

2010-2012
Energy Efficiency Plans:
Consultant Analysis
of Energy Savings Goals

Council Consultants

MA EE Advisory Council Meeting

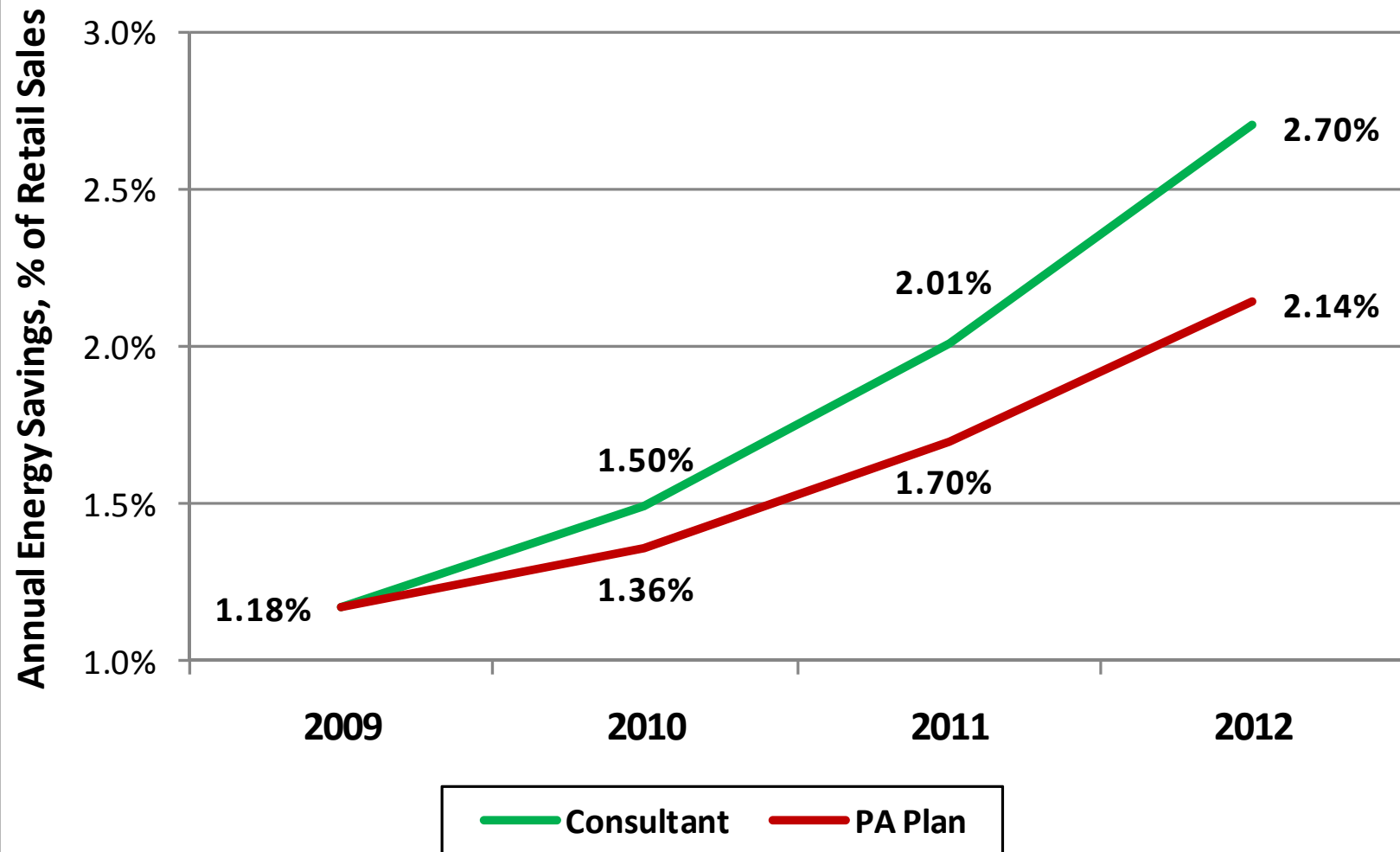
August 25, 2009

(Rev. Sept. 1; GHG Emissions Charts Added)

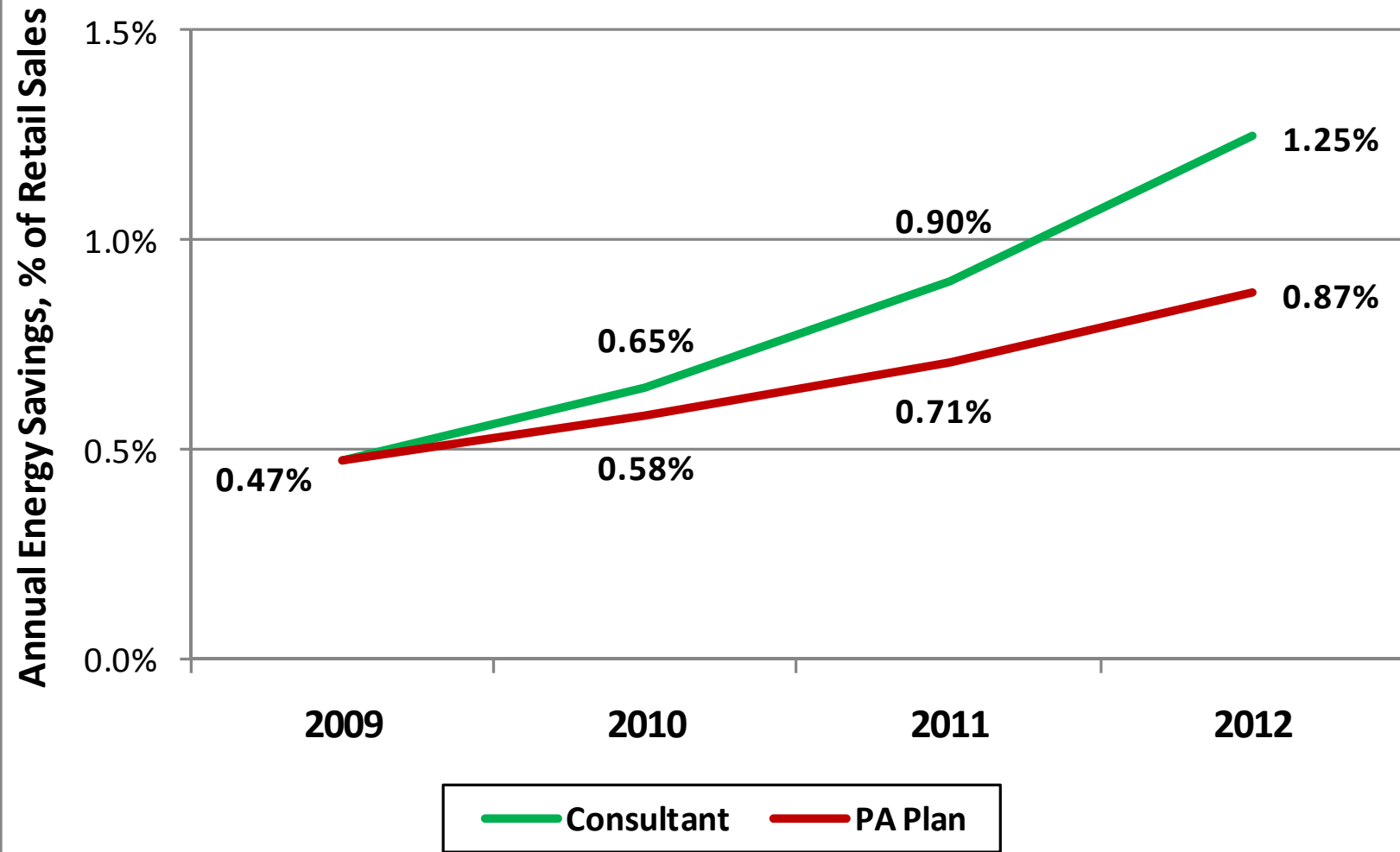
Revised Consultant Analysis

- Updated analysis of savings goals for the Statewide Plans by the EEAC consultants
- Comparison to July 16 and April 30 PA Plans
- Comparison to earlier (March) consultant analysis of the savings levels necessary to meet the GCA statutes and state policies
- Consultant recommendations for savings goals
- Based on the requirements of the GCA statute and the Council's objectives and resolution
- Informed by discussions with PAs and analysis²

Recommended Electric Energy Savings Goals



Recommended Gas Energy Savings Goals



Requirements of the Green Communities Act

- Electric and natural gas resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply. [Section 21 (a)]
- Each plan shall provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply. [Section 21 (b)(1)]
- Green Communities Act (GCA)
Chapter 169 of the Acts of 2008

