



Energy-Saving Obligations in the U.S.

Steven Nadel

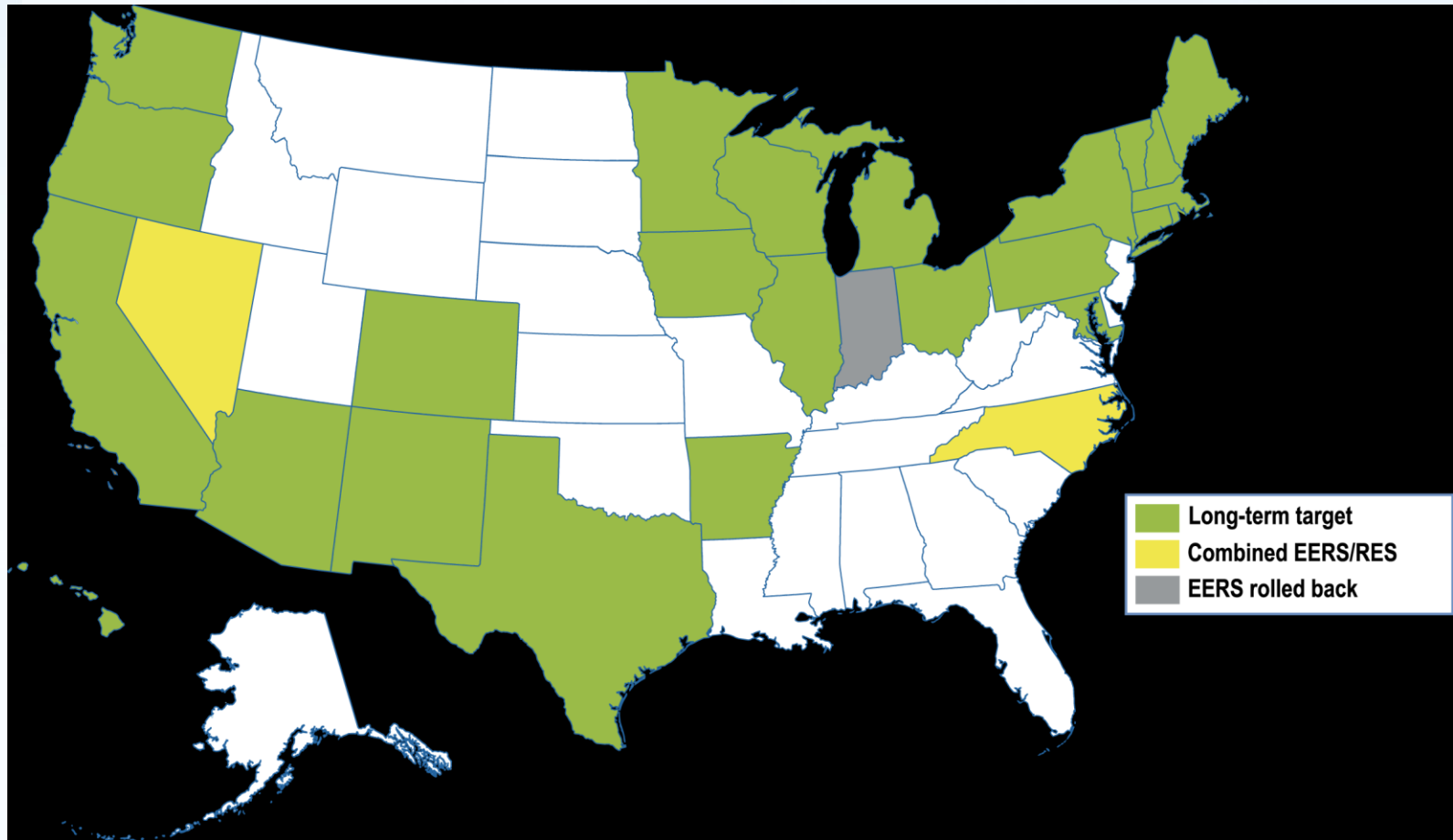
American Council for an Energy-Efficient Economy (ACEEE)

