

# Energy Efficiency Resource Standards (EERS): An Overview



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# Summary: Energy Efficiency Resource Standards (EERS)

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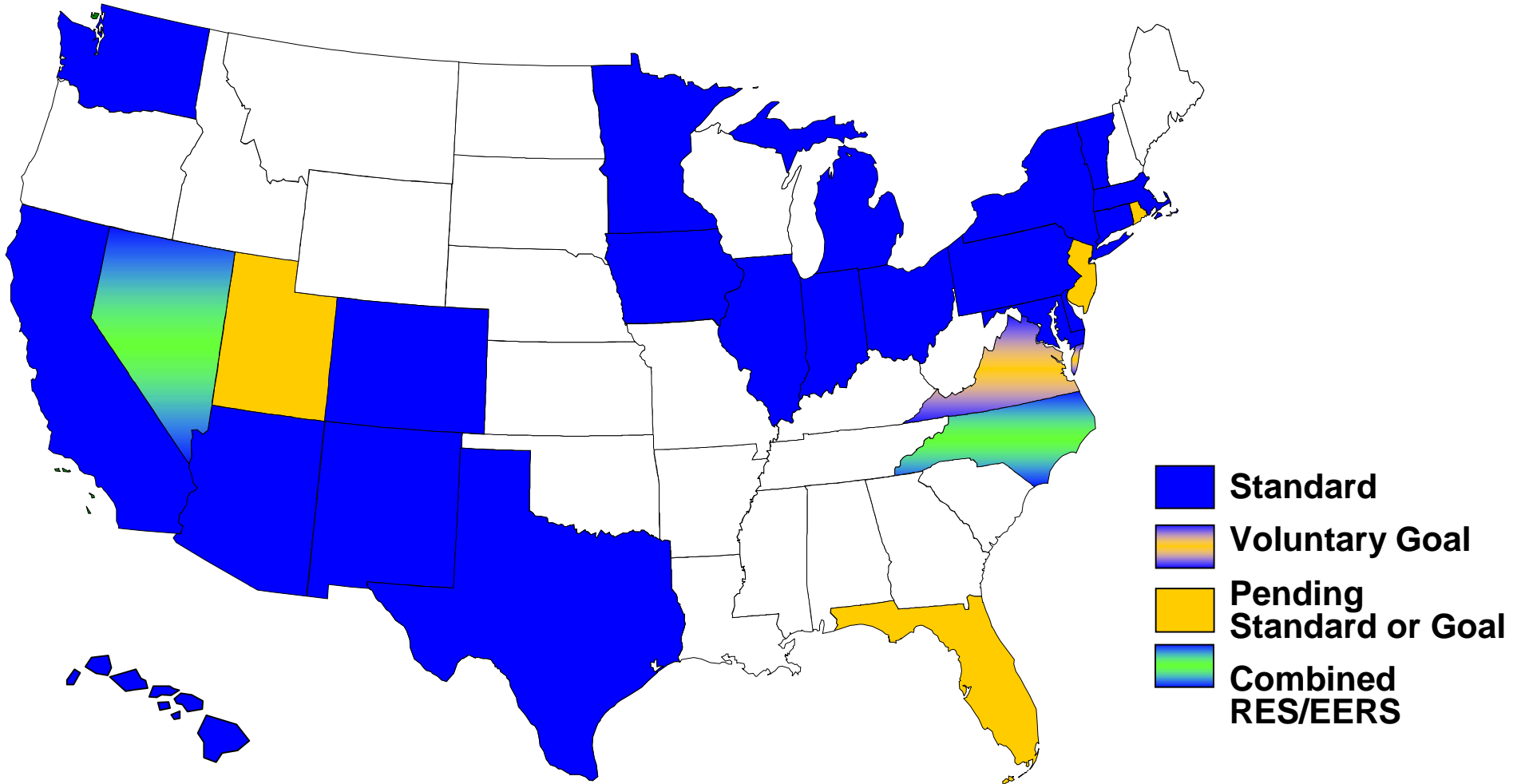
- 23 States have an EERS
- Important driver of ratepayer investment in energy efficiency (EE) programs & energy savings
- Design and implementation details vary by state
- A Federal Renewable Electricity Standard (RES) with an energy efficiency component is in the House-passed, and the Senate-Energy-passed,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

