

Energy Efficiency Resource Standards (EERS): An Overview



Jeff Brown

EPA - State Climate and Energy Program

Technical Forum – January 19, 2010

Summary: Energy Efficiency Resource Standards (EERS)

- 23 States have an EERS
- Important driver of ratepayer investment in energy efficiency (EE) programs & energy savings
- Design and implementation details vary by state
- A Federal Renewable Electricity Standard (RES) with an energy efficiency component is in the House-passed, and the Senate-Energy-passed, climate & energy bills

EERS: Background

- ❑ Establish a requirement for utilities (and/or other program administrators) to meet annual and cumulative energy savings targets through a portfolio of EE programs.
- ❑ As of late 2009, 23 States have adopted some form of an EERS, and many did so in the last few years.
 - The vast majority have a stand-alone EERS; a few (e.g., NC, NV) have a combined EE & RE standard.
- ❑ EERS is complementary to other EE policies (e.g., building energy codes, appliance standards, weatherization)
 - But it is drawing from the same pool of EE potential in some cases
- ❑ Ratepayer funded EE programs – developed to meet EERS targets in most cases – are projected to reduce national electricity demand by roughly 5% by 2020 (Barbose et al, 2009).

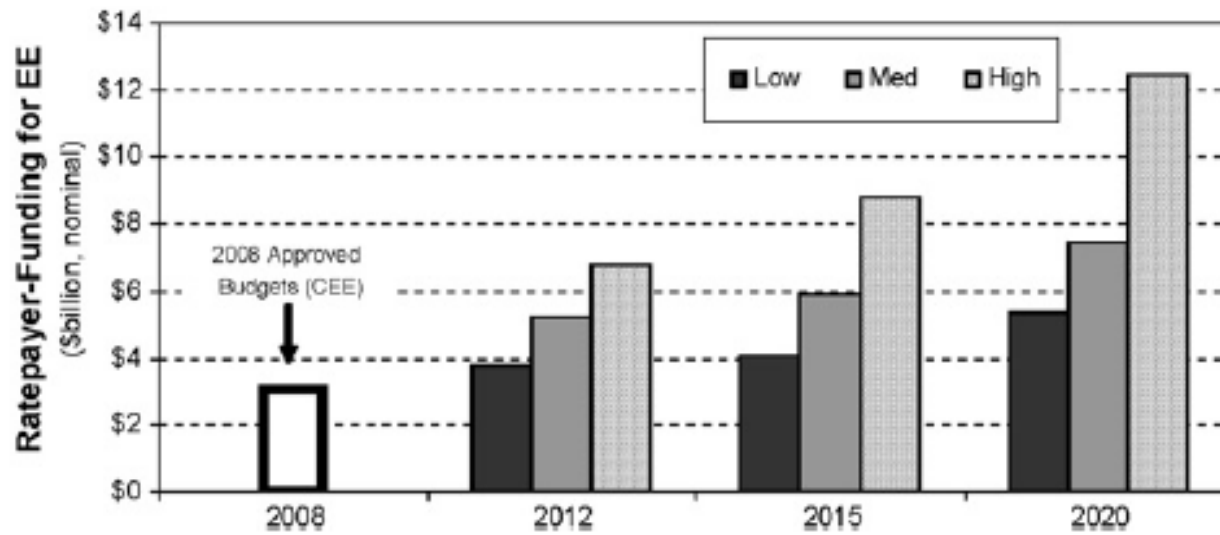


Figure 1: Projected Ratepayer-Funding for Electric and Natural Gas Energy Efficiency Programs in the U.S.

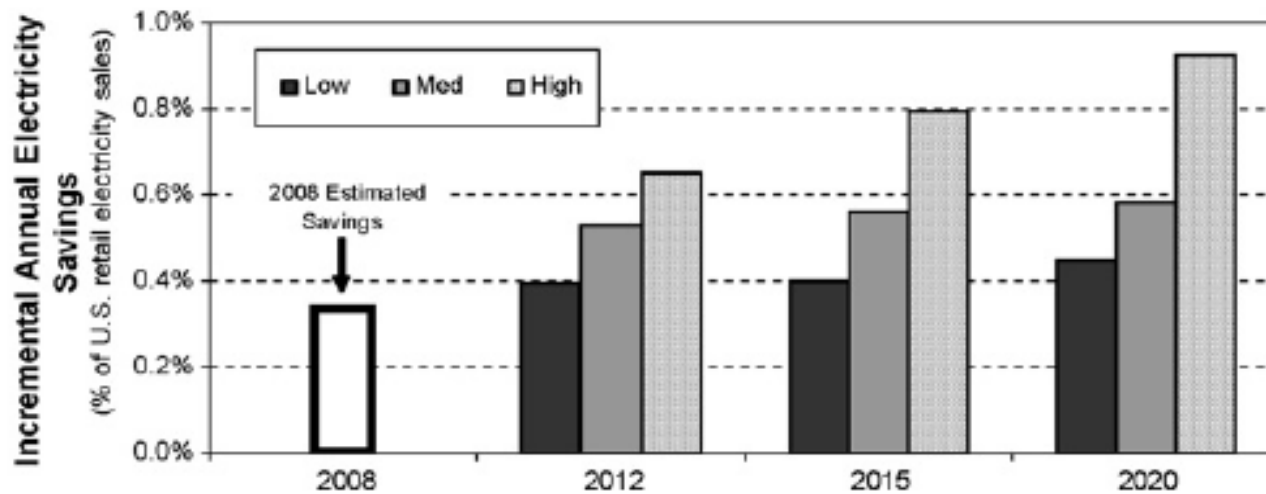


Figure 2: Projected Incremental Annual Electric Energy Efficiency Savings from Ratepayer-Funded Programs in the U.S.
Source: Barbose et al (2009)

