

Energy Efficiency Resource Standards

Steven Nadel American Council for an Energy-Efficient Economy March 2009

Share of Maryland Electricity Sales That Can Be Met by Efficiency Policies



Efficiency Programs Generate Jobs (Maryland 29% savings by 2025 scenario)



Source: ACEEE Feb. 2008 Maryland report



Efficiency Resources Cost Effective



Cost of New Electricity Resources



National Wholesale Electricity Price With an EERS (Climate Framework Scenario)



Source: ACEEE Dec. 2007 EERS-RES study

Midwest Wholesale Electricity Prices in Business as Usual & Efficiency Scenarios



Source: ACEEE Dec. 2007 EERS-RES study



Energy Efficiency Resource Standards

Analogous to a Renewable Portfolio Standard Electric and/or gas savings targets for utilities

 Includes end-use efficiency and sometimes combined heat & power (CHP) and codes/standards

 Targets generally start low and increase over time Savings must be documented in accordance with evaluation rules established by regulators
 Can authorize bilateral contracts to exchange savings credits and provide a role for 3rd parties



Why an EERS?

Achieve substantial energy and emissions savings

- Performance based emphasizes savings, not spending
- Can be easier to legislate savings targets than spending amounts

Can start programs quickly, without many years of study (but targets should be based on cost-effective opportunities)



States with Energy Efficiency Resource Standards (EERS)



These plus BAU EE will save ~5% nationally by 2020



Texas

- First state to establish an EERS
- Initially 10% of load growth but increased by legislature to 20% of load growth
- Utilities have not had difficultly meeting and exceeding targets
- In 2009, bill likely to come up to increase to 30% or even 50% of load growth or the equivalent as % of sales



Vermont

- Targets set in contract with Efficiency Vermont
- •Have exceeded each year

2.5%2.0% Rate of load growth without efficiency 15%- Annual new efficiency savings as a percentage 0.5%of statewide resource requirements 0.0% 2003 2004 2005 2006 20020.0% 2002 -2007(2008 values are forecasted)

Vermont

Council for an Energy-Efficient Economy

Efficiency Vermont MWh Savings and Yield: 2000-2007





Markey HR 889 -- A Federal EERS

- 15% electric, 10% gas savings by 2020
- Includes CHP, recycled energy, codes and standards
- DOE to establish M&V protocols
- Allow bilateral contracts within state; within power pool with PUC permission
- 5 cents/kWh, 50 cents/therm buyout option
 - Funds can be used in state to operate EE programs
- States implement if "willing and able"
- States can set higher targets if they want



Savings Grow Over Time

	Electric		<u>Natural Gas</u>	
	Annual	Cumulative	Annual	Cumulative
2011	0.33%	0.3%	0.25%	0.3%
2012	0.67%	1.0%	0.50%	0.8%
2013	1.00%	2.0%	0.75%	1.5%
2014	1.25%	3.3%	1.00%	2.5%
2015	1.25%	4.5%	1.00%	3.5%
2016	1.50%	6.0%	1.25%	4.8%
2017	1.50%	7.5%	1.25%	6.0%
2018	2.50%	10.0%	1.25%	7.3%
2019	2.50%	12.5%	1.25%	8.5%
2020	2.50%	15.0%	1.50%	10.0%

Note: Savings count from date of passage



Other Federal Activities

- Schumer (S. 548)
 - Virtually the same as Markey
 - Builds on Schumer-Landrieu 2007
 amendment
- Senator Bingaman draft bill
 - 20% RES with efficiency up to 5% EE
- President Obama's campaign platform calls for 15% electric savings by 2020, including codes and standards



How Does a Federal EERS Affect States that Already Have a State EERS?

States can implement federal and state EERS simultaneously – same/similar utility filings, meet higher targets

- States can set higher targets to gain additional savings
- States with targets greater than the federal targets also benefit from savings in nearby states
 - Emission reductions
 - Impacts on energy prices

Impacts of a Federal EERS

(15% electric, 10% gas by 2020; savings over and above existing state EERS's; includes codes & standards)

- Peak demand savings of 117,000 MW (390 power plants, 300 MW each)
- CO2 emissions down 262 MMT in 2020 (equivalent to taking 48 million vehicles off the road for a year)
- 222,000 net jobs created
 Net savings of \$169 billion (B/C ~3:1)



For More Information

ACEEE EERS webpage: <u>www.aceee.org/energy/national/eers.htm</u> (Markey bill, fact sheet, PPT, state-specific analyses)

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