January 2017

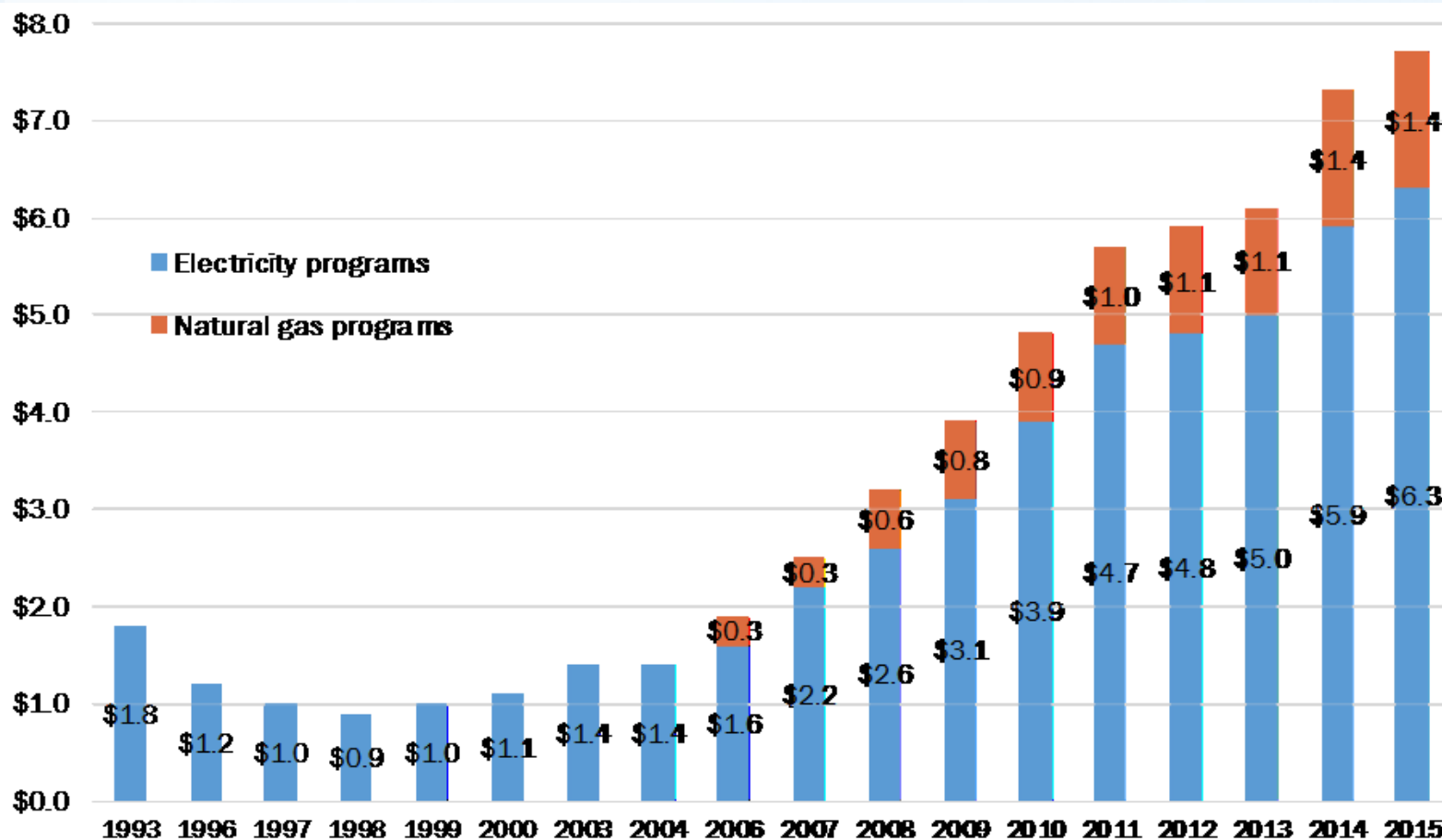


Energy Efficiency Targets (Energy Efficiency Resource Standards – EERS)

