Optimal ENERGY Integrated Energy Resources

Delaware EEAC Goal Selection Process

Presentation to the Council

June 10, 2015

EE Goals are Informed by Several Datapoints

- Past program activity
- Projected potential
- Demonstrated achievement in other jurisdictions

Past EE Activity in Delaware

- DESEU: ~0.3% of sales (2013-2014)
- DEC: ~0.6% of sales (2012-2014)
- ACEEE (all parties): ~0.5% of sales (2010-2013)

- WAP: 264 homes, <0.1% of sales (2014)

2014 Study Found Substantial EE Potential

- Savings in all fuels
- Highly cost-effective program potential
- EE investments benefit the environment and the economy
- Energy savings reduce average customer bills
- Well designed programs maximize customer participation across all sectors
- **Savings levels identified in this study are already being achieved in other jurisdictions**

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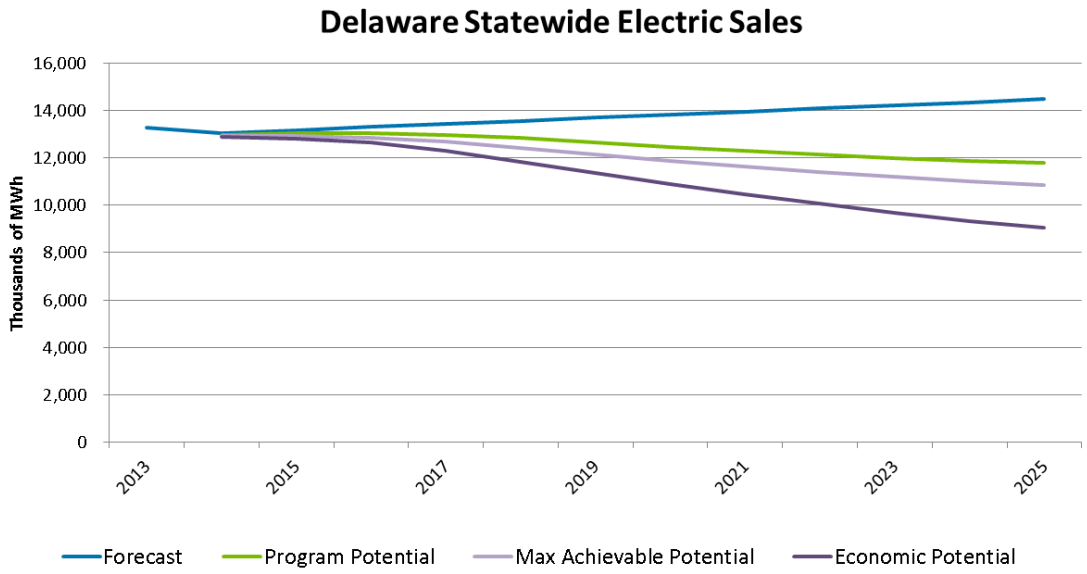
Potential Savings Rates Much Higher than Past

	Electric		Natural Gas		Petroleum Fuels	
	GWh	%	BBtu	%	BBtu	%
Program Potential	2,708	19	4,319	9	1,203	12
Max Achievable Potential	3,620	23	5,904	13	1,913	20
Economic Potential	4,670	30	8,561	18	2,391	25

Cumulative 12-year Annual Energy Savings Potential Relative to Sales Forecast, 2025



2014 Results are Comparable to 2011 Study

		CEEP (2011)	Optimal (2013)
Program Potential (Full Study Period)	**Study Period**	5 years	12 years
	Electric Potential (GWh)	797-1,190	2,709
	(% Savings)	(6.8-10.1%)*	(18.7%)
	Gas Potential (MMBtu)	1,021-1,794	4,319
	(% Savings)	(2.9-5.1%)	(9.1%)
	Petroleum Potential (MMBtu)	N/A	1203
	(% Savings)		(12.4%)
	Program Cost ($million)	198-362	839
	Emissions Savings (Thousand MT CO_2)	786-,1177	2,102
Program Potential (Annual Average)	**Electric Potential (GWh)**	159-238	226
	(% Savings)	(1.4-2.0%)	(1.6%)
	Gas Potential (MMBtu)	204-359	360
	(% Savings)	(0.6-1.0%)	(0.8%)
	Petroleum Potential (MMBtu)	N/A	100
	(% Savings)		(1.0%)
	Program Cost ($million)	40-72	70
	Emissions Savings (Thousand MT CO_2)	157-235	175

On an annual basis, results are similar

The 2011 CEEP study estimated energy savings relative to 2007 sales. Savings as a percent of sales are therefore higher than they would be if comparing savings to sales in each year. For example, assuming a 1% growth rate would result in percent savings estimates approximately 0.5% lower if comparing savings to sales in 2015 rather than 2007.