State EERS Designs Vary

- Who establishes the targets
 - Legislature
 - State Utility Regulator
- The size and form of the targets
 - Electricity, Natural Gas
 - % of sales, % of sales growth
- What counts
 - EE incentive, education, and technical assistance programs
 - Other (varies by State): CHP, electric distribution system improvements, Codes & Standards
- Evaluation, Measurement, & Verification (EM&V)

Federal EERS

- A stand-alone Federal EERS would:
 - Place requirements on electric utilities to meet electricity savings targets (e.g., GWh) by investing in energy efficiency.
 - Prescribe the types of EE investments that are eligible to count towards the EERS and the allowable methods for estimating energy savings from EE programs (i.e., EM&V)
 - Establish clear energy savings targets that can be utilized in utility/state/regional resource planning.
- Stand-alone EERS proposals include H.R. 2529 (Markey) and S. 548 (Schumer)
- Committee-passed Federal proposals (e.g., H.R. 2454 (Waxman-Markey); S. 1462 (Bingaman)) do not include a stand-alone EERS;
 - They do include a Renewable Electricity Standard (RES), with EE eligible to meet a portion of the standard

Federal RES Bills (1)

	HR 2454	S 1462
Obligated entities	Electric utilities with annual sales (excluding resale) of greater than 4,000,000 MWh	Electric utilities with annual sales (excluding resale) of greater than 4,000,000 MWh; excludes HI
Targets & Timetables	Annual targets from 2012-2039; 6% of base amount in 2012 ramping to 20% in 2020 and beyond; 1/4 of the target can be met with EE; the Governor may petition to increase EE component to 2/5	Annual targets from 2011-2039; 3% of base amount in 2011 ramping to 15% in 2021 and beyond; 26.67% of the target can be met with EE upon petition by the Governor
Base amount adjustment	Electricity generated by hydro that does not qualify for the RE component, CCS, new nuclear	Electricity generated by hydro, municipal solid waste, CCS, new nuclear or capacity/efficiency improvements at existing plants

Federal RES Bills (2)

	HR 2454	S 1462
Eligible Resources	Customer facilities (including recycled energy), distribution system, CHP, fuel cells	Customer facilities (including recycled energy), distribution system, CHP
Eligible Mechanisms	Utility played a "significant role" in achieving savings (including through 3 rd parties or purchased savings); include savings from programs administered by the utility and funded by State, Federal, or other sources; excludes savings from mandatory building and appliance standards	Utility achieved qualified savings, other entity achieved qualified savings and sold EE savings to a utility; excludes savings from mandatory building and appliance standards
Trading of energy savings	Allows for trading of energy savings occurring in the purchasing utility's state and that meets EM&V requirements through bilateral contracts	DOE to establish Federal EE credit trading program

Federal RES Bills (3)

	HR 2454	S 1462
States with non-utility admin. of EE prgms	Provides for electricity savings achieved through such programs to be distributed equitably among utilities with PUC direction	Not explicitly addressed; potentially covered by section that allows for non-utility entities to receive EE credits, which could be transferred to utilities
EM&V	FERC to prescribe standards & protocols for EM&V methods; and standards requiring 3 rd party verification; States may propose alternative methods that are equivalent to FERC standards	DOE to prescribe standards & protocols for EM&V methods; and standards requiring 3 rd party verification
Delegation of Authority for oversight of EE savings	FERC may delegate to States the authority to oversee EM&V and to determine annual savings that may count towards the compliance obligation if the Governor submits an application	n/a

Federal RES Bills (4)

	HR 2454	S 1462
State authority	Preserves state authority to adopt more aggressive standards; explicitly requires FERC to facilitate coordination between Federal and State programs	Preserves state authority to adopt more aggressive standards; explicitly requires DOE to facilitate coordination between Federal and State programs
Federal Oversight	FERC; required to review at least every 4 years each State's implementation of delegated authority	DOE
ACP/ Penalties	ACP = \$25/MWh (inflation adjusted); ACP revenues returned to States for EE/RE programs; Penalties = 2 x ACP	ACP = \$21/MWh (inflation adjusted); ACP revenues returned to States for EE/RE & electric vehicle programs; Penalties = 2 x ACP; DOE may mitigate penalties

Additional Resources

- ❑ Barbose et al (LBNL) 2009. The Shifting Landscape of Ratepayer-Funded Energy Efficiency in the U.S.
<http://eetd.lbl.gov/EA/emp/reports/lbnl-2258e.pdf>
- ❑ Furrey et al (ACEEE) 2009. Laying the Foundation for Implementing a Federal EERS
<http://www.aceee.org/pubs/e091.htm>
- ❑ National Action Plan for Energy Efficiency
<http://www.epa.gov/cleanenergy/energy-programs/napee/resources/index.html>
- ❑ EPA's Clean Energy-Environment Guide to Action
http://www.epa.gov/cleanenergy/documents/gta/guide_action_chap4_s1.pdf

Contact Info

Jeff Brown

EPA State Climate & Energy Program

brown.jeffrey@epa.gov

202-343-9787

<http://www.epa.gov/cleanenergy/>