



Impacts of Energy Efficiency Resource Standards

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Electricity Generation in the Midwest

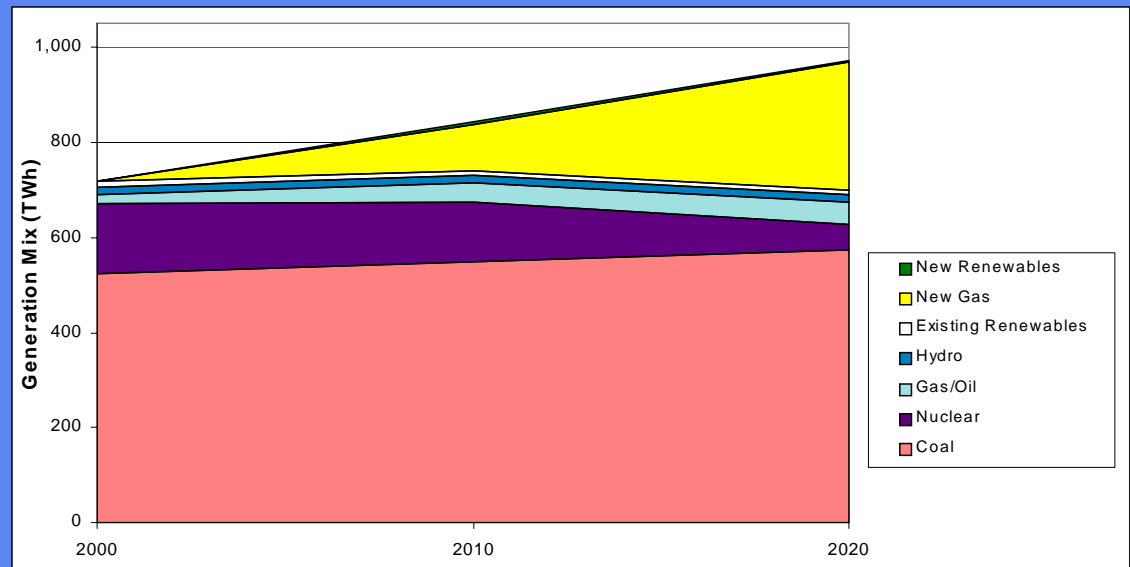
- More than 97% of the electricity generated in the Midwest comes from **coal, nuclear, and natural gas**.
- Midwesterners are facing rate increases:
 - Electric markets become more regional
 - Price of natural gas defines the market price
 - Contract length going down and
 - Uncertainty around future carbon regulations





Business as Usual 2000-2020

- Electricity demand increases annually
- Additions of natural gas capacity to meet demand = *price volatility*

