



EEAC Consultant Initial Review of July 2nd Draft Plans for 2013-2015

EEAC Consultant Team
July 10, 2012 (Revised Draft)





Many Good Elements

- **Well-organized and written** - Reads like a plan indicative of a national leader in energy efficiency
- **Well-collaborated and coordinated** – A true “statewide” plan
- **Innovative** - Leading ideas, best practices, and enhancements
 - Efficient Neighborhoods+, street lighting, customer self-service portal, segmentation, new financial tools, healthcare equip, upstream, and many more...
- **Responsive** – Addresses many Council Priorities and “asks”
- **Committed** – Many Program Descriptions include commitments, milestones, and dates





Key Concerns and Issues

- **Savings** – Electric approaching target, gas too low
- **Costs & Cost Drivers** – Costs are high; information provided is not adequate to satisfy “Sense of Council”
- **Consistency and Best-Practice Sharing** – Not adequately addressed for both planning and implementation
- **Deep Savings** – Primary focus of Plan is on broader, too little focus on achieving deeper savings
- **Action Plans** – Need more detail, commitment, or earlier dates for several initiatives, aligned with “Sense of Council”
- **Stakeholder Input** – Need more information on how PAs will address this key mechanism
- **CHP** – Given impact, CHP implementation and effect on cost is not adequately addressed

Issue: Cost Drivers

Sense of the Council - "...include complete analysis, methodologies used, assumptions, background, data sources, market uncertainties, etc. used to... build the budgets."

- Only text descriptions of cost drivers are provided
- Does not justify PA-proposed significant cost increases or satisfy "Sense of Council" request
- Decision makers need a systematic demonstration of cost driver impact on portfolio
- Little connection between actual costs and projected





Issue: Consistency and Best Practice Sharing

Sense of the Council - “..for each sector and related programs, explain how best practices were reviewed and modeled across PAs, and then used to develop and implement best practices across all PAs’ gas and electric plans.”

- Looking for proactive, formalized process for Best-Practice sharing in all implementation and planning efforts
- ...this includes sharing on costs and savings
- Becomes even more important as PAs pursue more market segmentation, new and customized delivery models
- Opportunity to raise the bar, draw from each other’s strengths, reduce overlap, improve collaboration and coordination including small PAs



Issue: Deep Savings

- Priority - “Continue to address deeper retrofit applications in residential, commercial, and low income sectors. With an effective model, the longer term results should lead to greater savings for more customers”
- Little mention of deeper savings, plan focused primarily on broader – without a plan for deeper savings, broader alone is not sustainable
- While lighting is important, its emphasis leads away from deep savings
- Issues exist for both Res and C&I
- What is plan to overcome deeper savings barriers?



Issue: Action Plans

Priority - “for each sector and key related programs or initiatives... provide an action plan with defined goals, deliverables, timelines and methods of evaluation.”

Need more detail, commitment, or earlier dates for several initiatives

Some Examples:

- Numerous HES enhancements do not include milestones or dates
- Lack of detail or commitment to residential feedback/behavior/engagement initiatives
- Lighting Retrofit Redesign Pilot not launched until Q4 of 2013. Could be sooner.
- No target date for implementation of LED street lighting





Issue: Stakeholder Input

Priority -“...provide specific and detailed information as to how Point 380, the January 10, 2012 Public Comments, the Appreciative Inquiry and the Synapse economic study were reviewed and used to inform, enhance and deliver the gas and electric plans.”

- Need more information on how stakeholder input (AI Summit, Council, etc.) was addressed in Plan
- Some Examples:
 - “Working with industry groups on marketing collaboration” from AI Summit is not addressed in plan
 - How will the ‘Culture of Sustainability’ be developed in the RES and Low Income sectors?
 - How will the programs target Hard-to-reach/hard-to-serve customers?

Issue: CHP

- Given impact on cost, CHP should be pursued to the maximum extent possible, as feasible, cost-effective, and within customer best-interest
- Plan reads: we've learned a lot, efficiency first, CHP second
- Demonstration of CHP effect on portfolio costs would benefit from scenario analysis
- Plan should have dedicated, focused effort to promote CHP
 - Separate initiative
 - Identify all potential opportunities in customer base
 - Efficiency can be promoted in parallel with CHP project

Data/Quantitative Analysis

- Data and quantitative analysis begins on the following slide





Total Benefits are Impressive, but 6% Lower than Benefits in April

\$8 billion in total benefits (electric and gas) for 2013-2015 proposed in the July 2nd Plan is still impressive...

