



2012 Electric and Gas Energy Efficiency Programs: Annual Reports and Summary of Performance

EEAC Consultants
August 22, 2013 (draft)





Introduction

- Review of the performance of the EE programs in 2012, with comparisons to the 2012 Plan (MTMs)
- Initial review for today, with follow up including a three-year review of the 2010-2012 performance scheduled for the September 10 EEAC meeting
- Data are from the PAs (from the individual PA Annual Reports); there is no statewide annual report per se, so the individual PA data were compiled
- Primarily a factual reporting of what happened in 2012, with some consultant observations (initial review)
- Includes summary of program advances as well as data summarizing 2012 performance and results



Key Findings/Observations

- Key program advances in 2012 (see next slide)
- Overall, EE portfolio benefits were 93% of Plan goal
- Electric programs fell short of Plan goals, achieving 88% of annual savings and 91% of benefits
- Gas programs performed better relative to the Plan goals, achieving 96% of annual savings and 103% of benefits
- Several PAs achieved or exceeded the goals
- Differences in performance across the sectors
- Large variations in performance across the PAs
- Energy savings as % of sales increased, but varied widely
- Need for more detailed data, especially for C&I

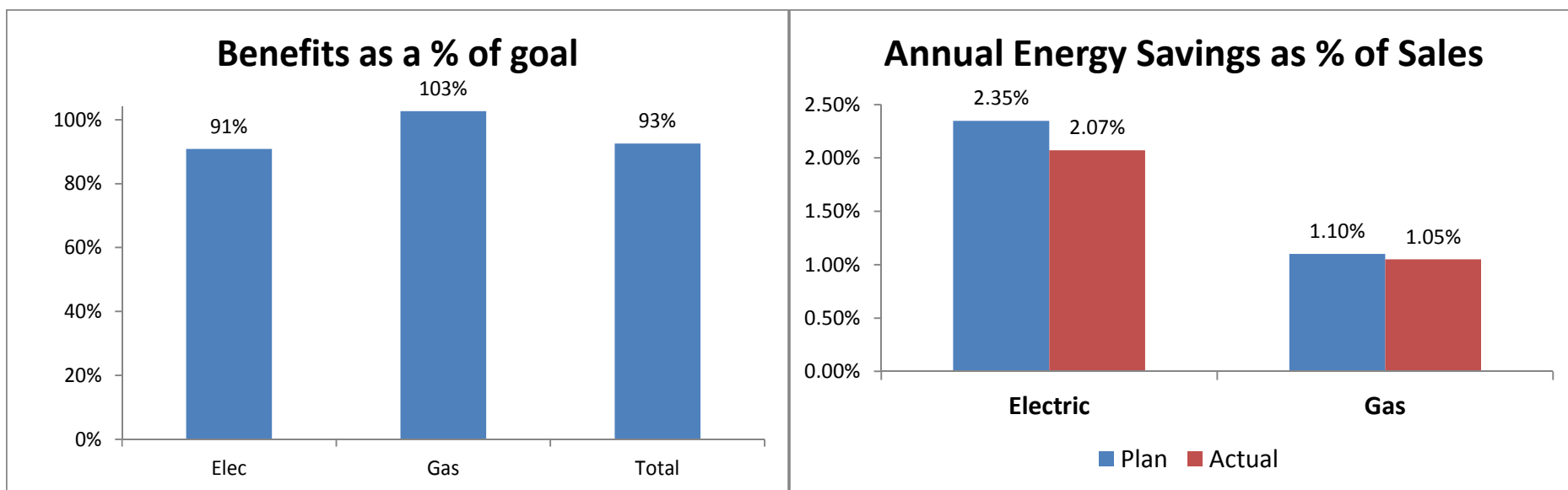


Program Advances

1. Strong growth in participation, nation-leading savings and benefits
2. Enhanced Mass Save Home Energy Services (HES) program completes one full year of operation
3. Growth in Mass Save financing, expanded financing offerings
4. Increased focus on communities and neighborhoods, including hard-to-reach/hard-to-serve customers, kick-off of EN+
5. Effective and increased efforts serving low income customers especially in light of the expiration of ARRA funding
6. Progress in municipal, government, public housing facilities
7. Upstream initiatives effective in influencing vendor stocking and sales practices, equipment costs, and customer participation.
8. Progress in market segmentation and targeting
9. Evaluation (EM&V) results indicate continued improvement in savings estimation—plan versus actual.



