

Federal Energy Efficiency Resource Standard: Opportunities for Efficiency in Missouri

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An Energy Efficiency Resource Standard (EERS) is similar in concept to a Renewable Energy Standard (RES). Where an RES dictates a certain percentage of energy generation from renewable sources, an EERS requires a percentage reduction in energy use from energy efficiency measures. Under the proposed federal EERS, retail electricity distributors would be required to attain 15% electricity savings while natural gas distributors would need to meet a 10% savings target.

Savings begin at modest levels, 0.33% electricity and 0.25% natural gas savings in the first year, and ramp up to 2.5% incremental savings per year for electricity and 1.25% for natural gas. The standard is expressed in cumulative terms as efficiency measures installed in early years continue to save energy throughout the compliance period. Credit is given for savings from state and local building codes and state and federal equipment efficiency standards which account for about 5% electricity and 3% natural gas savings in 2020. The cumulative 15% savings target for electricity and 10% savings target for natural gas are percentages of energy sales. The proposed EERS is similar to the Schumer-Landrieu provisions prepared for floor consideration in the Senate during the energy bill debate in mid-2007 and the same as President Obama’s goal of 15% electricity savings by 2020.

Why Energy Efficiency? Experience in numerous states shows that efficiency improvements on average cost about 3 cents per lifetime kilowatt-hour saved¹ compared to about 7 cents to over 13 cents per kilowatt-hour for conventional electricity generation.² Additional studies show that large energy efficiency opportunities are available in all states, with estimates of 20 – 30% savings or more from installation of cost effective efficiency measures. Opportunities range from end-use efficiency improvements, such as high efficiency lighting and appliances, to combined heat and power (CHP) systems and transmission and distribution improvements.

In **Missouri**, ACEEE estimates that deploying the full 15% electricity savings and 10% natural gas savings would achieve the following benefits in 2020 –

Equivalent to:

Electricity savings	10,200 GWh	
Peak demand savings	3,300 MW	11 power plants (300 MW)
Natural gas savings	15 TBtu	Note: includes gas savings at power plants
Total energy savings	120 TBtu	Energy use of 1.3 million households ³
Total CO ₂ emission savings	10.7 MMT	1.8 million autos taken off the road ⁴
Value of energy savings ⁵	\$2.8 billion	\$1,100 per household ⁶
Net jobs created	4,100	

Additionally, under an EERS there will be increasing demand in Missouri for energy auditors, engineers, and energy service companies (i.e., companies that provide financing and/or installation of energy efficient equipment).

More information is available at: <http://aceee.org/energy/national/eers.htm>

Notes

¹ Kushler, York and Witte, 2004, *Five Years In: An Examination of the First Half Decade of Public Benefits Energy Efficiency Policies*. Report U042. Washington, DC: American Council for an Energy-Efficient Economy.

² Lazard. June 2008. *Levelized Cost of Energy Analysis — Version 2.0*.
[http://www.narucmeetings.org/Presentations/2008%20EMP%20Levelized%20Cost%20of%20Energy%20-%20Master%20June%202008%20\(2\).pdf](http://www.narucmeetings.org/Presentations/2008%20EMP%20Levelized%20Cost%20of%20Energy%20-%20Master%20June%202008%20(2).pdf)

³ Based on EIA 2005 national annual average energy consumption per household of 95 million Btu.
http://www.eia.doe.gov/emeu/recs/recs2005/hc2005_tables/c&e/detailed_tables2005c&e.html

⁴ Based on 6 metric tons of CO₂ per vehicle per year.

⁵ Energy savings based on measures installed by 2020, estimating an average measure life of 13 years.

⁶ Based on U.S. census estimate of households by state. <http://quickfacts.census.gov/>