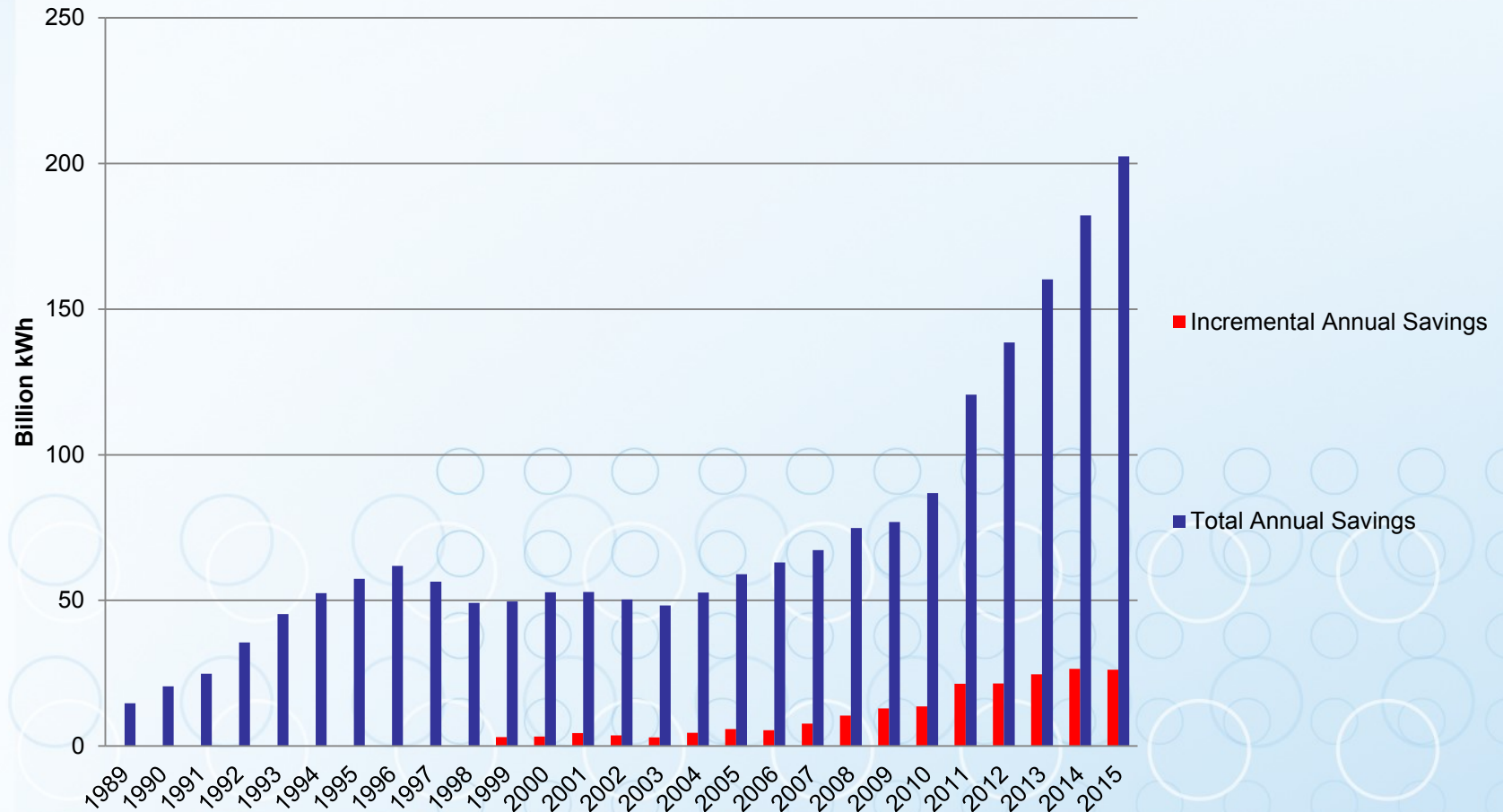
26 states with EERS in place and fully funded