2012 performance was good, but fell short of achieving the goals



- Overall EE portfolio benefits for 2012 were \$2.33 billion -- 93% of the Plan goal (91% of electric and 103% of gas benefits goals)
- Energy savings as a % of sales increased, but fell short of goal
- MA accomplishments in 2012 represent some of the highest savings levels ever achieved by energy efficiency programs

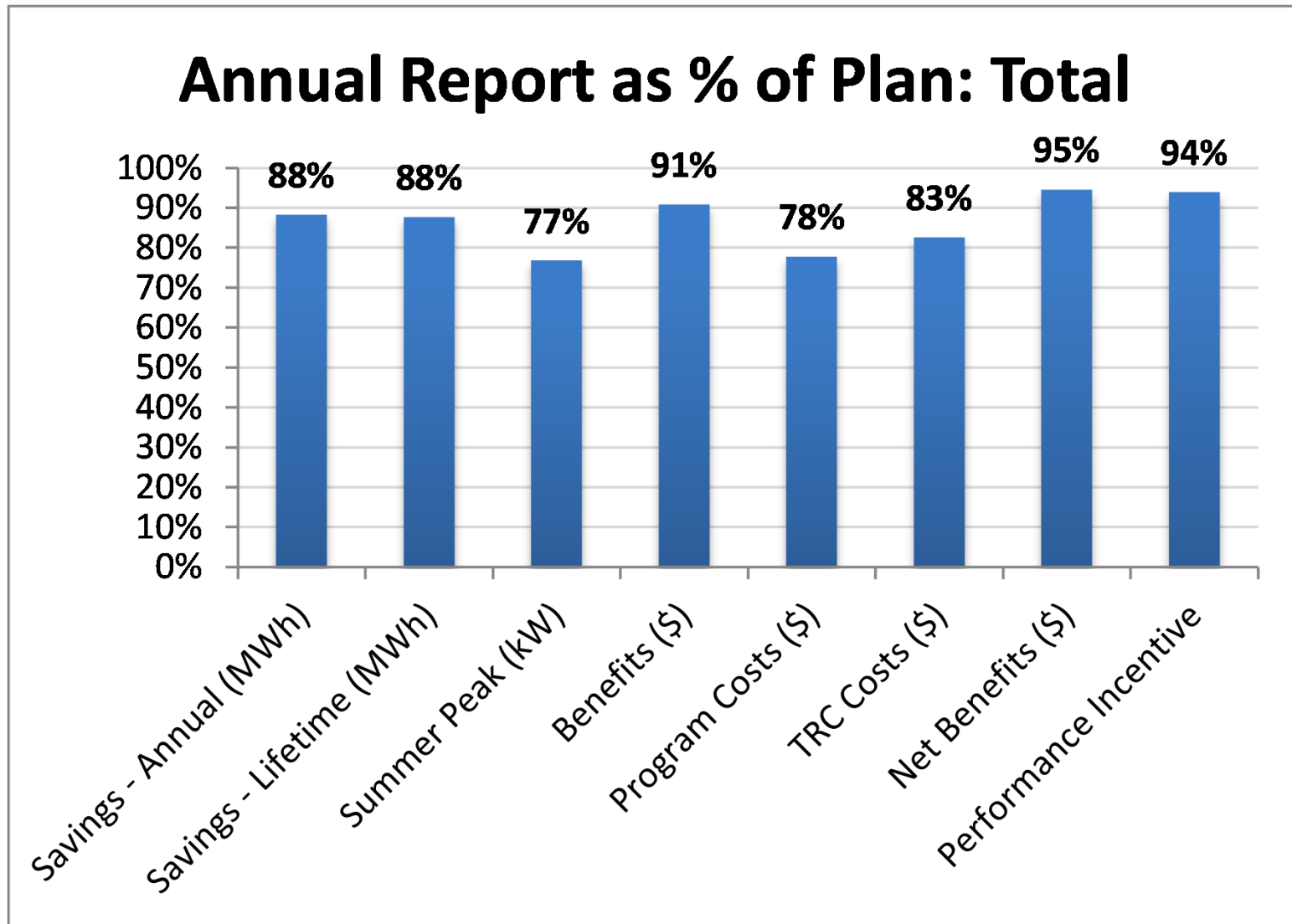
Electric Programs

	2012 Final	% of Plan	% difference from preliminary year-end
Annual GWh Saved	980	88%	-4%
Lifetime GWh Saved	10,725	88%	-2%
Peak kW saved (MW)	127	77%	-15%
Benefits (million \$)	1,957	91%	n/a
