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

15% reduction in forecasted consumption by 2015

29% reduction in forecasted consumption by 2025

CHP
Building Codes
RD&D Initiative
Appliance Standards
State and Utility Programs
Efficiency Programs Generate Jobs
(Maryland 29% savings by 2025 scenario)

Source: ACEEE Feb. 2008 Maryland report
Efficiency Resources Cost Effective

Evaluated results of All-Sector State-Level Energy Efficiency Programs

Source: ACEEE, “Five Years In,” 2005
Cost of New Electricity Resources

Source: Lazard 2008 for NARUC (midpoint of range)
National Wholesale Electricity Price With an EERS (Climate Framework Scenario)

Wholesale Electricity Prices (2006$/MWh)

- Climate Framework
- House RES in Climate Framework
- 10% EE + 5% NG in Climate Framework
- 15-15 in Climate Framework

Note: Cost of efficiency programs will raise prices at retail level modestly.

Source: ACEEE Dec. 2007 EERS-RES study
Midwest Wholesale Electricity Prices in Business as Usual & Efficiency Scenarios

Wholesale Electricity Prices (2006$/MWh)

- **BAU**
- **House RES**
- **10-5 EERS**
- **15-15 EERS**

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 difficulty 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
What Markets Do We Work In?

Target Sub-Markets:
- Colleges and Universities
- Municipal Waste and Water
- K-12 Schools
- Industrial Process
- State Buildings
- Farms
- Hospitals
- Ski Areas

Existing Homes
Efficient Products
Equipment Replacement
Existing Businesses
Business New Construction
New Homes
Low-Income
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

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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:
www.aceee.org/energy/national/eers.htm
(Markey bill, fact sheet, PPT, state-specific analyses)

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