Utility-Sector Spending on Energy Efficiency Programs



Savings from Utility-Sector Energy Efficiency Programs



Results by State

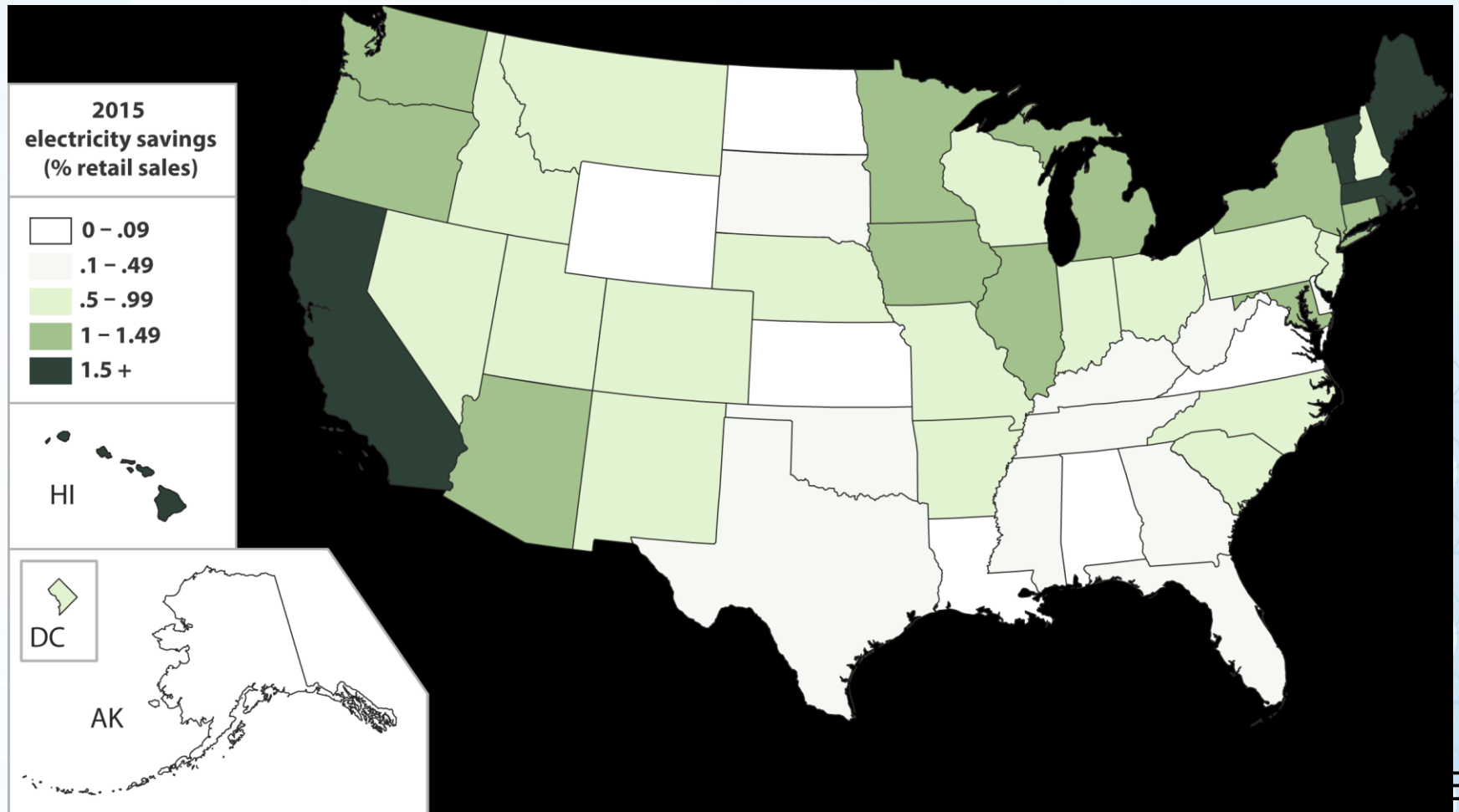
Source:
ACEEE
analysis for
forthcoming
ECEEE
paper