Program Costs (million \$)	387	78%	n/a
Net Benefits (million \$)	1,402	95%	n/a
Performance Incentive (million \$)	24	94%	n/a

n/a = preliminary year-end data not reported

Effects of evaluations/EM&V

Electric Programs





Electric Programs (Table for Reference)

	2012 Final	% of Plan
Annual GWh Saved	980	88%
Lifetime GWh Saved	10,725	88%
Peak kW saved (MW)	127	77%
Benefits (million \$)	1,957	91%
Program Costs (million \$)	387	78%
TRC Costs (million \$)	555	83%
Net Benefits (million \$)	1,402	94%
Performance Incentive (million \$)	24	94%



Gas Programs

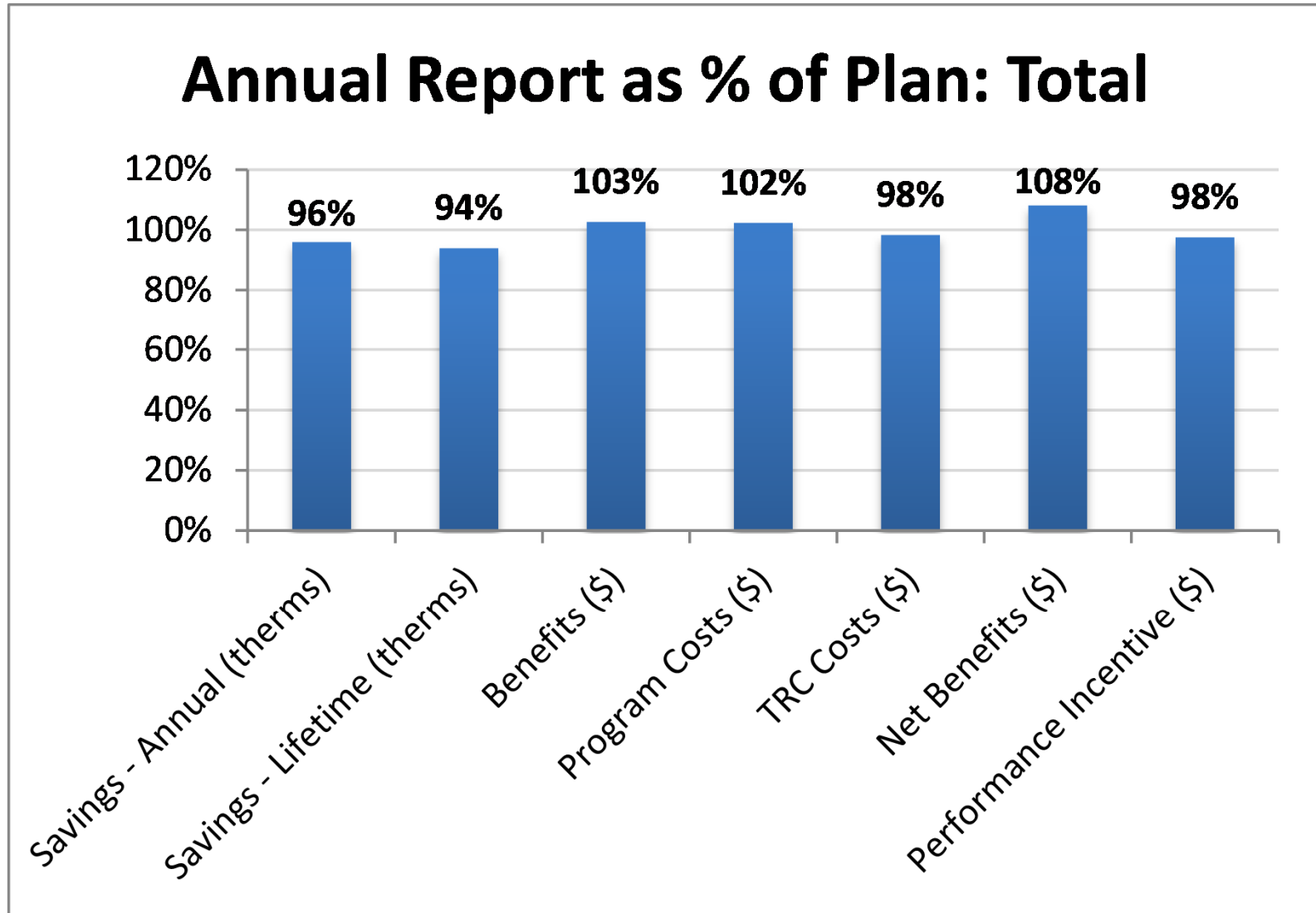
Table 2: 2012 Statewide Gas Program Performance