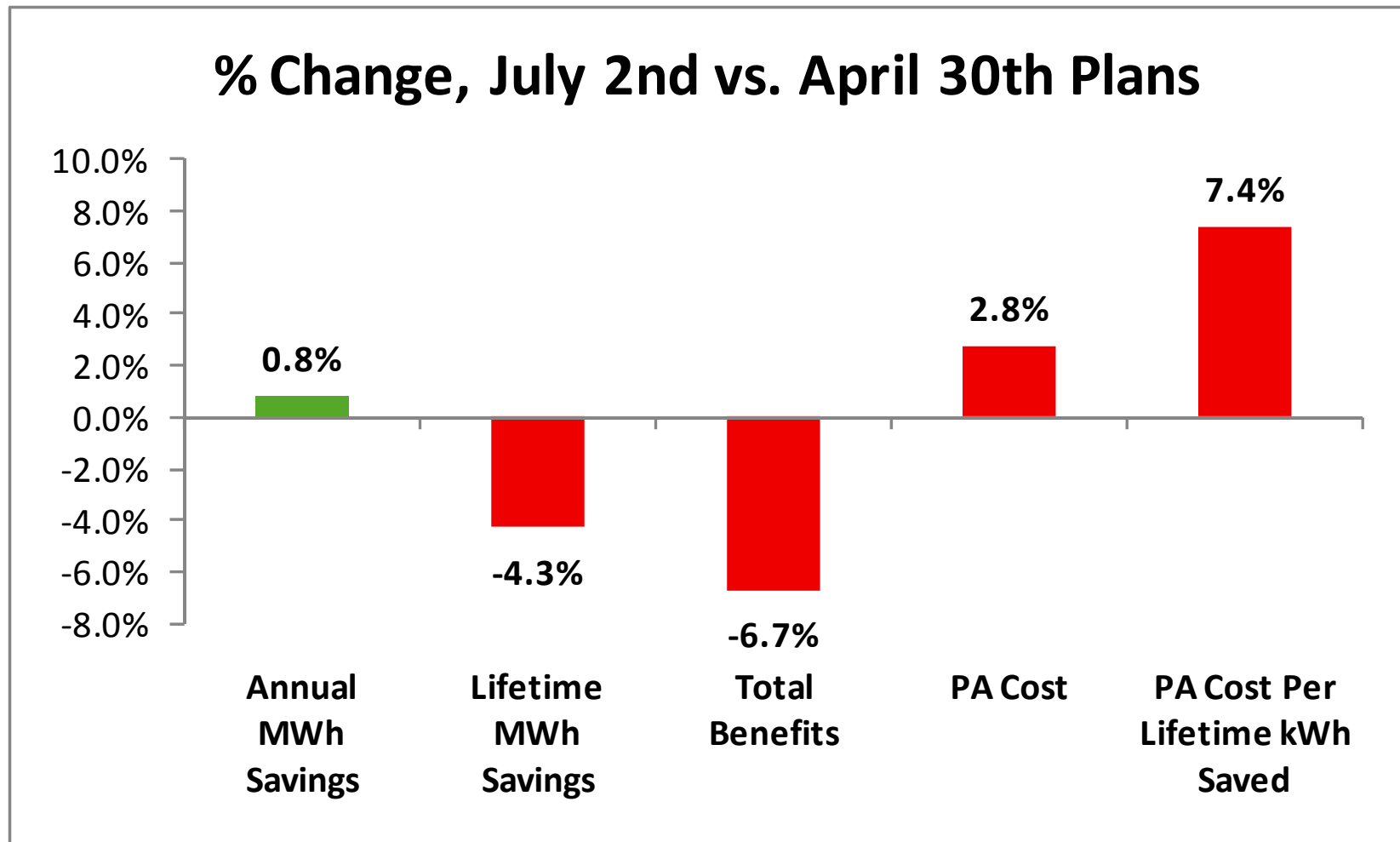
Energy Efficiency Program Benefits (millions) - JULY				
	2013	2014	2015	Total
Electric Benefits	\$ 2,255	\$ 2,311	\$ 2,397	\$ 6,963
Gas Benefits	\$ 354	\$ 364	\$ 375	\$ 1,093
Total Benefits	\$ 2,609	\$ 2,675	\$ 2,772	\$ 8,056

Energy Efficiency Program Benefits (millions) - APRIL				
	2013	2014	2015	Total
Electric Benefits	\$ 2,447	\$ 2,489	\$ 2,529	\$ 7,465
Gas Benefits	\$ 364	\$ 375	\$ 384	\$ 1,123
Total Benefits	\$ 2,810	\$ 2,864	\$ 2,914	\$ 8,588

...but they are about 6% lower than the \$8.6 billion in benefits proposed in the April 30th Draft Plan



Electric Summary: Savings Mixed, Benefits Lower, and Costs Higher Compared to the April 30th Draft Plan



Red bars indicate changes that were not consistent with EEAC consultant recommendations.