Council Resolution, July 28

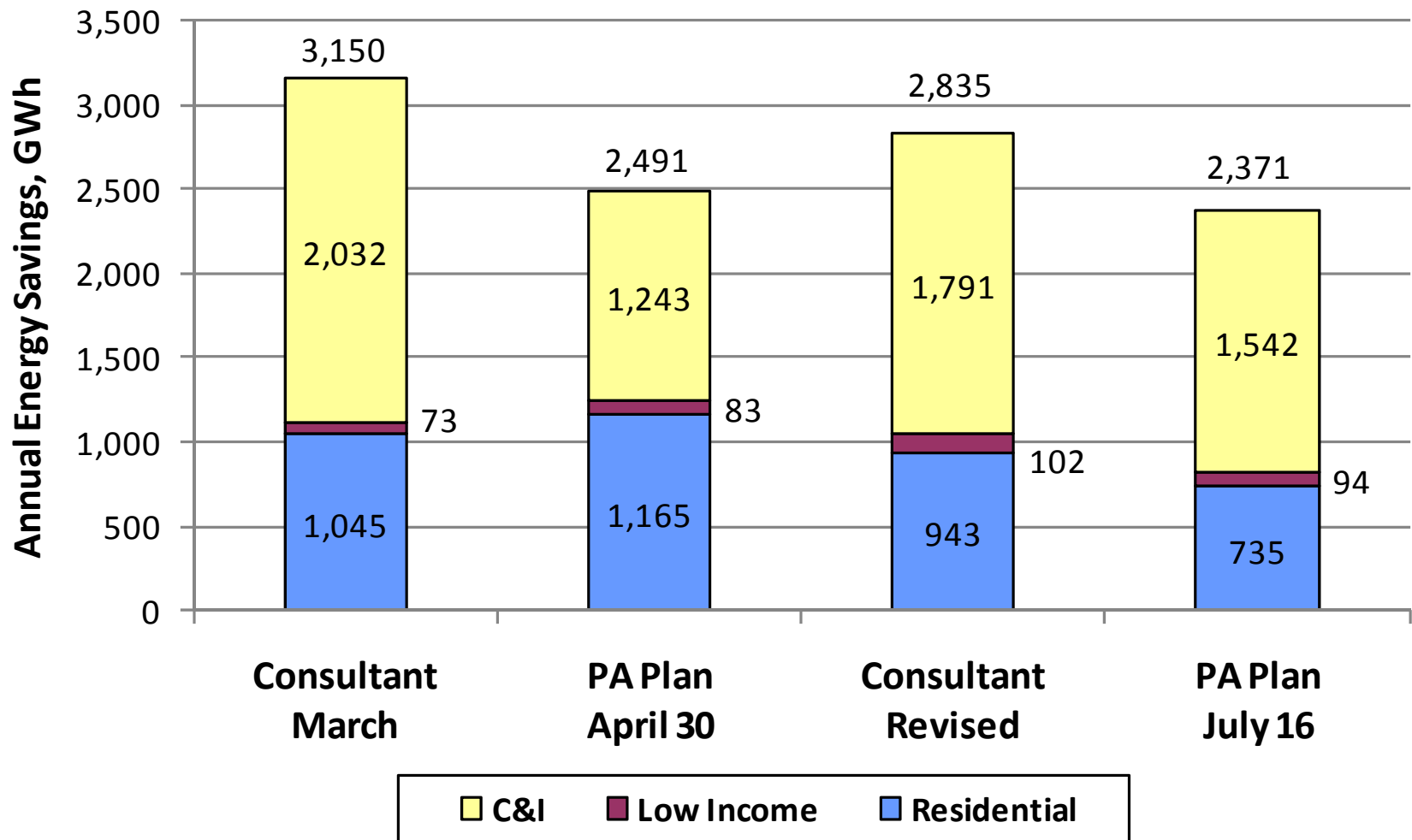
“...revise the program savings goals to approach the estimates of all cost-effective energy efficiency identified in the July 14 Council resolution, specifically, a low of 2.8% and a high of 3.0+% for electric (inclusive of CHP), and a low of 2.0-% and a high of 2.0+% for natural gas.”

Analysis Based on GCA Requirements and Council's Primary Objectives

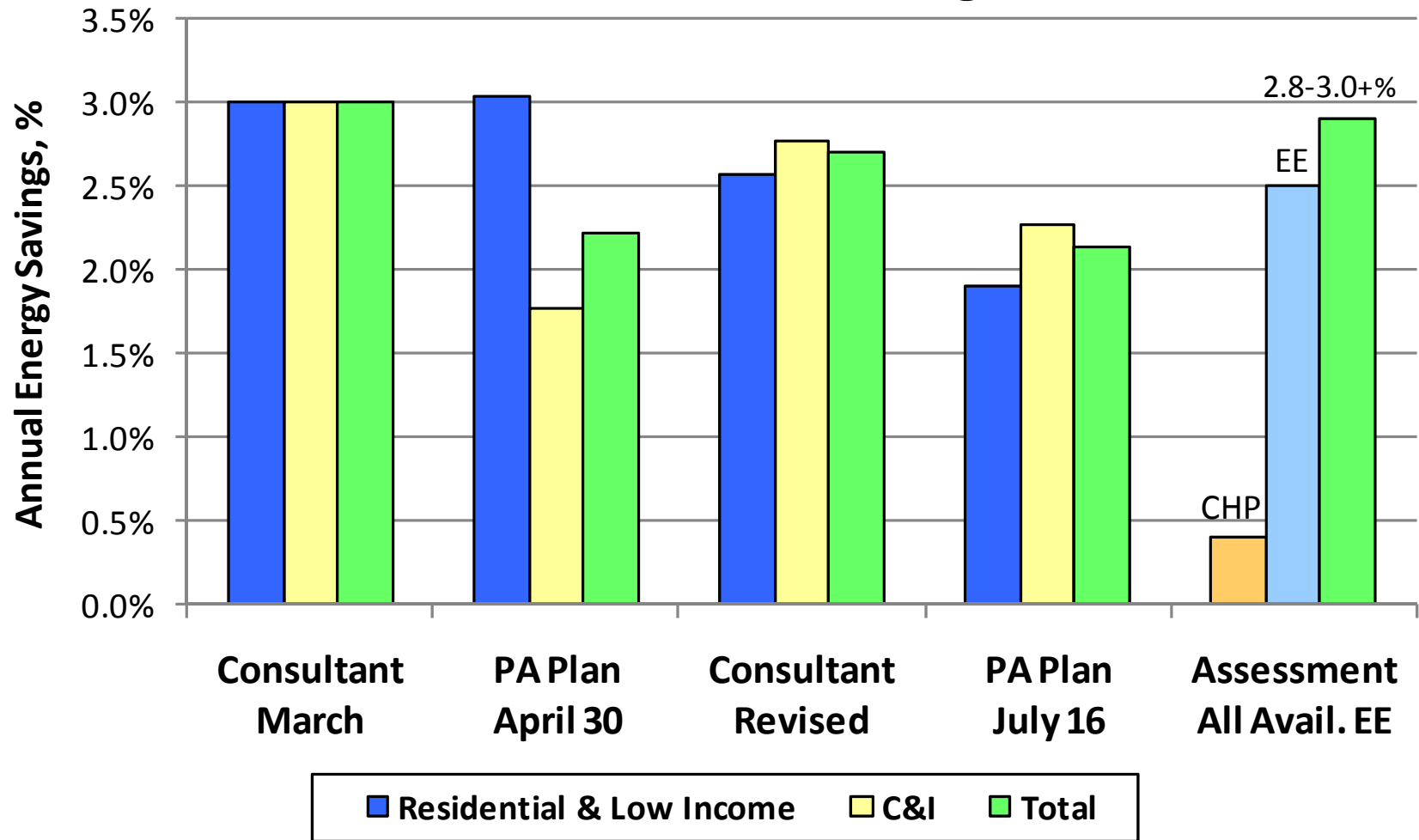
1. Acquire all available cost-effective EE (GCA)
2. Savings goals should approach the levels in the assessment of all available cost-effective EE
3. Focus on deeper savings first, then broader
4. Improved program designs, statewide consistency of programs, streamlining the customer experience, integration of energy efficiency delivery across fuels and silos, and effective public education and marketing