	2012 Final	% of Plan	% difference from preliminary year-end
Annual BBtu Saved	2,263	96%	-6%
Lifetime BBtu Saved	31,149	94%	-6%
Benefits (million \$)	377	103%	n/a
Program Costs (million \$)	135	102%	n/a
Net Benefits (million \$)	177	108%	n/a
Performance Incentive (million \$)	5	98%	n/a

n/a = preliminary year-end data not reported

Effects of evaluations/EM&V

Gas Programs





Gas Programs (Table for Reference)

	2012 Final	% of Plan
Annual BBtu Saved	2,263	96%
Lifetime BBtu Saved	31,149	94%
Benefits (million \$)	377	103%
Program Costs (million \$)	135	102%
TRC Costs (million \$)	199	98%
Net Benefits (million \$)	177	108%
Performance Incentive (million \$)	5	98%

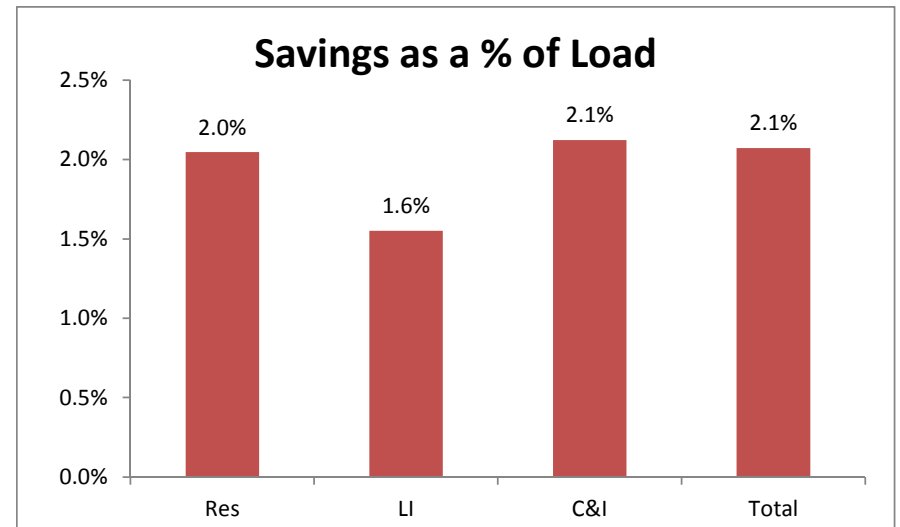
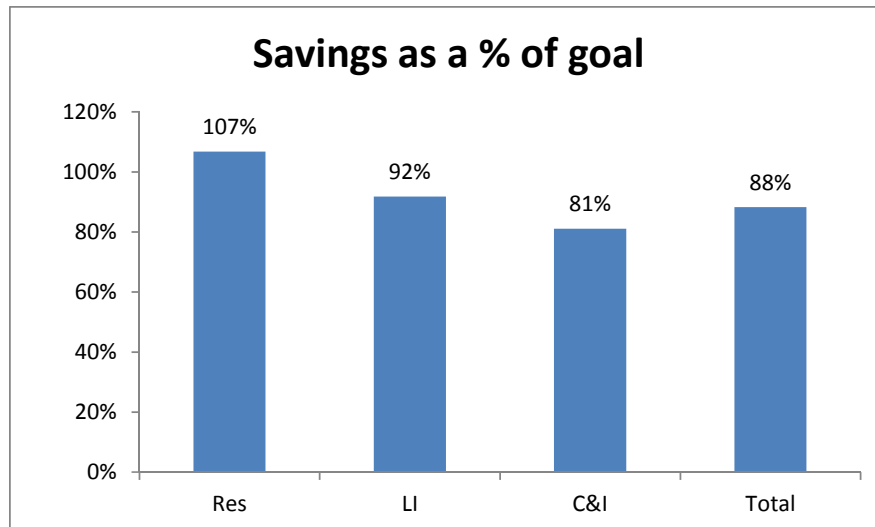