Electric Summary: Savings Mixed, Benefits Lower, and Costs Higher Compared to the April 30th Draft Plan

Comparison Between July 2nd and April 30th Versions of 2013-2015 Plans					
2013-2015 Plan	Annual MWh Savings	Lifetime MWh Savings	Total Benefits (\$, billions)	PA Cost (\$, billions)	PA Cost Per Lifetime kWh Saved
July Plan	3,603,259	39,958,324	\$6.963	\$1.569	\$0.039
April Plan	3,574,423	41,750,715	\$7.465	\$1.527	\$0.037
% Change, July vs. April Plan	0.8%	-4.3%	-6.7%	2.8%	7.4%

All quantities are for the three years of the Plan, 2013-2015, at the portfolio level.



Electric Savings Goals

Electric Annual Savings as % Sales (Annual % Savings Goals)									
	Actuals and MTMs			July 2nd Plan			April 30th Plan		
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015	2013	2014	2015
Statewide	1.30%	1.72%	2.32%	2.47%	2.49%	2.49%	2.45%	2.47%	2.47%
NGRID	1.36%	1.69%	2.41%	2.50%	2.52%	2.53%	2.48%	2.51%	2.50%
NSTAR	1.34%	1.79%	2.37%	2.51%	2.55%	2.55%	2.50%	2.50%	2.50%
WMECo	1.12%	1.47%	2.18%	2.53%	2.54%	2.52%	2.50%	2.50%	2.50%
CLC	0.76%	1.28%	1.17%	1.70%	1.61%	1.62%	1.82%	1.77%	1.80%
Unitil	0.61%	4.18%	2.18%	1.66%	1.68%	1.68%	1.69%	1.69%	1.69%

- Electric annual savings approach the 2.5% target for 2013
- Savings as a % of retail sales are fairly flat, though MWh savings increase slightly in 2014 and 2015 (due to higher sales)
- Annual savings are 0.8% higher than the April Plan
- ...but lifetime savings are 4.3% lower
- Savings are slightly under Clean Energy and Climate Plan targets



Electric Savings Goals and Clean Energy & Climate Plan

	Electric Annual Energy Savings in GWh				Needed Goal 2013-15 Plan
	Total CECP	July Plan	Shortfall	% Shortfall	
2013	1,190	1,178	12	1.0%	2.49%
2014	1,257	1,206	51	4.1%	2.59%
2015	1,325	1,219	106	8.0%	2.71%
Savings at customer meter level					

- Electric annual savings start close to 2.5% in 2013, but are fairly flat as a % of sales across the three years
- Annual savings increase slightly each year, as shown above, partly because the retail sales forecast grows slightly
- PA electric savings goals would need to be a bit higher to meet the CECP targets; 1% higher in 2013, 4% higher in 2014, and 8% higher in 2015



Are the Electric EE Programs Acquiring All Cost-Effective EE?