Electric Energy Savings

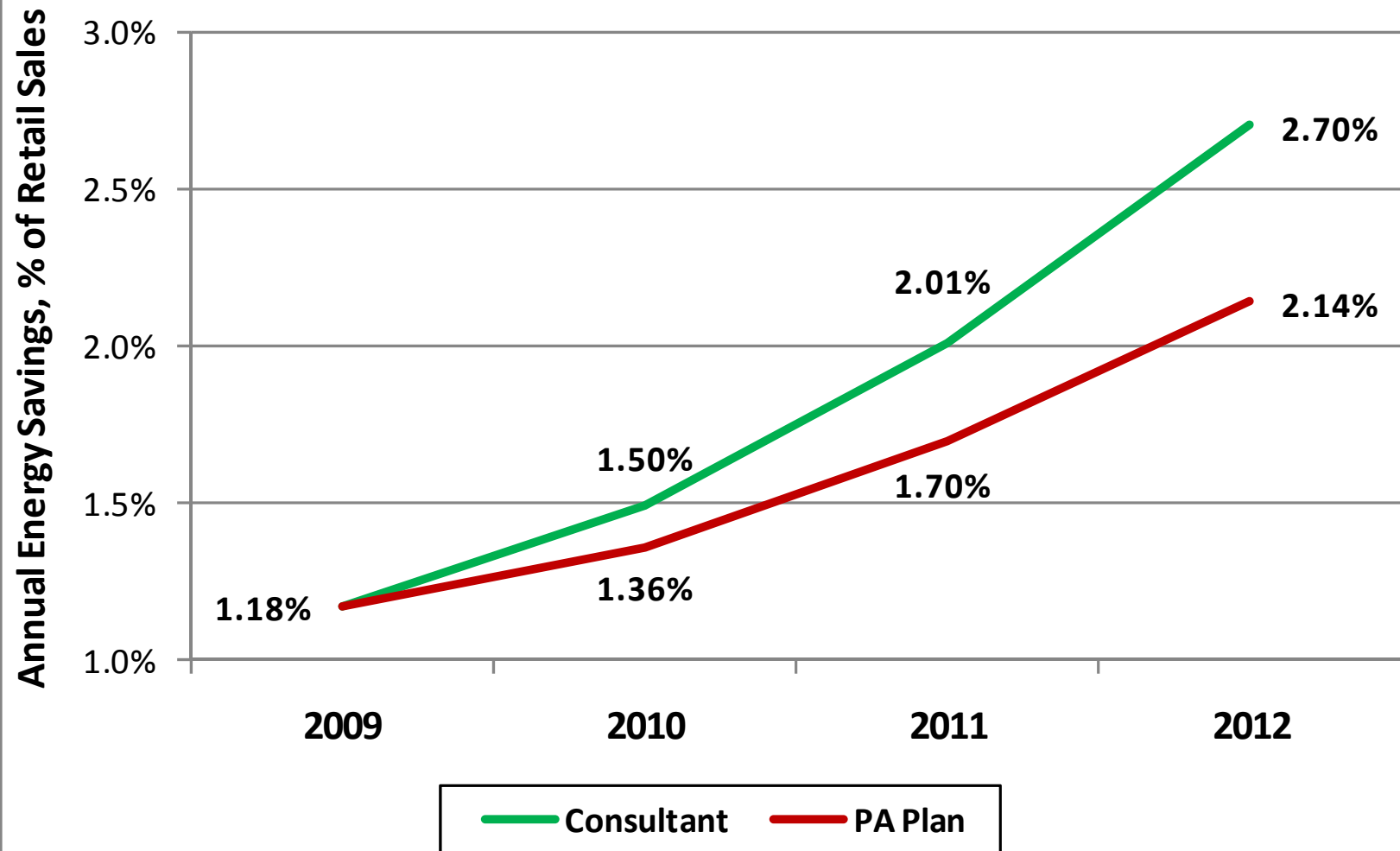
Electric Energy Savings, Sum of 2010-2012