Several PAs achieved or exceeded their 2012 goals

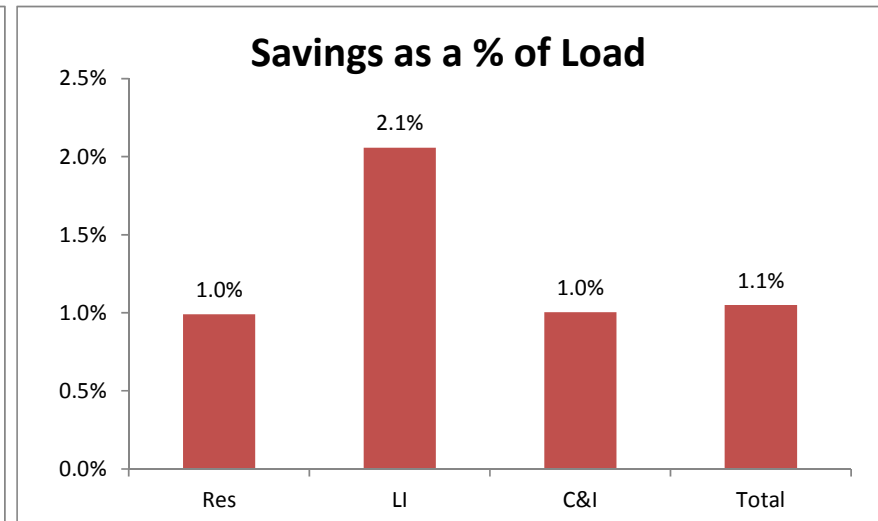
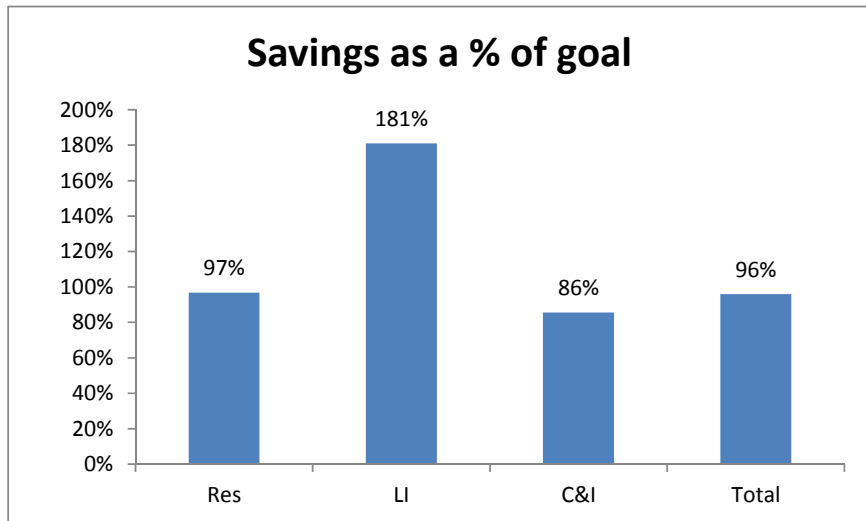
- National Grid gas: 103% of Plan portfolio goal, with 95% residential, 249% low income, and 98% C&I
- NSTAR electric: 98% of Plan portfolio goal, with 131% residential, 123% low income, and 90% C&I
- NSTAR gas exceeded goals in residential and low income
- WMECo achieved 103% of Plan goal in residential
- NGrid electric achieved 100% of Plan goal in residential
- NEG achieved 108% of Plan goal in residential
- Several PAs exceeded the gas goals for low income
- Berkshire exceeded goals in residential and low income
- Unitil exceeded goals in gas but fell short in electric
- Goals are achievable and are being achieved by some PAs