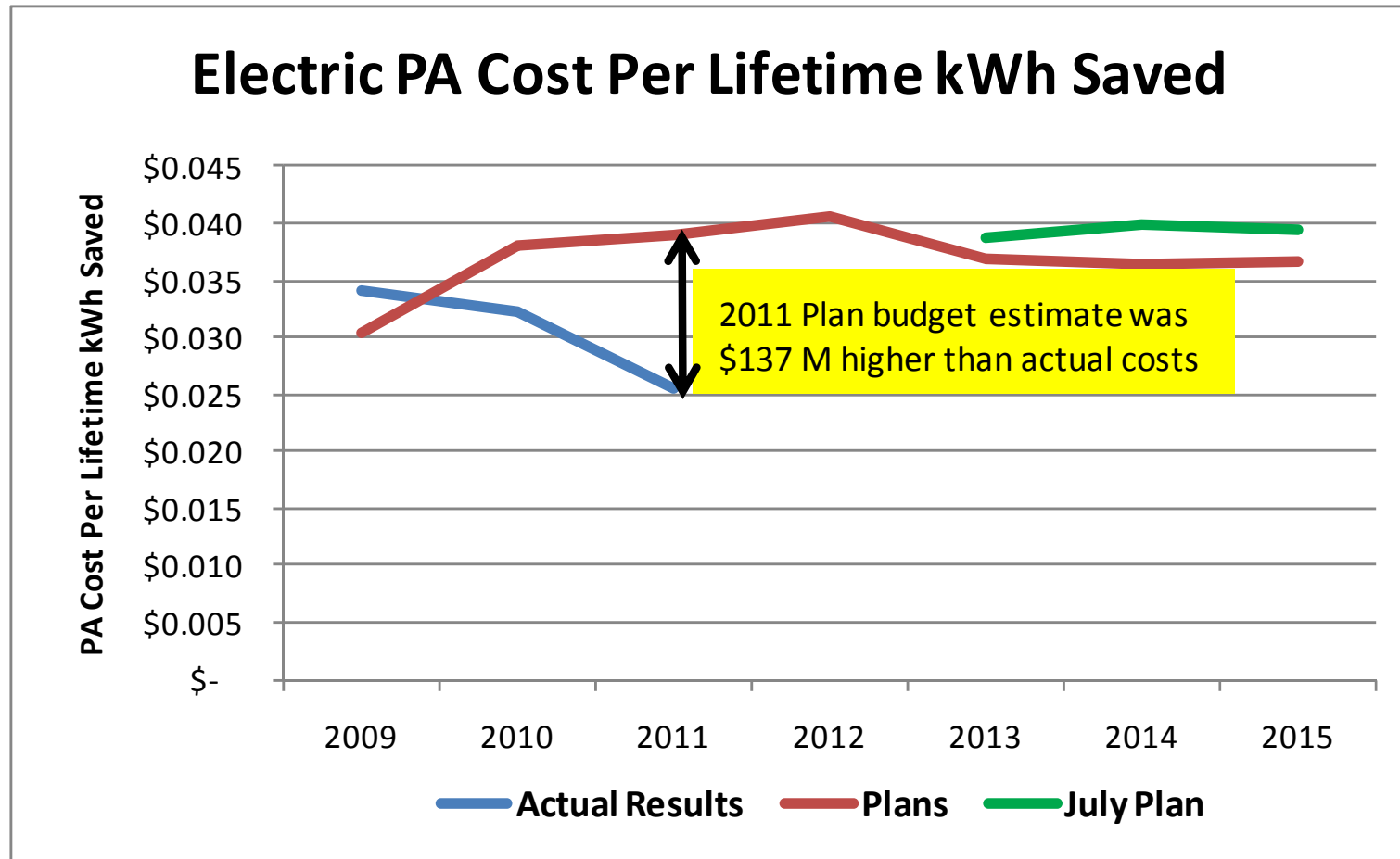
High electric program benefit/cost ratios indicate that the EE programs are not acquiring all cost-effective EE.

Benefit/Cost Ratios in 2013-2015 Plan (July 2nd)				
	2013	2014	2015	2013-2015
Residential	2.93	2.92	3.05	2.97
Low Income	2.02	1.94	2.00	1.99
C&I	3.36	3.44	3.55	3.45
Total	3.13	3.17	3.28	3.19

The electric benefit/cost ratios proposed by the PAs increase over the years, which is not consistent with increasing the emphasis on deeper savings.