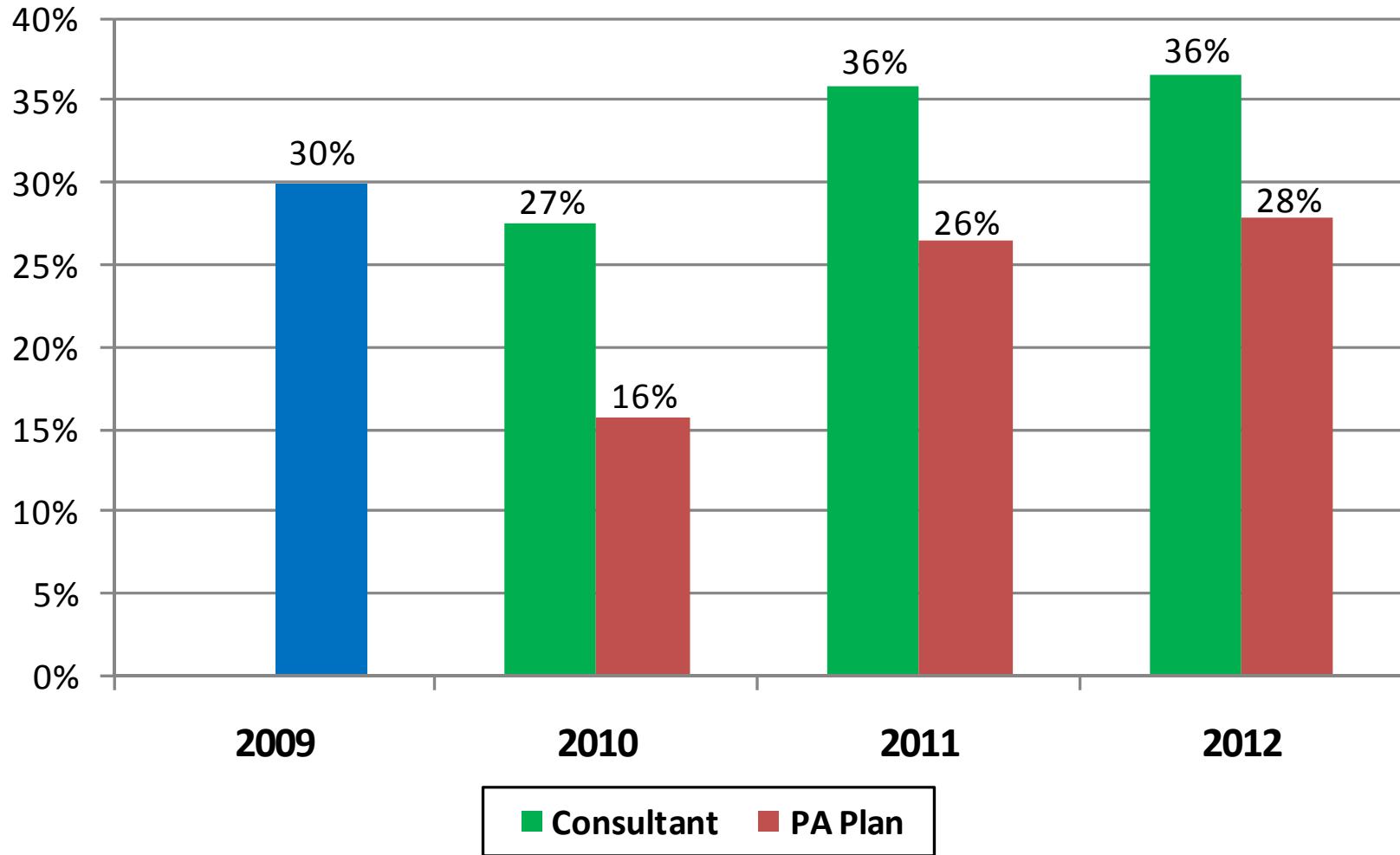
Electric Annual Percent Savings in 2012



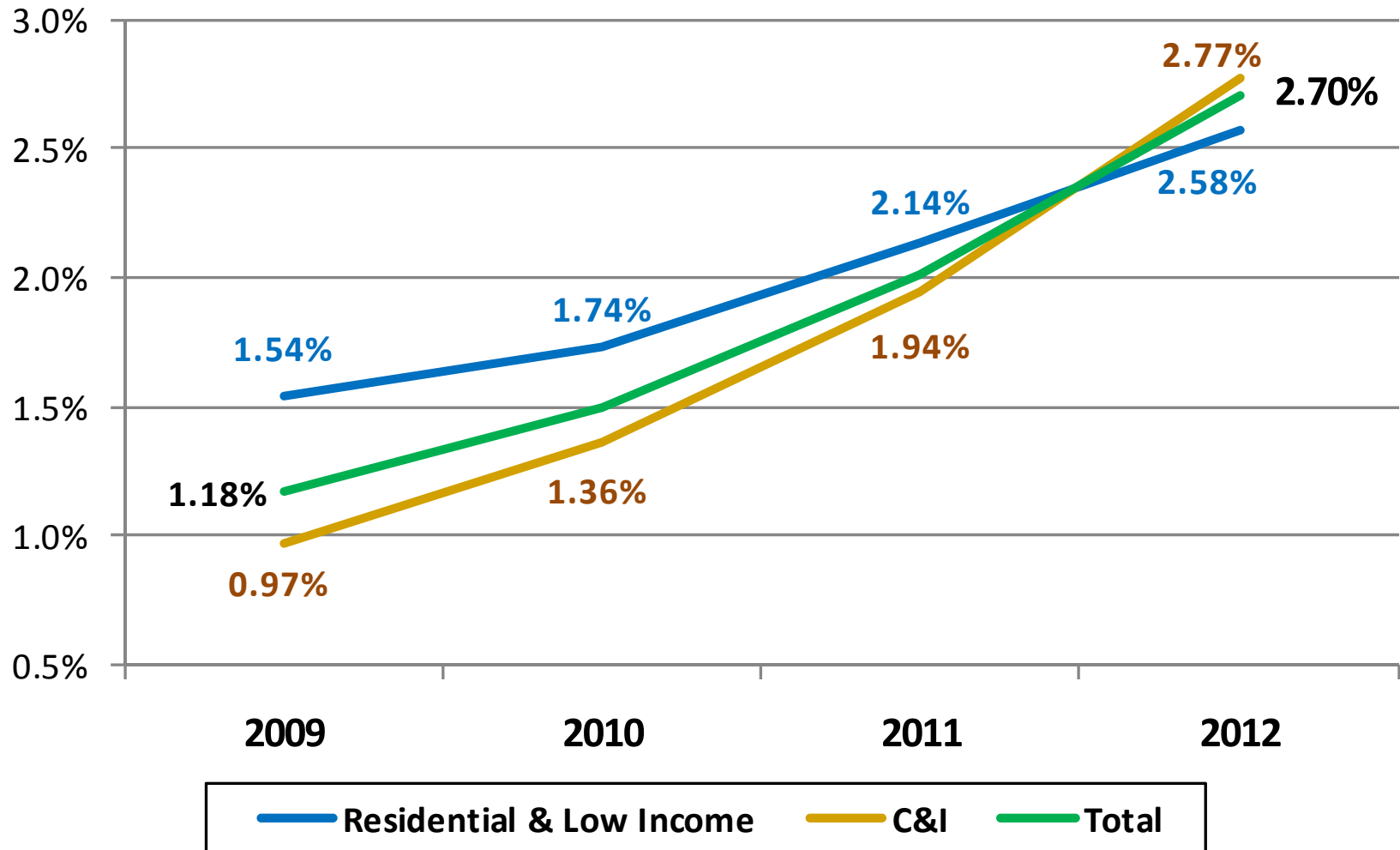
Electric Percent Savings by Year



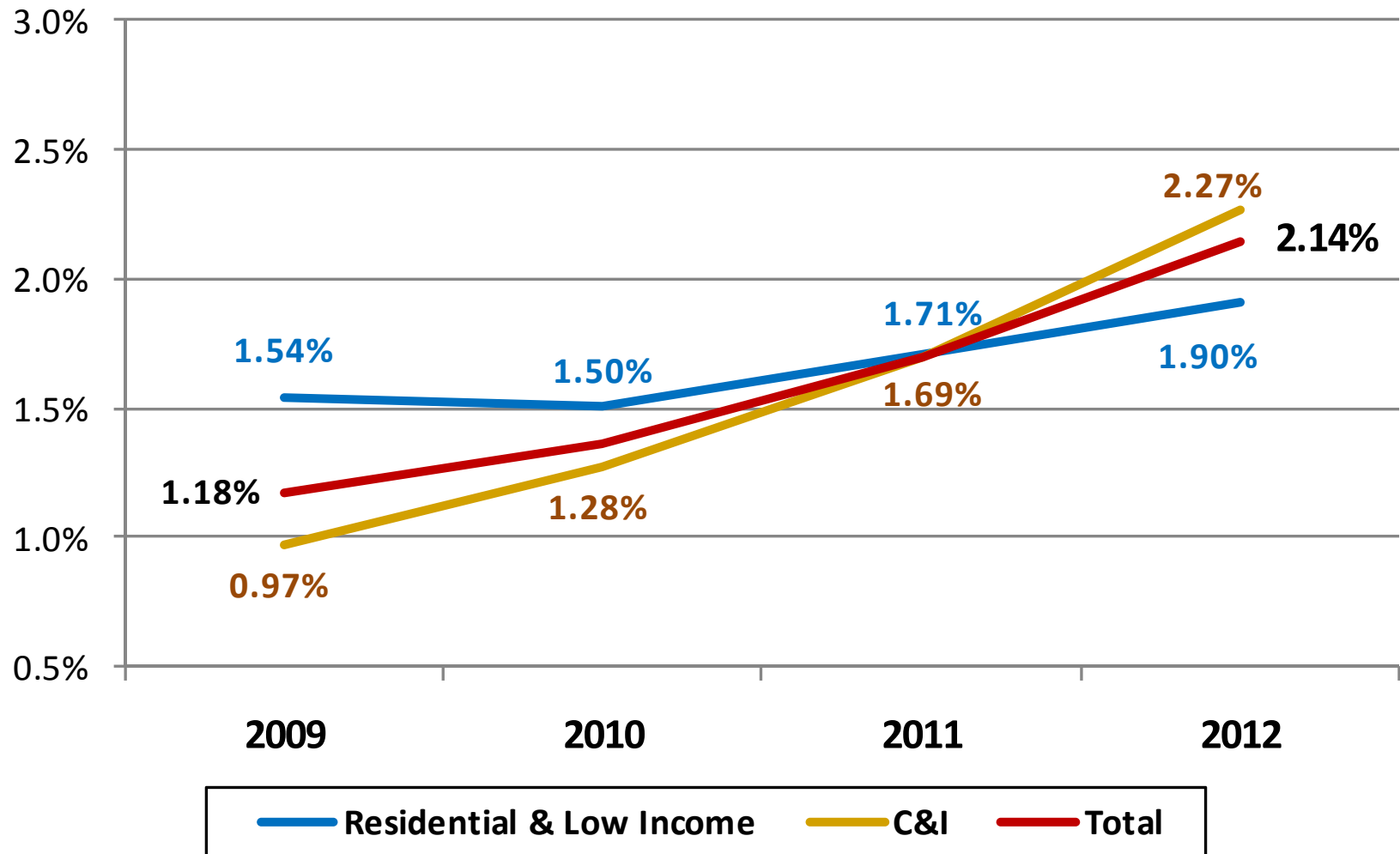
Annual Growth Rates for Energy Savings



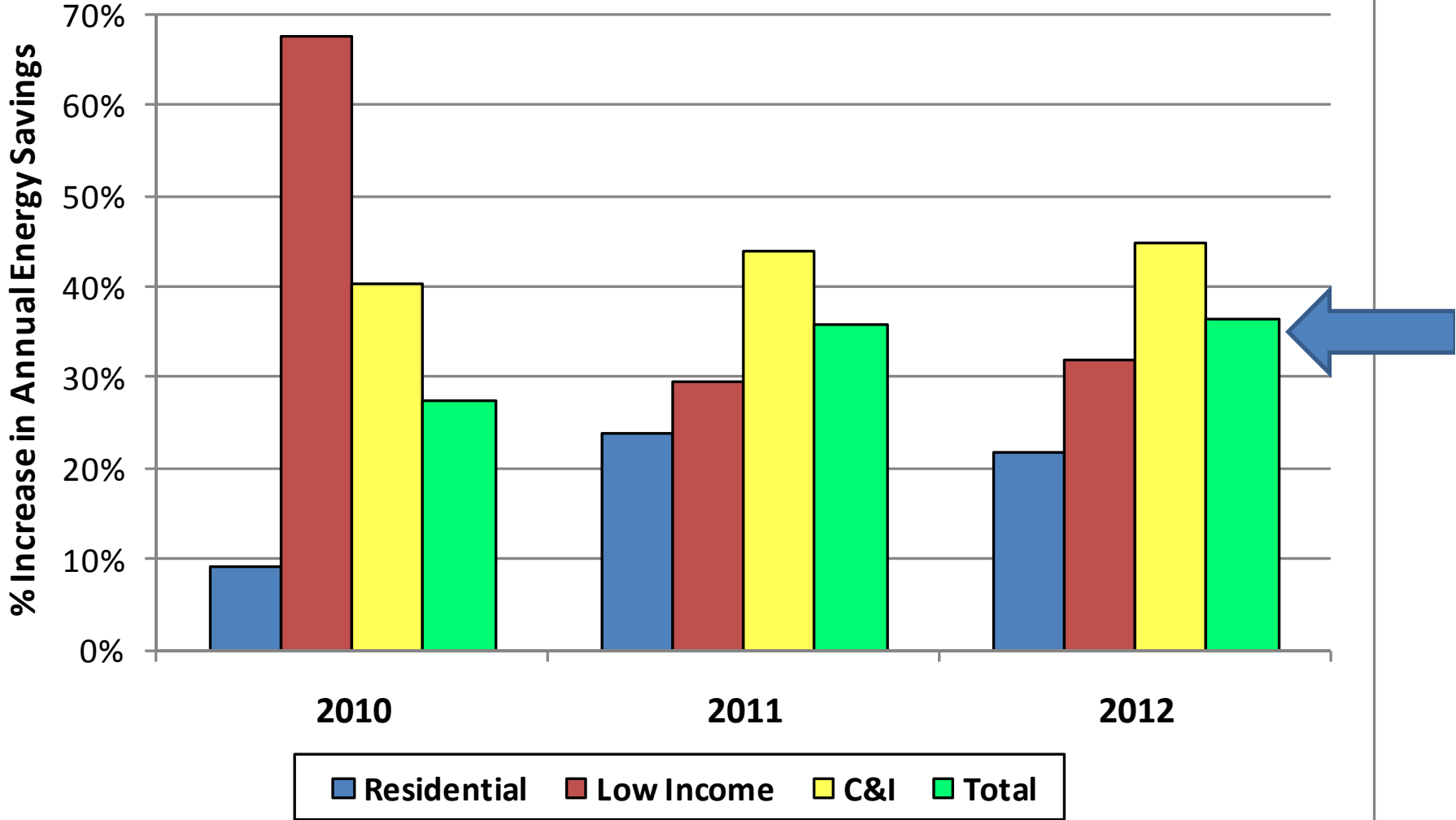
Electric Percent Savings by Sector (Consultant)