Performance By Sector - Electric



- 2012 electric performance was different by sector, with C&I performance relative to goal lagging the other two sectors

Performance By Sector - Gas



- 2012 gas performance was different by sector, with very good performance in low income, and with C&I performance relative to goal lagging the other two sectors

Variations Across PAs

Table 3: 2012 Statewide Electric Program Performance by PA

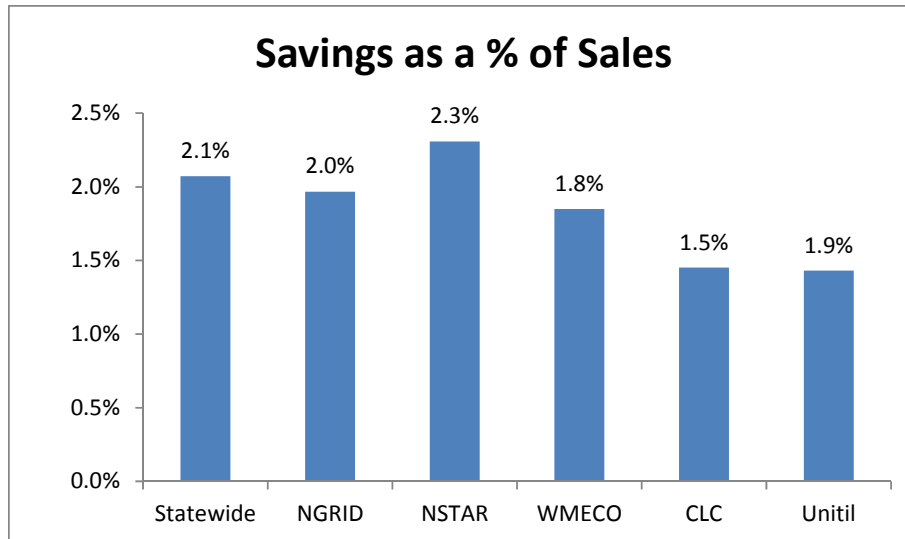
	Statewide					
	Total	NGRID	NSTAR	WMECO	CLC	UNITIL
Annual kWh % of Plan	88%	82%	98%	85%	78%	66%
Spending % of Plan	78%	75%	75%	97%	98%	72%
PA cost/annual kWh	\$0.40	\$0.38	\$0.36	\$0.47	\$0.88	\$0.67
TRC benefit/annual kWh	\$2.00	\$1.82	\$2.04	\$2.12	\$3.28	\$3.23
TRC BCR	3.5	3.4	3.7	3.6	3.2	3.1