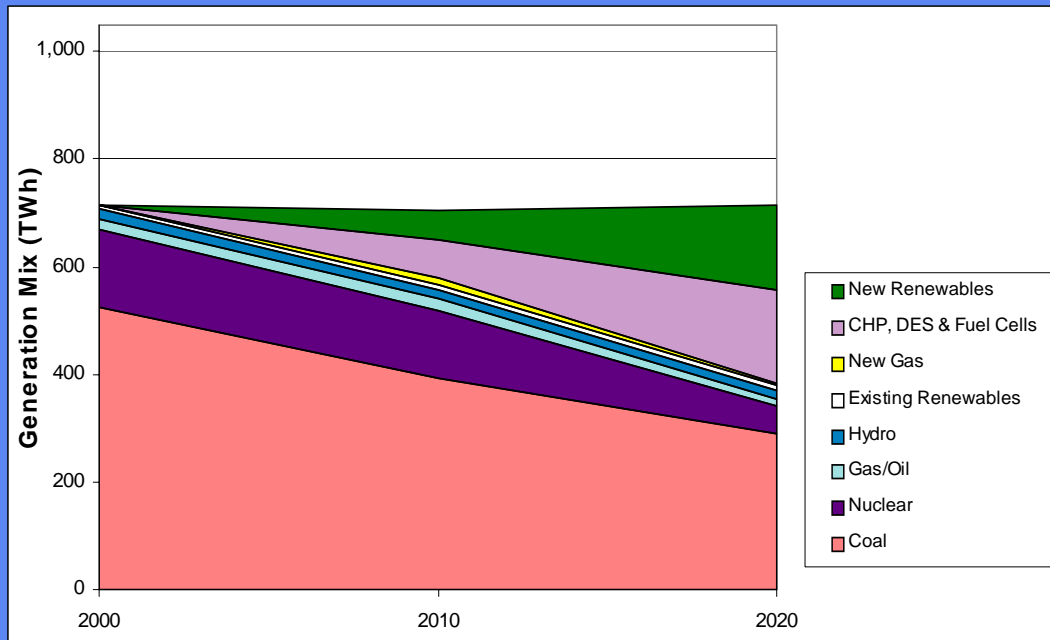




A Better Future: Renewables and Energy Efficiency 2000-2020

Electric Generation with Renewable Energy and Energy Efficiency Gains

- Creates jobs.
- Boosts economic development.
- Improves environmental quality.



- New state and local tax revenue.
- Provides hedge against natural gas price volatility.
- Efficiency flattens demand and saves consumers money.



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Midwest Net New Jobs and Economic Gains

	Net Job Growth		Economic Output	
	2010	2020	2010	2020
Energy Efficiency	84,000	141,000	\$7.0 Billion	\$12.6 Billion
Renewables	37,000	68,000	\$3.6 Billion	\$6.7 Billion
TOTAL	121,000	209,000	\$10.6 Billion	\$19.4 Billion





EERS: What's Already Happening?

- The following states have EERS in place, in varying forms: Texas, Hawaii, Nevada, Connecticut, California, Vermont, Colorado, and Pennsylvania. EEPS are planned in Illinois and New Jersey.
- Almost all states have combined EERS with other efficiency measures, most commonly Public Benefit Funds and Renewable Portfolio Standards.





EERS: What's Already Happening?

- All states with EERS require increases in percentage demands each year or over several-year period. For instance, Connecticut will require 1% of its electricity demand to come from energy efficiency in 2007, ramping up to 4% in 2010.
- Most EERS requirements are assigned to investor owned utilities.
- The details of individual states' EERS programs vary greatly. This is one of the chief strengths of the EERS system—individual states can figure out how to best meet efficiency requirements based on individual considerations.





EERS: Air Quality Impacts

- Pollution reductions from energy efficiency depends on system load and generation profile. In states where supply comes from high-pollution plants, EERS's will have significant air quality benefits.
- Midwestern states rely heavily on coal plants for generation.





Case Study: Texas

- The first EERS program was implemented in Texas, in 1999.
- Required 5% of demand growth to come from energy efficiency in 2002, and 10% in 2003 and thereafter.
- Energy savings from Texas EERS-
 - 2003 - utilities were required to save 135 MW but saved 151 MW.
 - 2004 - utilities were required to save 147 MW but saved 192 MW.
- Air quality benefits from the Texas EERS program:
 - NOx emissions were reduced by 623 tons in 2004, and are projected to be reduced by 7,300 tons over ten years.
- EERS programs in Texas saved ratepayers an estimated \$25 million in 2004, and provided a total net savings of \$76 million as of 2005.





Case Study: Connecticut

- EERS established in 2005
- Utilities must procure 1% of supply from EE by 2007 ramping up to 4% by 2010. Only post-2005 resources are eligible.
- Utilities can comply with actual reductions or purchase of certificates set at \$0.035/kwh.
- In 2004, 1% of supply was saved with existing programs. Cost was \$67 million. Lifetime savings will be \$440 million. Estimated economic leverage of EERS is 3:1.





Summary: Energy Efficiency Resource Standards Work

- EERS work: More energy efficiency means less air pollution.
- EERS work: More energy efficiency means direct and indirect savings to rate-payers.





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