# EERS: Background

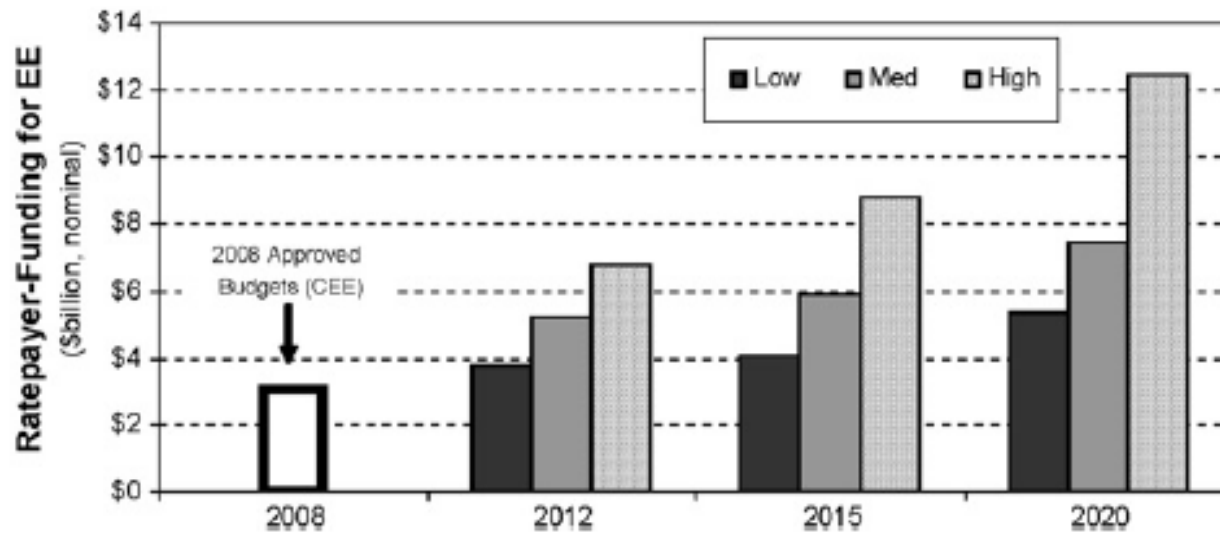
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- ❑ Establish a requirement for utilities (and/or other program administrators) to meet annual and cumulative energy savings targets through a portfolio of EE programs.
- ❑ As of late 2009, 23 States have adopted some form of an EERS, and many did 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).

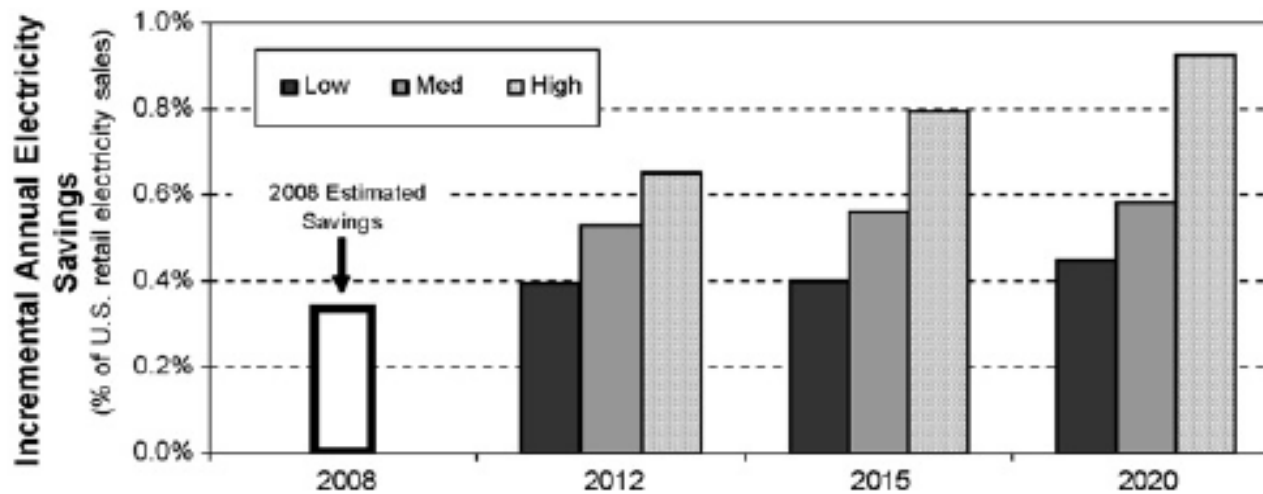
# State EERS as of December 2009



Source: ACEEE (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

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- 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

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- 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
<b>Obligated entities</b>	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
<b>Targets &amp; Timetables</b>	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
<b>Base amount adjustment</b>	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
<b>Eligible Resources</b>	Customer facilities (including recycled energy), distribution system, CHP, fuel cells	Customer facilities (including recycled energy), distribution system, CHP
<b>Eligible Mechanisms</b>	Utility played a "significant role" in achieving savings (including through 3 <sup>rd</sup> 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
<b>Trading of energy savings</b>	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 <sup>rd</sup> 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 <sup>rd</sup> 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

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- ❑ 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](http://www.epa.gov/cleanenergy/documents/gta/guide_action_chap4_s1.pdf)

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