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Recent Examples of Program Acceleration

	2010	2011	2012	2013	2014	2015
Massachusetts						
Average Target	1.4%	2.0%	2.4%	2.5%	2.55%	2.6%
Achieved Savings	*1.2%*	*1.7%*	*2.1%*	*2.4%*		
Maryland						
Average Target	1.0%	1.2%	1.2%	1.6%	1.6%	1.6%
Achieved Savings	*0.6%*	*0.7%*	*1.3%*	*1.6%*		
Pennsylvania						
Average Target		1.0%	1.0%	1.0%	0.8%	0.8%
Achieved Savings	*0.2%*	*1.0%*	*1.0%*	*1.0%*		
Arkansas						
Average Target		0.2%	0.5%	0.8%	0.8%	0.9%
Achieved Savings	*0.1%*	*0.2%*	*0.5%*	*0.9%*		
Arizona						
Average Target		1.2%	1.8%	2.0%	2.2%	2.2%
Achieved Savings	*1.0%*	*1.4%*	*1.7%*	*1.7%*		

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Putting All of the Pieces Together…

	Year 1	Year 2	Year 3
Incremental Annual Eelctric Savings (MWh	57,881	100,751	154,465
as a % of sales forecast	0.4%	0.6%	0.9%
Incremental Annual Gas Savings (BBtu)	68.442	206.438	372.946
as a % of sales forecast	0.2%	0.3%	0.5%