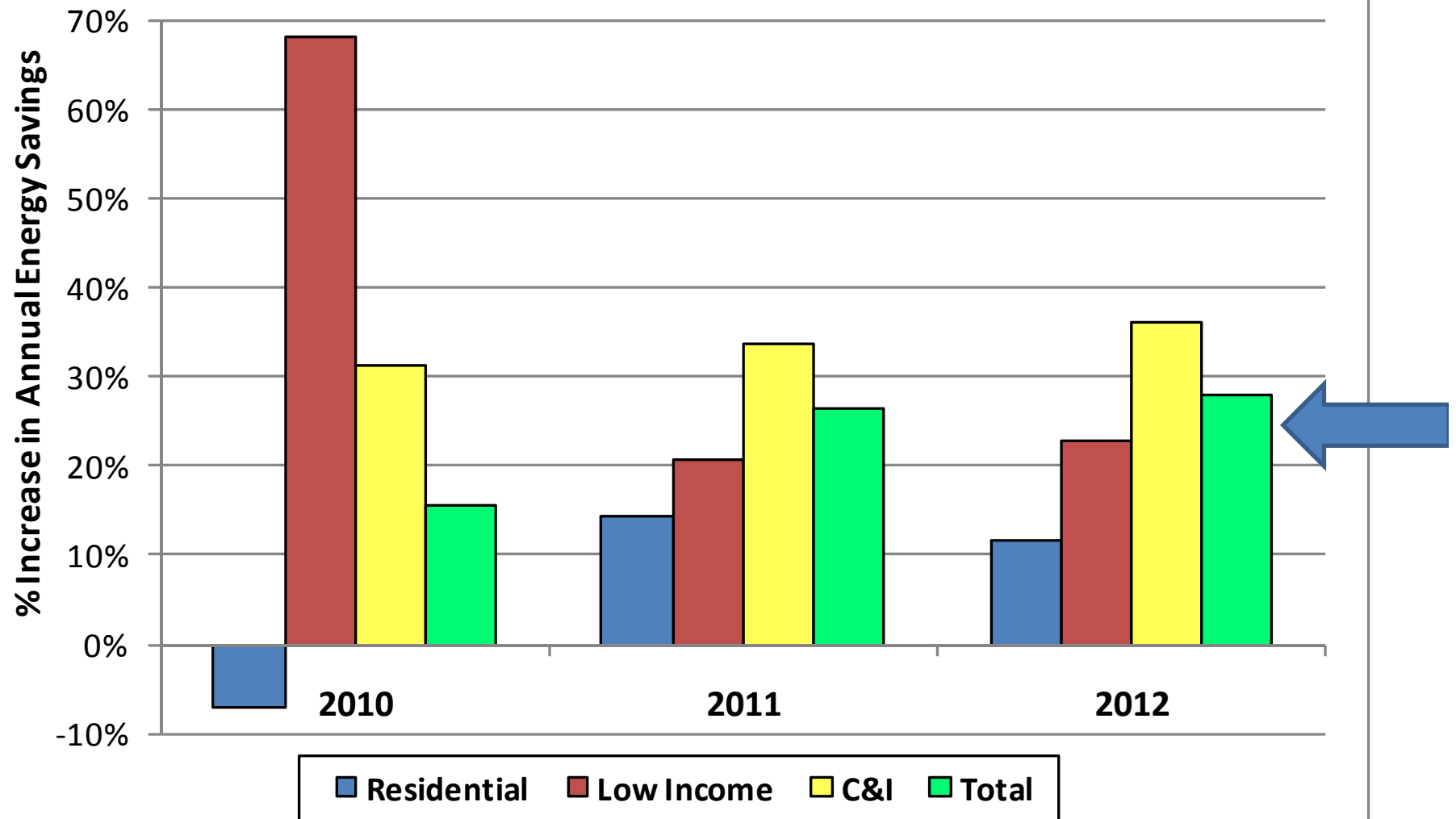
Electric Percent Savings by Sector (PA Plan)



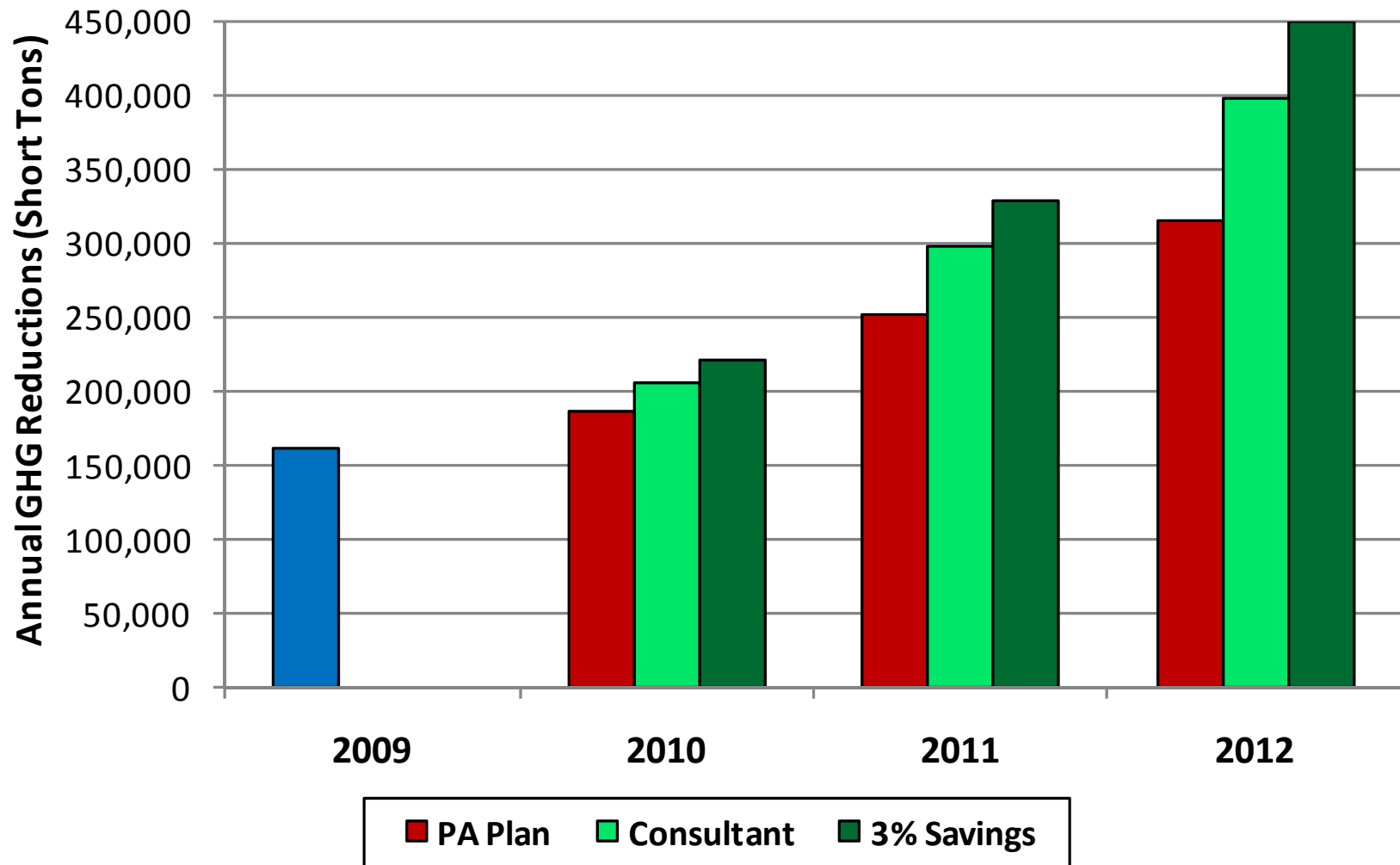
Annual Growth Rates by Sector (Consultant)