Electric Costs Per Unit Savings are 7% Higher than in April Plan



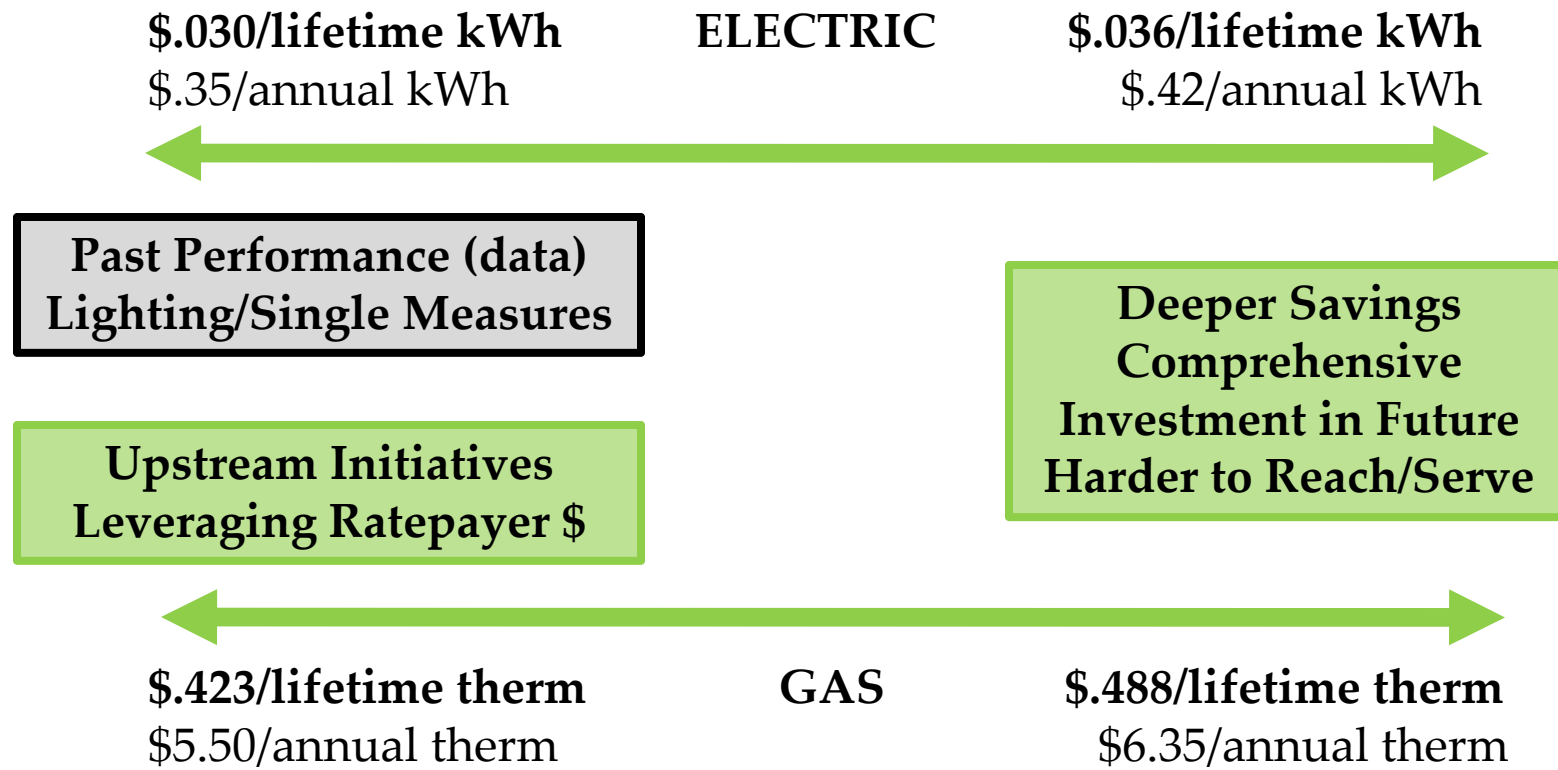
PA-proposed costs to achieve savings also are significantly (54%) higher than 2011 actual costs to achieve savings.