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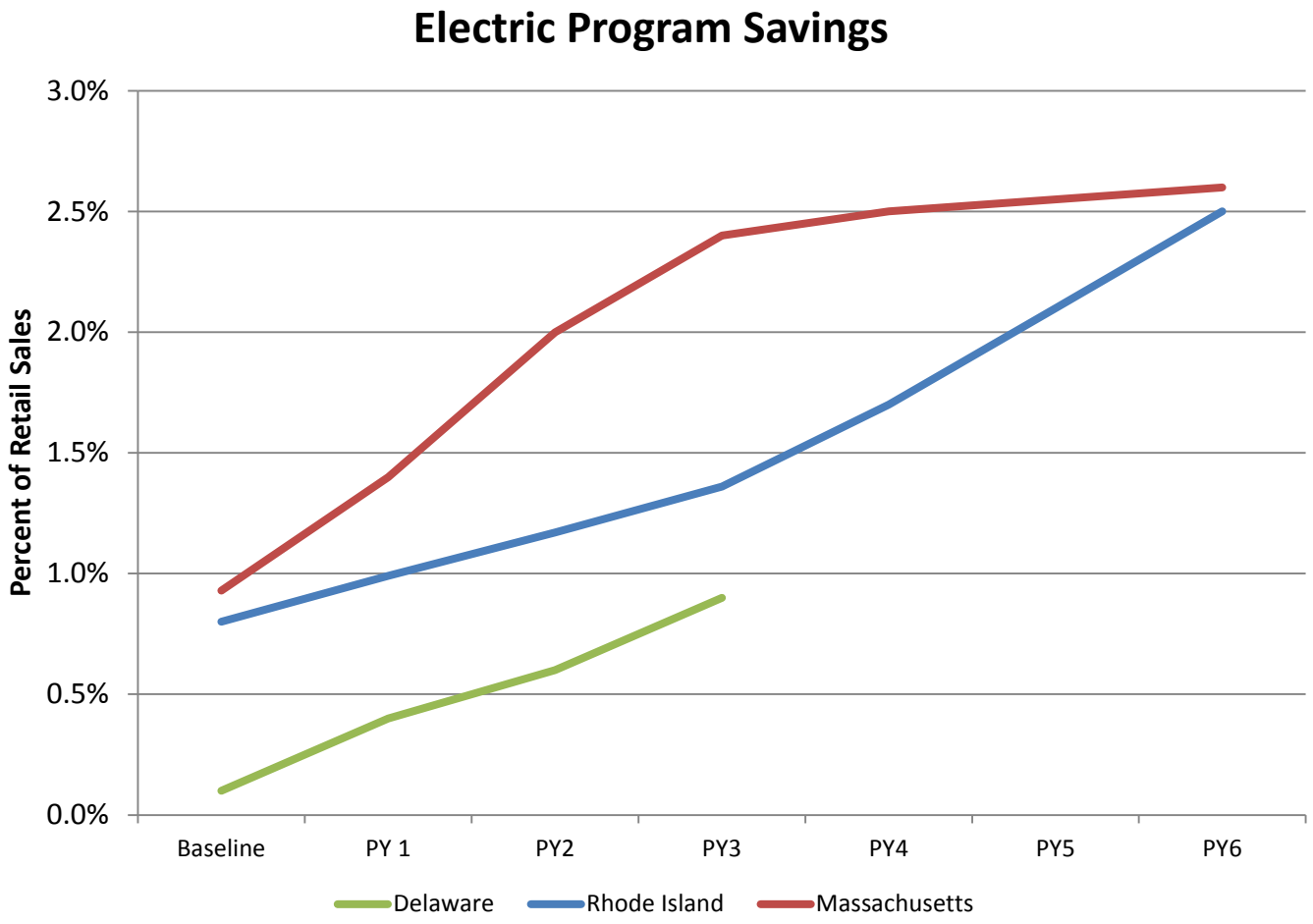
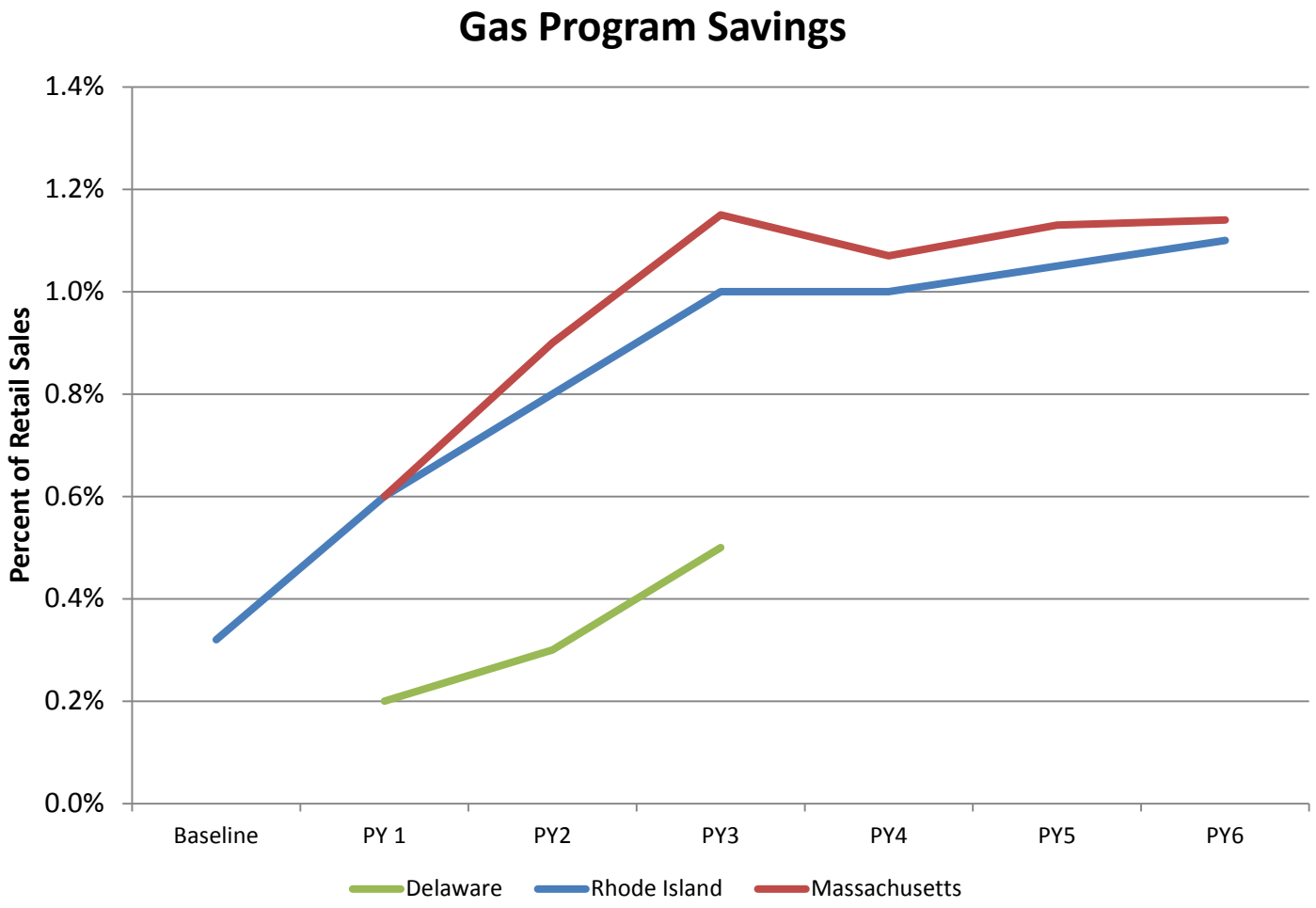
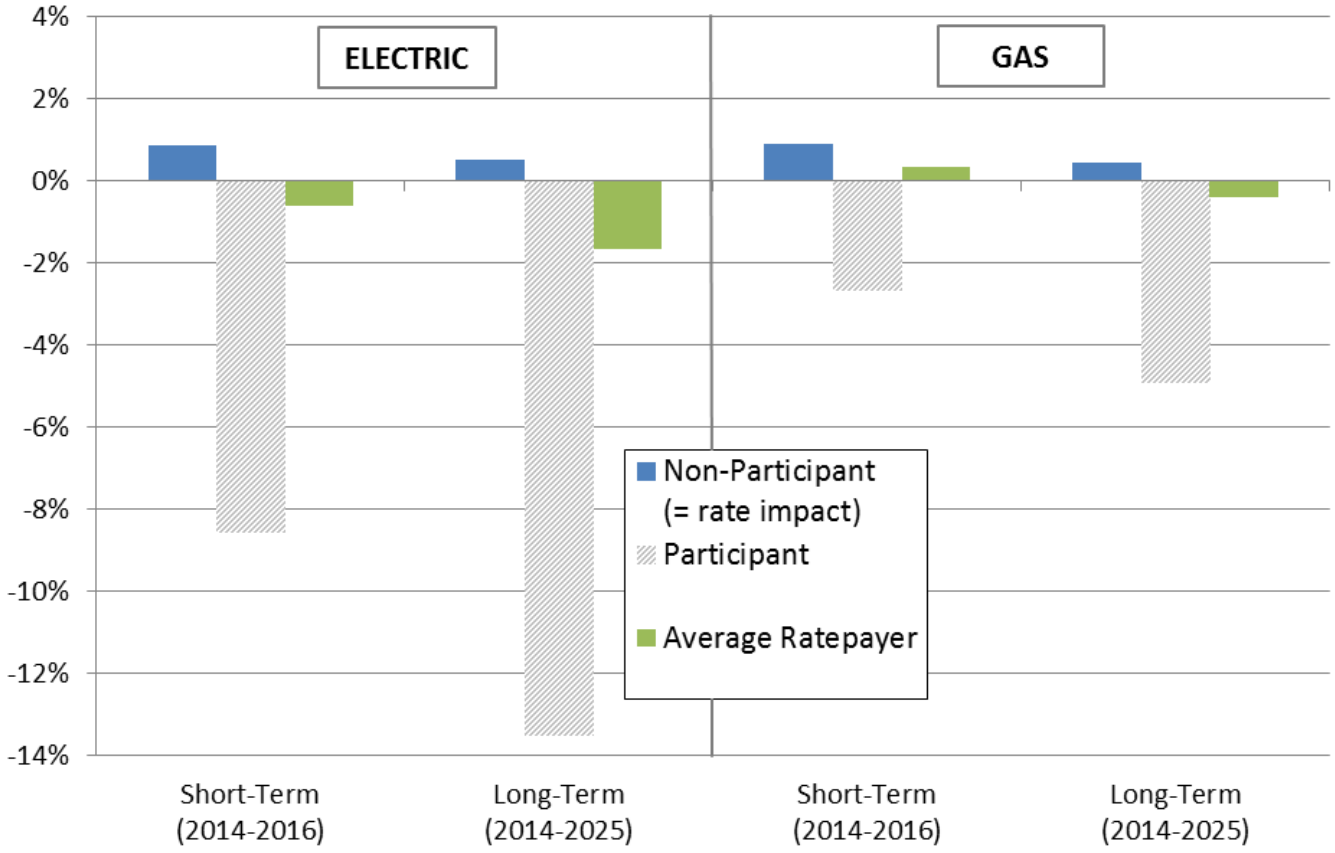
Electric Savings Ramp-up is Feasible…



Gas Savings Ramp-up is Feasible



Average Ratepayer sees Reduced Energy Bill



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Goals Aren't Everything…

- Meaningful stakeholder engagement
- Clear, stable, long-term regulatory and legislative support
- Meaningful and accurate cost-effectiveness screening
  - Robust EM&V practices
  - Realistic Avoided Costs
- Integrated Resource Planning practices

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