Table 4: 2012 Statewide Gas Program Performance by PA

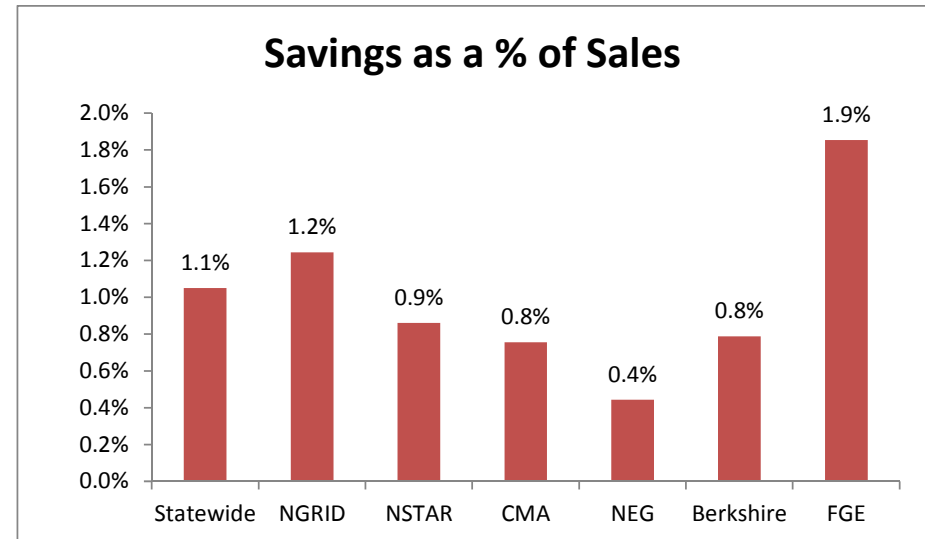
	Statewide						
	Total	NGRID	NSTAR	CMA	NEG	BERKSHIRE	FGE
Annual MMBtu % of Plan	96%	103%	82%	82%	63%	96%	296%
Spending % of Plan	102%	109%	91%	90%	89%	110%	115%
PA cost/annual MMBtu	\$60	\$59	\$57	\$66	\$92	\$81	\$30
TRC benefit/annual MMBtu	\$166	\$155	\$171	\$186	\$188	\$235	\$286
TRC BCR	1.9	1.8	2.0	1.9	1.4	1.6	5.8

Variations Across PAs

Electric



Gas



- 2012 performance varied widely across the PAs, based on energy savings as a % of retail energy sales
- Yet energy savings as a % of sales is a relative indicator, and is based on the retail energy sales in each PA territory