State	Electric				Natural Gas		
	Average Target	Percent Covered	2015 Achieved	Estimated 2020	Average Target	Percent Covered	2015 Achieved
Rhode Island	2.6%	99%	2.91%	21.3%	0.9%	100%	1.24%
Massachusetts	2.9%	86%	2.74%	21.9%	1.1%	88%	1.09%
Vermont	2.1%	100%	2.01%	19.6%	--	--	1.01%
California	1.2%	78%	1.95%	12.6%	0.6%	82%	0.75%
Maine	2.4%	100%	1.53%	15.9%	0.3%	100%	0.14%
Hawaii	1.4%	100%	1.52%	13.4%	--	--	0.00%
Connecticut	1.5%	93%	1.48%	13.2%	0.6%	100%	0.54%
Arizona	2.5%	56%	1.19%	17.4%	0.6%	85%	0.87%
Michigan	1.0%	100%	1.16%	8.9%	0.8%	100%	0.82%
Minnesota	1.5%	100%	1.15%	12.2%	1.5%	74%	1.09%
Illinois	0.7%	89%	1.13%	11.2%	1.1%	88%	0.47%
Oregon	1.3%	69%	1.09%	11.1%	0.4%	89%	0.93%
Washington	1.5%	81%	1.06%	11.8%	--	--	0.35%
New York	0.7%	100%	1.05%	6.9%	0.5%	100%	0.46%
Maryland	2.0%	100%	1.01%	12.5%	--	--	0.08%
Iowa	1.2%	74%	1.00%	10.6%	0.2%	100%	0.75%
Ohio	0.6%	89%	0.92%	8.8%	--	--	0.00%
Colorado	1.3%	57%	0.90%	8.8%	0.2%	72%	0.34%
Wisconsin	0.8%	100%	0.79%	7.5%	0.5%	100%	1.08%
Nevada	0.4%	62%	0.72%	5.8%	--	--	0.03%
Pennsylvania	0.8%	97%	0.64%	6.4%	--	--	0.02%
North Carolina	0.4%	99%	0.62%	4.4%	--	--	0.11%
Arkansas	0.9%	53%	0.61%	5.8%	0.5%	60%	0.52%
New Hampshire	0.9%	100%	0.59%	7.1%	0.7%	100.0%	1.12%
New Mexico	0.6%	68%	0.56%	6.7%	--	--	0.13%
Texas	0.1%	70%	0.18%	1.5%	--	--	0.00%
Average	1.28%	85.38%	1.17%	10.89%	0.66%	89.88%	0.54%