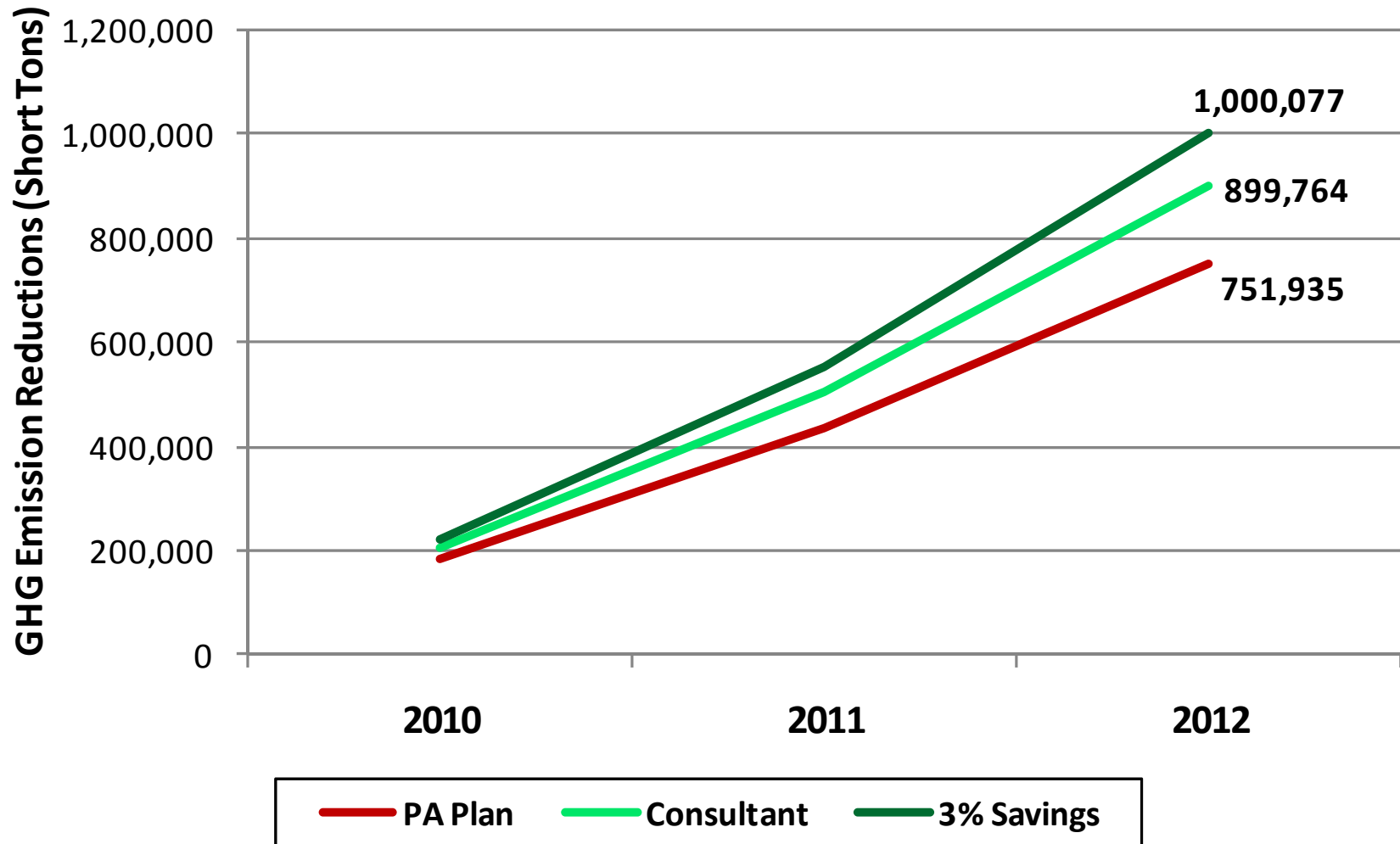
Annual Growth Rates by Sector (PA Plan)



Electric: Annual GHG Emission Reductions



Electric: Cumulative Annual GHG Reductions



Key Drivers of Savings

- Drivers of savings in general; some of these are also drivers of the *differences*, PAs vs. Consultant
- Res. Lighting, CFLs vs. specialty bulbs, federal lighting standards, net-to-gross ratio
- How deep in Residential Retrofit, what savings can be achieved, cost and cost-effectiveness
- Depth of C&I savings, electric and gas
- Degree of financing, and source of capital (outside capital vs. program funding)
- Mix of rebate vs. financing (how much of each)

C&I Electric Highlights

- Good agreement in several C&I programs
 - Agree in C&I New Construction/Lost Opps
 - Very close to agreement in Large C&I Retrofit (PAs 9% lower across 2010-12)
 - PAs only slightly lower in first year/2010 (6% lower)
- But big gap in Small C&I savings
 - PAs are 40% lower across 2010-12
- And C&I Multifamily electric savings are low
 - Only 3 GWh in 2010-12; 0.2% of PA C&I savings