Budget Suggestion for 2013-2015

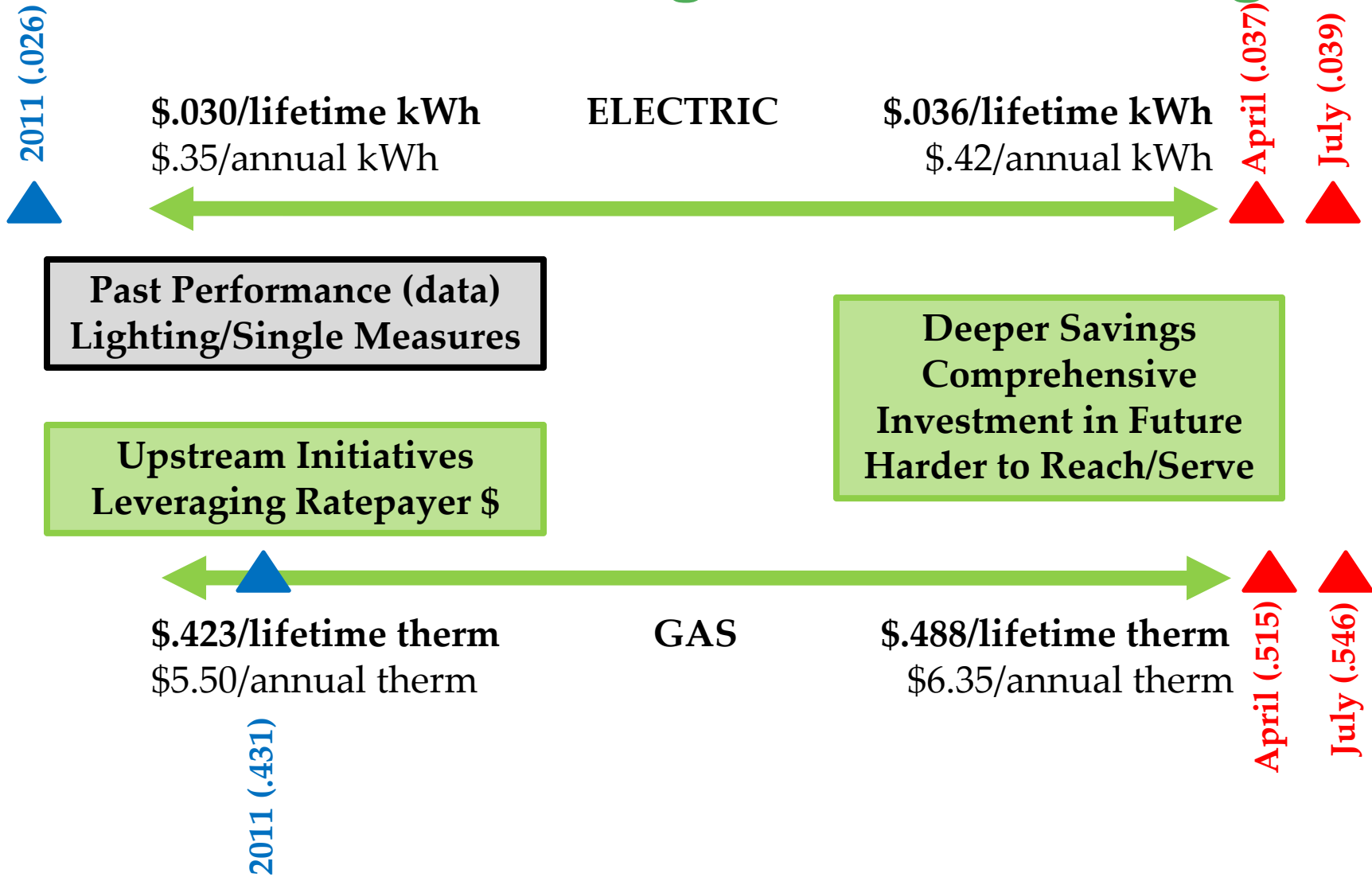
Initial Thoughts on Cost Ranges



Based on EEAC Consultant initial analysis from April 2012.
 Each \$.001/lifetime kWh saved = ~\$40 million
 Each \$.001/lifetime therm saved = \$0.87 million

Budget Suggestion for 2013-2015

Initial Thoughts on Cost Ranges





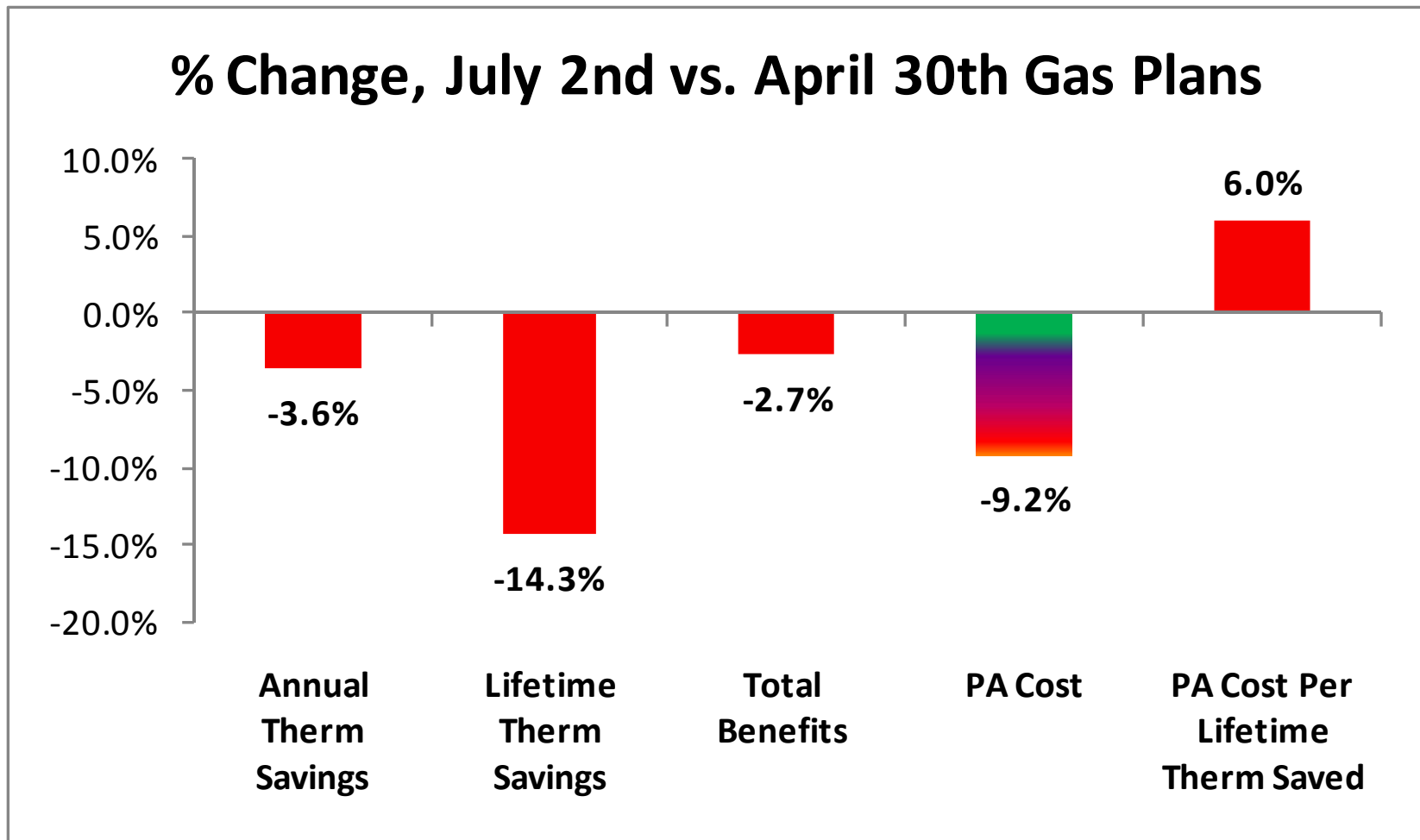
Electric Costs Per Unit Savings are Higher and Vary Significantly