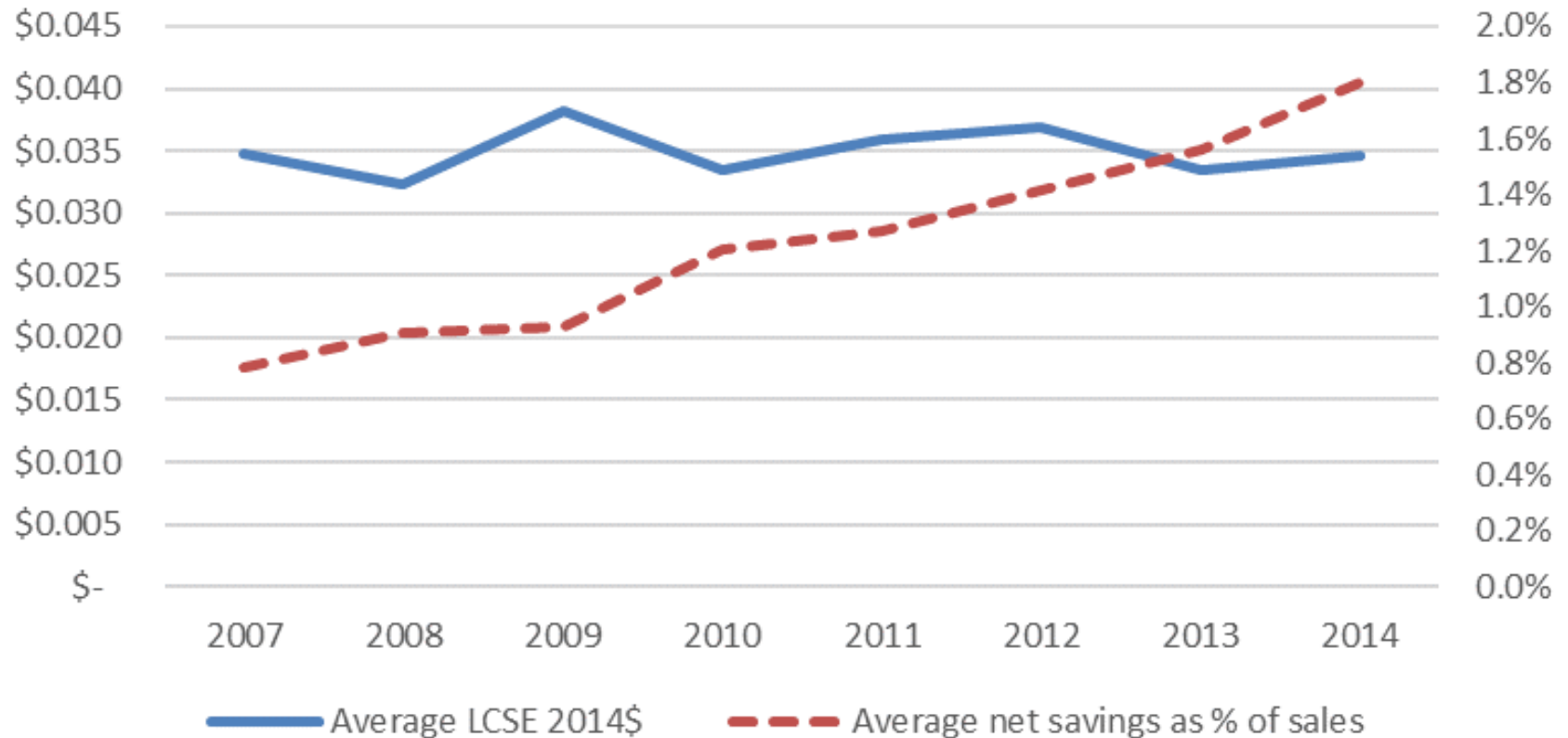
EEE



Total Savings in 2015 from Utility Efficiency Programs



Average Cost of Saved Energy and Energy Savings as a % of Retail Sales for Major Utility Programs



Impact of EERS (2015 data)