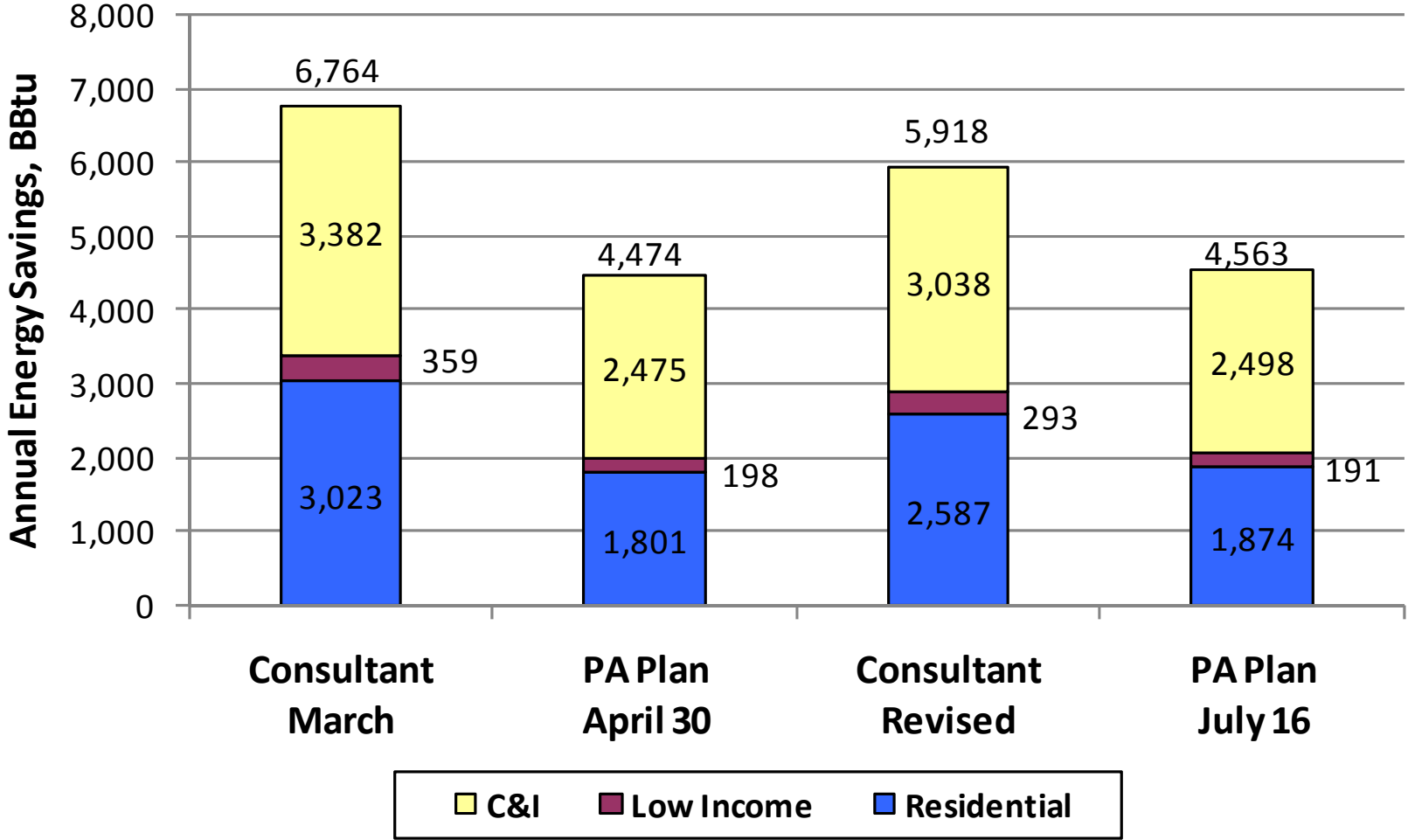
Residential/Low Income

Highlights

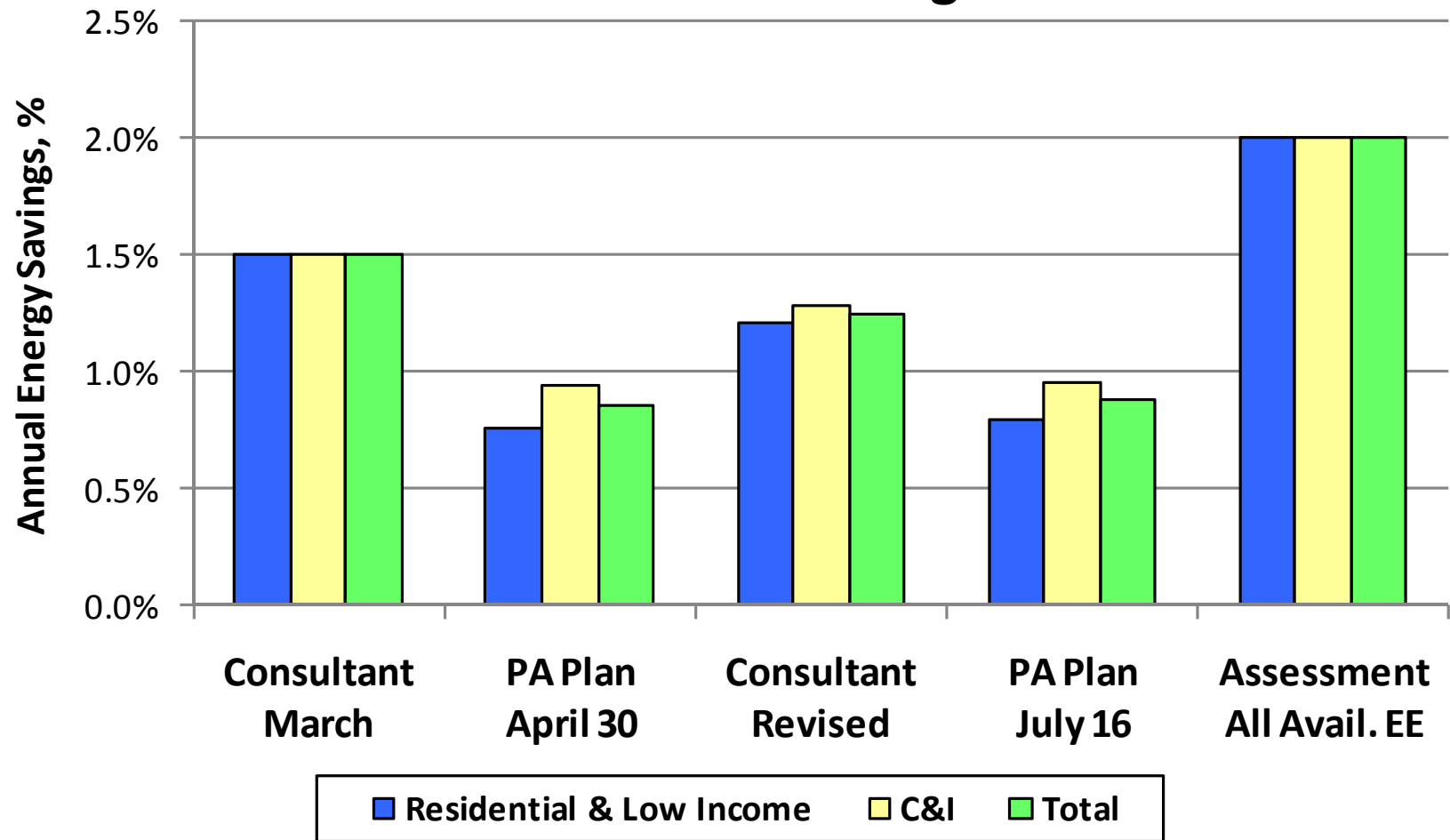
- Agreement in all Low Income programs except Multifamily (PAs 7 GWh/22% lower in 2010-12)
- PAs Residential is only 15% (37 GWh) lower in 2010, but 22% (over 200 GWh) lower in 2012
- Significant gaps in three major Res. Programs
 - Res. Lighting, PAs are 17% lower, 110 GWh
 - Res. Retrofit 1-4, PAs are 33% lower, 43 GWh
 - Res. Multifamily, PAs are 53% lower, 38 GWh
- Concerns about depth, breadth, and ramp up

