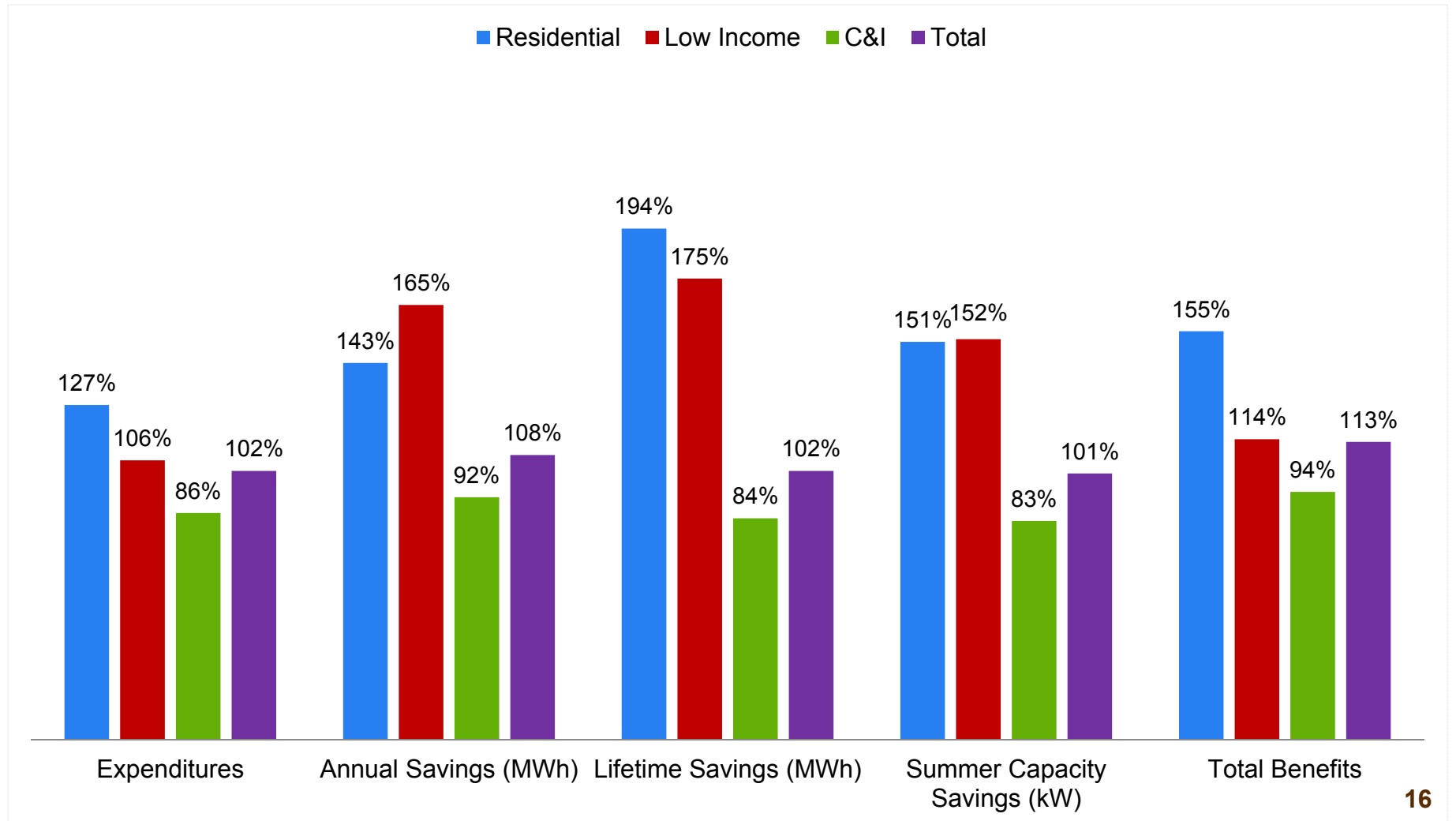
- PAs will shift retail channels for product support (e.g., Upstream Water Heating Equipment)

Lighting: EISA standards and evaluations reduce attributable savings

- Opportunity remains in residential and C&I linear products but at a higher cost; LED support essential for converting sockets to efficient lighting



Electric Summary by Sector – 2014 Plan-Year Report





Gas Summary by Sector – 2014 Plan-Year Report