Electric PA Cost/Lifetime kWh Saved									
	Actuals and MTMs			July 2nd Plan			April 30th Plan		
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015	2013	2014	2015
Statewide	\$ 0.032	\$ 0.026	\$ 0.041	\$ 0.039	\$ 0.040	\$ 0.039	\$ 0.037	\$ 0.036	\$ 0.037
NGRID	\$ 0.032	\$ 0.028	\$ 0.043	\$ 0.041	\$ 0.041	\$ 0.041	\$ 0.036	\$ 0.036	\$ 0.036
NSTAR	\$ 0.028	\$ 0.023	\$ 0.038	\$ 0.034	\$ 0.036	\$ 0.035	\$ 0.035	\$ 0.035	\$ 0.035
WMECo	\$ 0.039	\$ 0.032	\$ 0.036	\$ 0.038	\$ 0.040	\$ 0.041	\$ 0.038	\$ 0.038	\$ 0.038
CLC	\$ 0.082	\$ 0.049	\$ 0.073	\$ 0.088	\$ 0.079	\$ 0.082	\$ 0.074	\$ 0.064	\$ 0.065
Unitil	\$ 0.060	\$ 0.009	\$ 0.049	\$ 0.062	\$ 0.061	\$ 0.062	\$ 0.051	\$ 0.051	\$ 0.052

- PA-proposed cost per unit savings (\$.039/kWh for 2013-2015) in the July 2nd Plan is significantly (54%) higher than 2011 actual cost per unit savings (\$.026/kWh)
- This difference in cost per kWh saved = **\$548 million higher costs** over the three years
- Costs per unit savings vary significantly across the PAs, by more than a factor of two



Gas Summary: Savings Lower, Benefits Lower, and Costs Per Unit Savings Higher Compared to the April 30th Plan



Red bars indicate changes that were not consistent with EEAC consultant recommendations.





Gas Summary: Savings Lower, Benefits Lower, and Costs Per Unit Savings Higher Compared to the April 30th Plan

Comparison Between July 2nd and April 30th Versions of 2013-2015 Gas Plans

2013-2015 Plan	Annual Therm Savings	Lifetime Therm Savings	Total Benefits (\$, millions)	PA Cost (\$, millions)	PA Cost Per Lifetime Therm Saved
July Plan	66,707,515	866,179,423	\$1,093	\$473	\$0.546
April Plan	69,181,272	1,011,225,373	\$1,123	\$521	\$0.515
% Change, July vs. April Plan	-3.6%	-14.3%	-2.7%	-9.2%	6.0%

All quantities are for the three years of the Plan, 2013-2015, at the portfolio level.