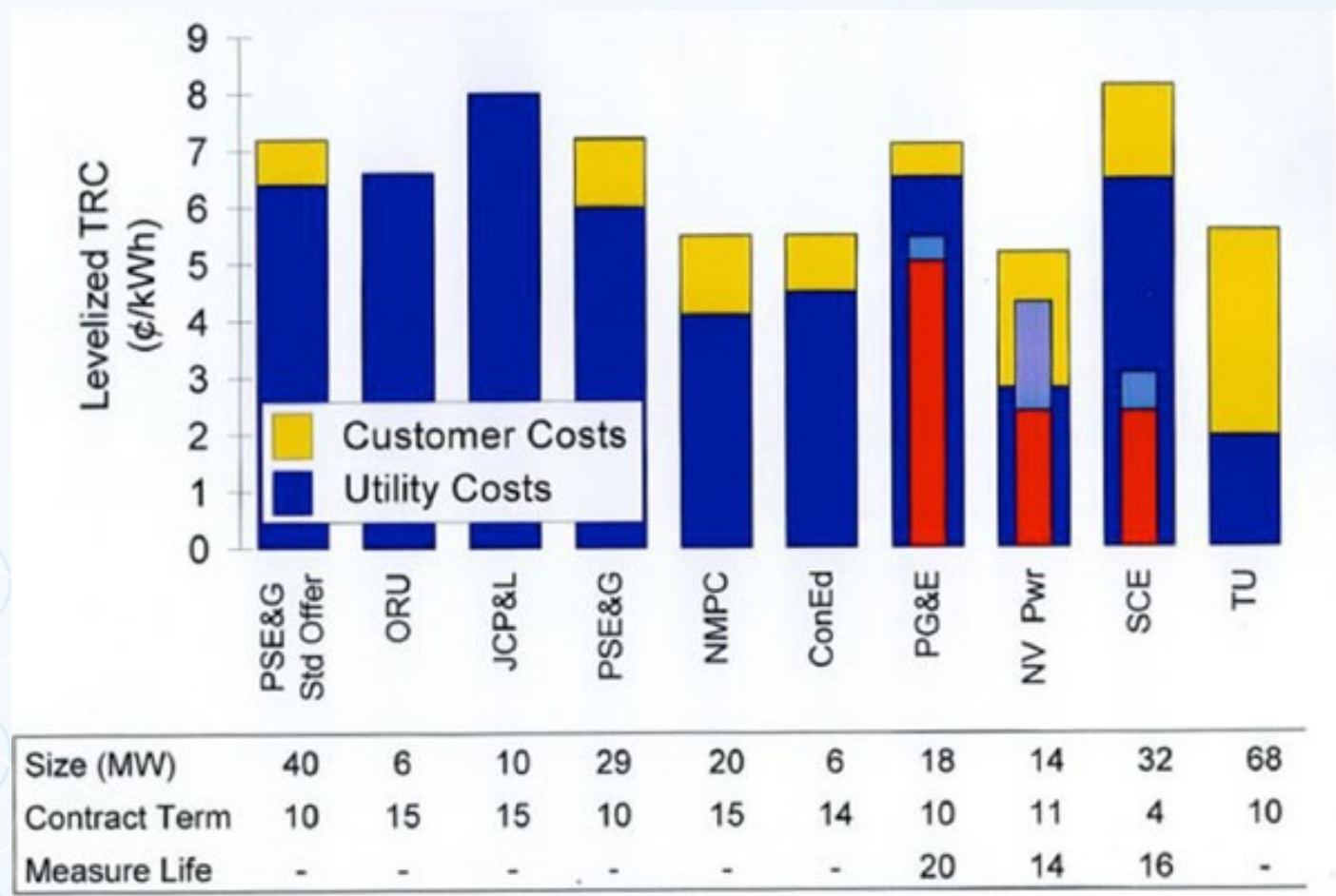
Policy	No. of states	Average EE investments as % of revenues*	Average EE savings as % of sales*
No EERS	24	0.7	0.3
Yes EERS	26	2.6	1.2

EERS in the U.S.