Gas Energy Savings

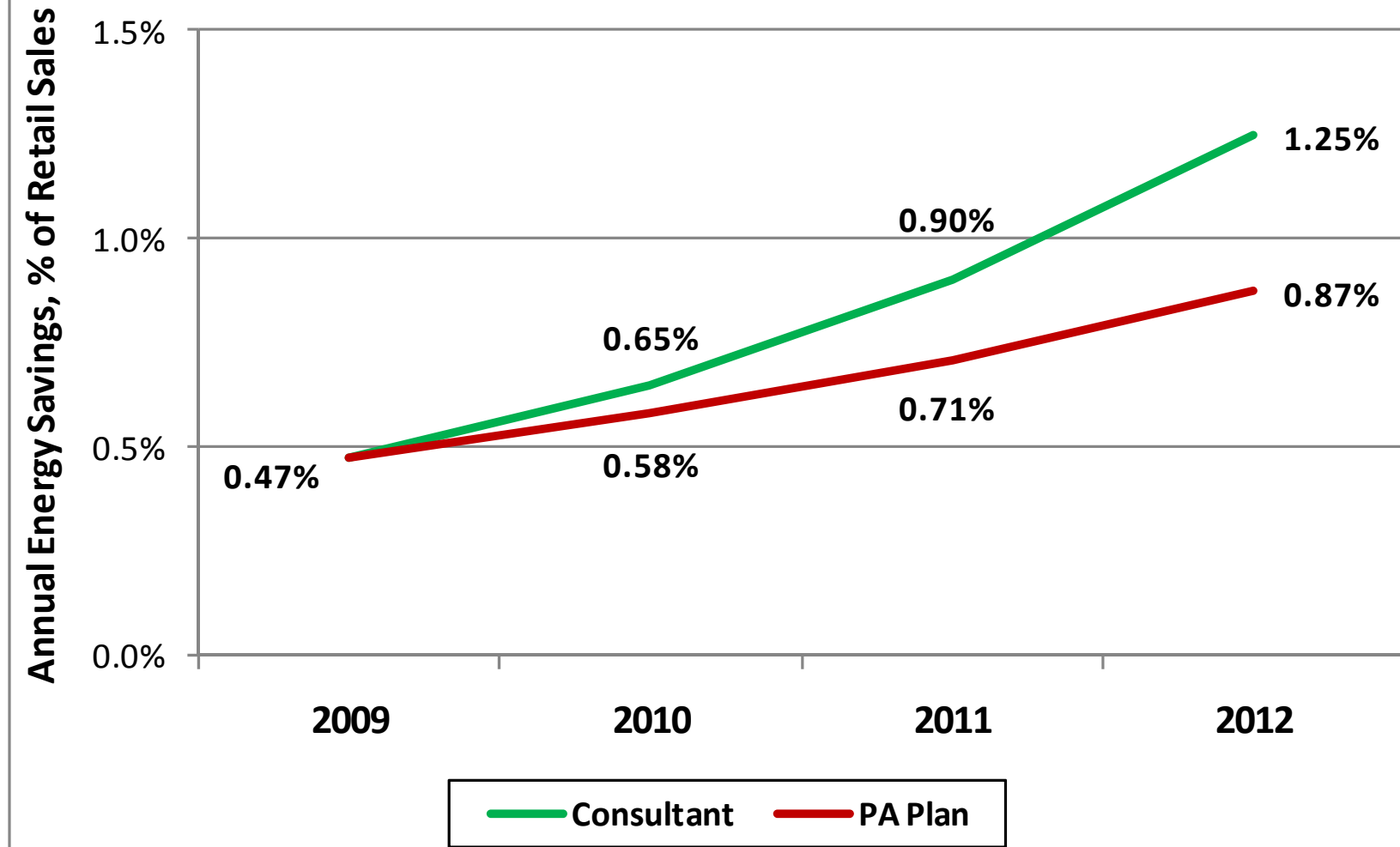
Gas Energy Savings, Sum of 2010-2012



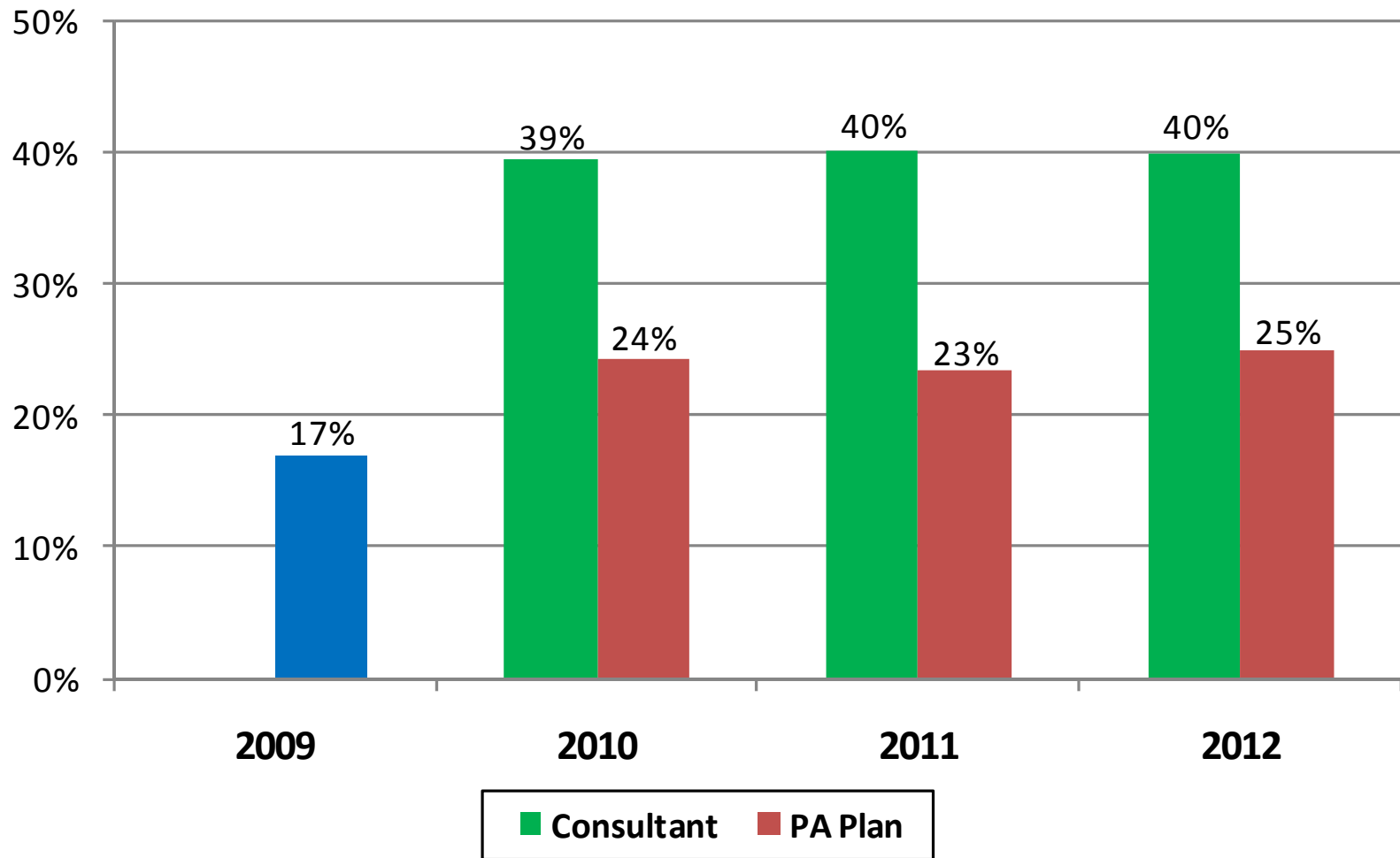
Gas Annual Percent Savings in 2012



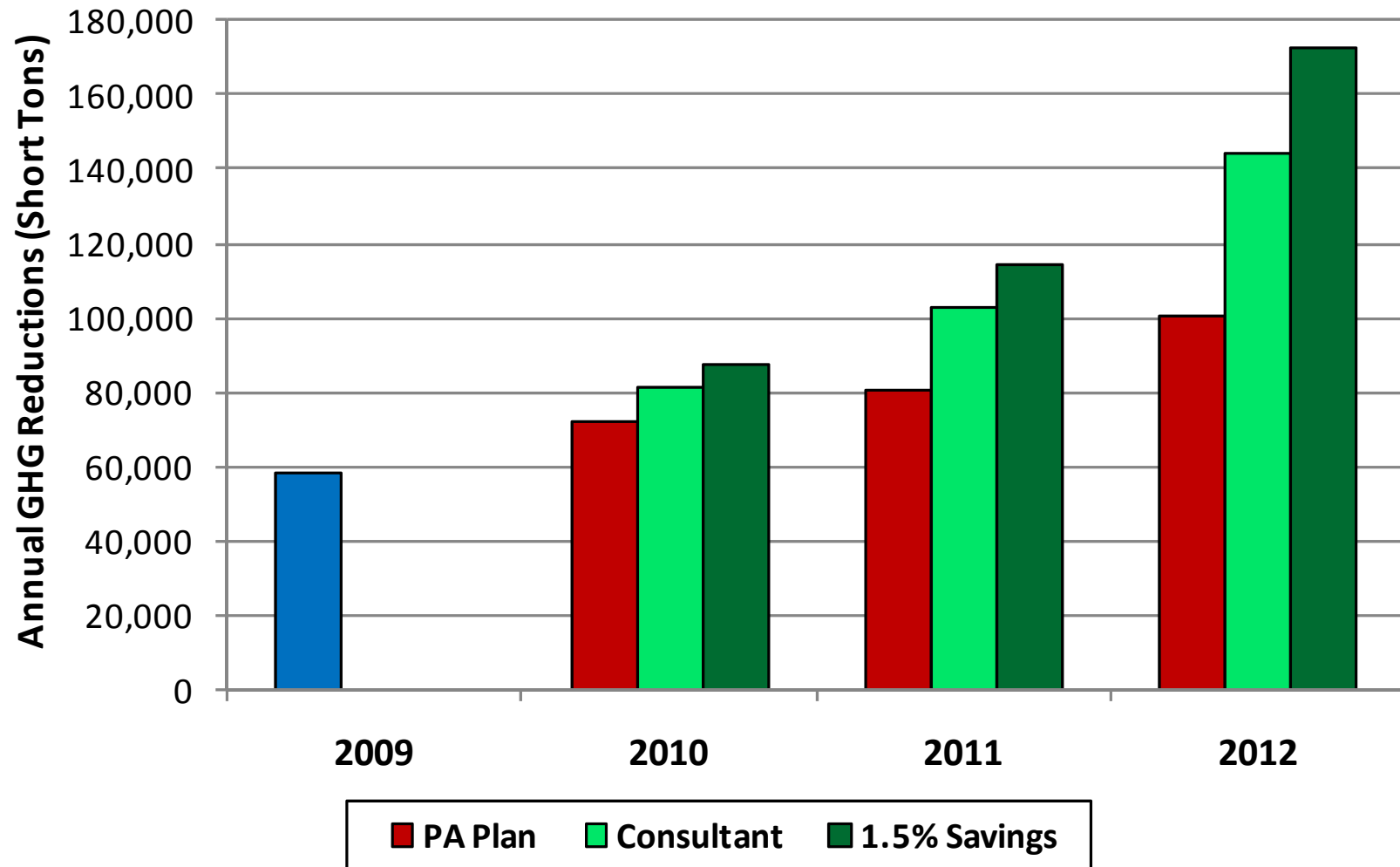
Gas Percent Savings by Year



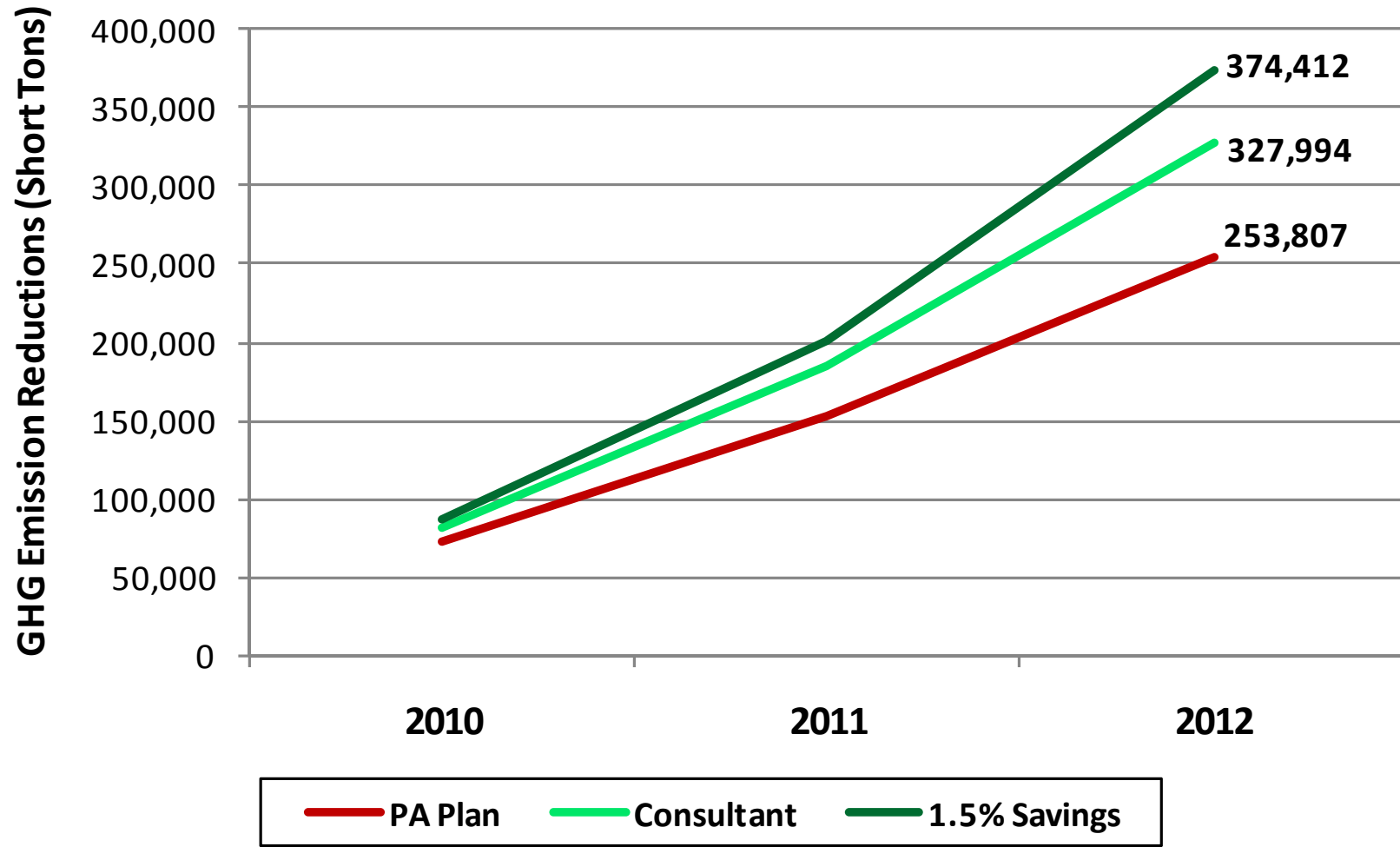
Annual Growth Rates for Gas Energy Savings



Gas: Annual GHG Emission Reductions



Gas: Cumulative Annual GHG Reductions



Next Steps and Key Dates

- Continue interactions with PAs; attempt to resolve remaining differences while encouraging PAs to reach for higher savings goals
- Savings goals are on the Council meeting agendas for Sept. 8 and Sept. 22
- Revised Benefit/Cost analysis and Bill Impact analysis are on Council agendas concurrently, plus Performance Incentives
- Additional data from the PAs around Sept. 15?
- Plenty to do, focus on the highest priority issues