Gas Savings Goals

Gas Annual Savings as % Sales (Annual % Savings Goals)									
	Actuals and MTMs			July 2nd Plan			April 30th Plan		
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015	2013	2014	2015
Statewide	0.56%	0.73%	1.10%	0.98%	1.05%	1.06%	1.02%	1.09%	1.10%
NGRID	0.54%	0.77%	1.21%	1.00%	1.10%	1.11%	1.06%	1.16%	1.15%
NSTAR	0.51%	0.71%	1.05%	1.04%	1.05%	1.06%	1.10%	1.12%	1.15%
CMA	0.72%	0.70%	0.92%	1.00%	1.03%	1.05%	1.00%	1.03%	1.05%
NEG	0.27%	0.55%	0.71%	0.65%	0.65%	0.66%	0.51%	0.52%	0.53%
Berkshire	0.50%	0.49%	0.82%	0.56%	0.57%	0.68%	0.51%	0.52%	0.55%
Unitil	0.81%	0.66%	0.63%	0.63%	0.67%	0.72%	0.63%	0.63%	0.63%

- Gas annual savings are less than 1% in 2013, lower than the 2012 MTM level (1.10%) and lower than consultants suggested
- Gas savings do not increase adequately in 2014 and 2015 to continue the ramp up to higher savings levels
- Gas annual savings are 3.6% lower than the April Plan
- Gas lifetime savings are 14.3% lower than the April Plan



Gas Costs Per Unit Savings are 6% Higher than in April Plan

Gas PA Cost/Lifetime Therm Saved									
	Actuals and MTMs			July 2nd Plan			April 30th Plan		
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015	2013	2014	2015
Statewide	\$ 0.303	\$ 0.431	\$ 0.397	\$ 0.544	\$ 0.547	\$ 0.549	\$ 0.521	\$ 0.516	\$ 0.509
NGRID	\$ 0.299	\$ 0.549	\$ 0.475	\$ 0.604	\$ 0.608	\$ 0.610	\$ 0.642	\$ 0.625	\$ 0.603
NSTAR	\$ 0.318	\$ 0.295	\$ 0.329	\$ 0.520	\$ 0.523	\$ 0.526	\$ 0.480	\$ 0.484	\$ 0.487
CMA	\$ 0.288	\$ 0.334	\$ 0.292	\$ 0.435	\$ 0.438	\$ 0.445	\$ 0.335	\$ 0.350	\$ 0.363
NEG	\$ 0.607	\$ 0.398	\$ 0.435	\$ 0.552	\$ 0.555	\$ 0.531	\$ 0.443	\$ 0.460	\$ 0.477
Berkshire	\$ 0.308	\$ 0.344	\$ 0.351	\$ 0.466	\$ 0.448	\$ 0.436	\$ 0.394	\$ 0.376	\$ 0.374
Unitil	\$ 0.247	\$ 0.363	\$ 0.380	\$ 0.474	\$ 0.495	\$ 0.496	\$ 0.357	\$ 0.364	\$ 0.371

- PA-proposed cost per unit savings (\$.546/therm for 2013-2015) in the July 2nd Plan is significantly (27%) higher than 2011 actual cost per unit savings (\$.431/lifetime therm)
- Three year difference in cost per therm saved = **\$100 million**
- Costs per unit savings vary significantly across the PAs



Marketing and Branding

- Many Good Elements
 - Strong focus on increasing awareness, driving participation, implementation of market segmentation
 - Prioritizes community work, outreach to schools, utilization of diverse media
 - Reexamination of website usability/scope, brand guidelines, messaging effectiveness
- Opportunities for Improvement
 - More emphasis on Mass Save as unifying, dominant brand in statewide, program, and PA-specific EE marketing
 - More focus on *statewide* marketing and support for increasing awareness of Mass Save brand
 - Development of high-level strategic metrics to define success and against which to measure success
 - Localization (multi-language) of Mass Save website

Bill Impacts

- Analysis of Bill Impacts will be included in the final version of this presentation, as additional data are reviewed and analyzed
- NOTE: In general, issues regarding program enhancements and associated program costs and cost drivers will need to be resolved before the bill impact numbers could be known reliably.





Summary of EEAC Consultant Suggestions

- Electric savings slightly higher, and increasing across 2013-2015, to meet the CECF targets
- Gas savings higher each year, at least 1.1% in 2013 increasing to 1.3% by 2015
- Stronger focus on deeper savings, to acquire all cost-effective EE now and throughout decade
- Budgets adequate to support the achievement of the goals, with enhanced/deeper programs (the current PA-proposed costs are too high for the programs proposed in the July Plan)