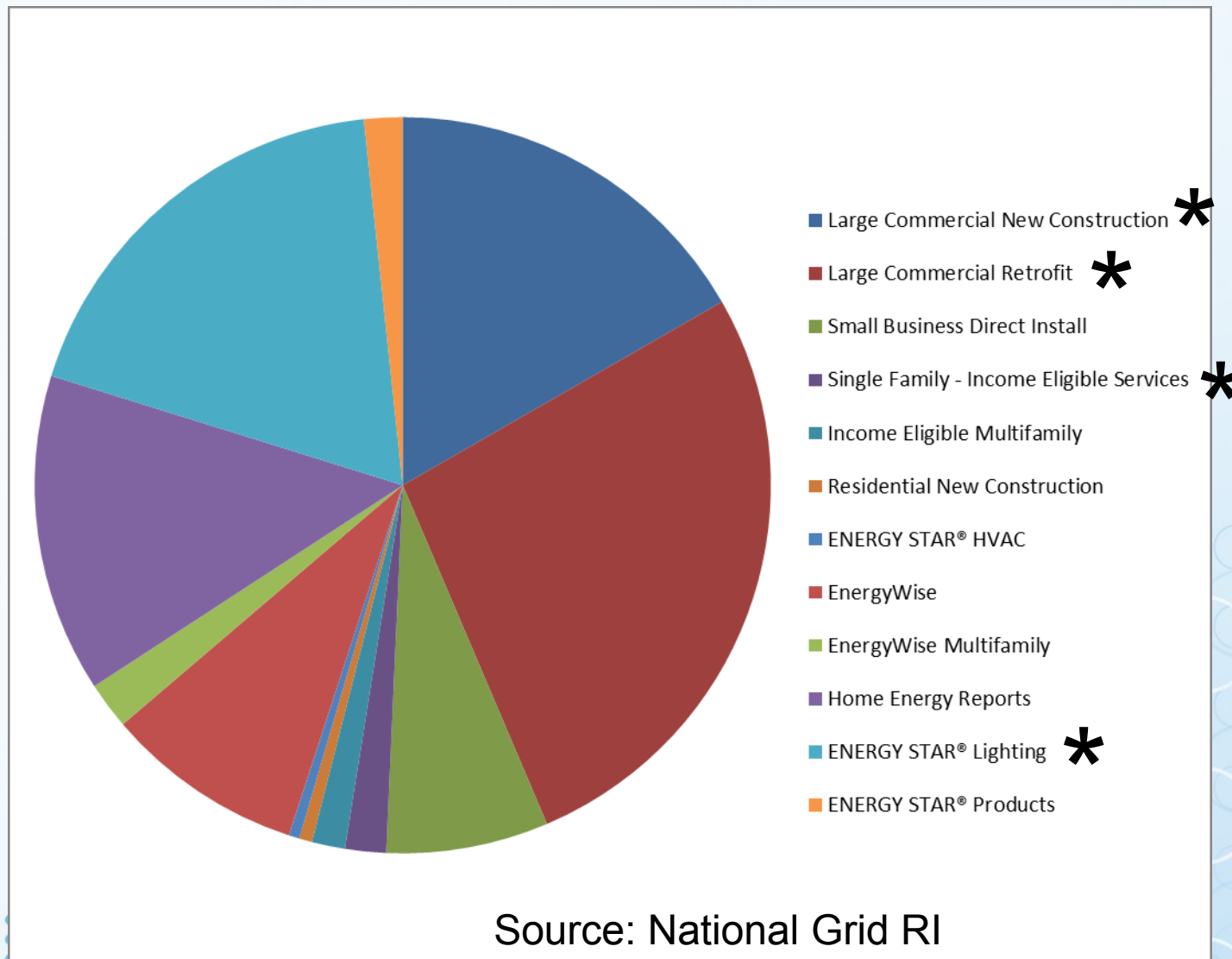
- Obligation generally placed on distribution companies
- Targets are most commonly for net annual incremental savings as a % of retail sales
 - Generally substantial evaluation to verify savings and guide deemed savings values
- In some regions, EERS savings bid into forward capacity markets and these revenues contribute to program budgets

Cost per kWh Saved of U.S. Demand-Side Bidding and Standard Performance Contracting Programs



Energy Savings by Measure Type

For RI,
2015



Source: National Grid RI

Key Lessons Learned

- Pay attention to the business case for utilities – cost recovery, lost revenues/decoupling, return on investment/shareholder incentives
- Savings targets very helpful – set by legislators or regulators
- Consult with stakeholders and build support
- Have programs for all major customer classes – everyone can participate
- Show how programs save all ratepayers money
- Set eligibility levels that keep free riders to modest levels
- Start gradually (e.g. “quick-start programs”) and ramp up over time

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