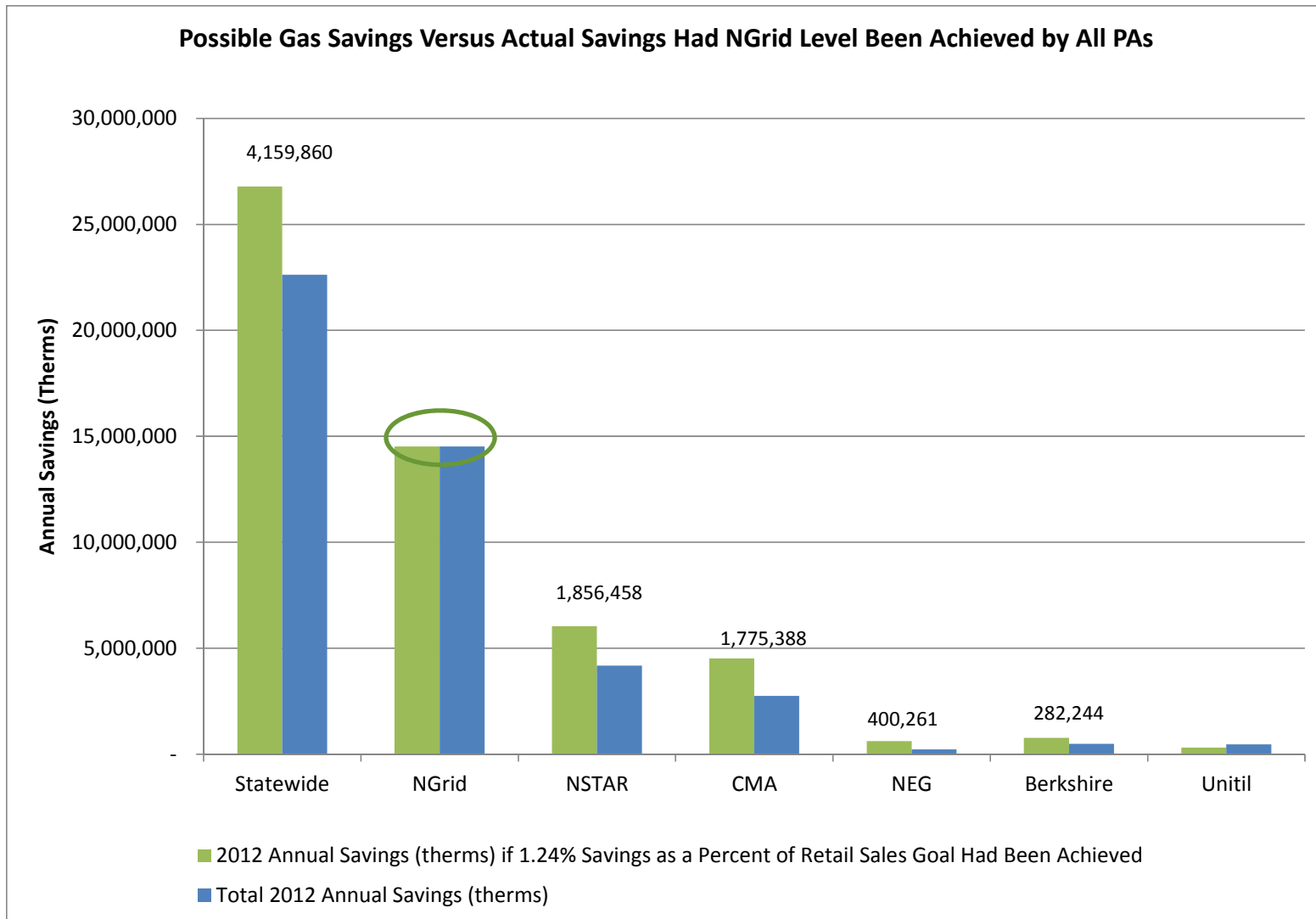
Electric savings as % of sales



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



Additional savings are possible





Need more data for some purposes

The Annual Reports are documents prepared for the DPU per DPU guidelines. The level of detail in the data provided is insufficient for the consulting team to verify the savings claims, costs per unit savings, and benefits.

For instance, if the Consulting team had access to more detailed data it would allow us to:

- Address several of the issues noted in our memorandum, including the wide variances between PAs in some key indicators of performance.
- Support program development by identifying and targeting savings opportunities.
- Verify that that the PAs applied all the changes to the statewide Technical Reference Manual (TRM) resulting from EM&V studies into the values presented in the Annual Reports.
- Understand the details behind highly aggregated C&I programs

C&I Retrofit (electric)	\$143 million	30% of spending	54% of lifetime energy savings
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(Initiative-level data from the 08-50 data tables)



Notes

- Initial review
- More to come -- a three-year review of the 2010-2012 performance is scheduled for the September 10 EEAC meeting
- There are some data inconsistencies in the PAs' 2012 Annual Reports, which we have reviewed with the PAs as needed – so there will be some revisions to some of the PA Annual Reports