

# Environmental Regulations and Future Electric Reliability



## Environmental regulations and electricity production

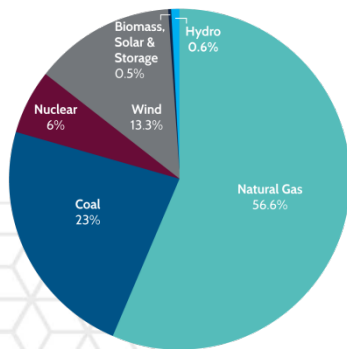
Several proposed or recently finalized U.S. Environmental Protection Agency (EPA) regulations could affect future electricity production and consumption. The Electric Reliability Council of Texas (ERCOT) has evaluated how proposed carbon regulations, along with other pending changes to air, water and waste regulations, may affect generation facilities and other grid functions. ERCOT and its members will continue to monitor these developments to determine how future requirements could affect electric reliability — and what steps we need to take to prepare.

## Analysis and results

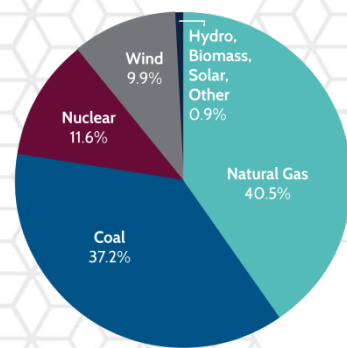
Coal-fired power plants are the most affected by environmental regulations, which include the Mercury and Air Toxics Standards, the Cross-State Air Pollution Rule, the Regional Haze program, the 316(b) Cooling Water Intake Structures Rule, the Electric Effluent Limitation Guidelines Rule, the Coal Combustion Residuals Disposal Rule, and the proposed Clean Power Plan released earlier this year.

ERCOT assessed the impacts of these regulations through a generator survey and a modeling analysis. Results indicate that the Regional Haze Program and Clean Power Plan, in combination with other regulations, could result in the retirement of up to 8,700 megawatts (MW) of coal-fired generation resources in the ERCOT region. That is about half the coal-fired capacity and more than 13 percent of the overall thermal generation resources, by MW, that serve ERCOT today.

The Regional Haze program would require specific units to retrofit or upgrade scrubbers to reduce sulfur dioxide (SO<sub>2</sub>) emissions. The Clean Power Plan sets carbon dioxide (CO<sub>2</sub>) emissions limits on a statewide basis. Owners of coal-fired generation resources that require scrubber improvements are less likely to make these investments if they anticipate additional impacts under the Clean Power Plan, which — when considered alone — also is likely to result in some retirements. By comparison, the other rules would have a milder impact.



2014 Generation Capacity  
effective May 2014



Energy Use 2013\*  
\*Totals >100% due to rounding

Generation owners must notify ERCOT at least 90 days before retiring or suspending operations of a generation resource, and earlier notification is unlikely. If multiple retirements occur within a short timeframe, without early notice, loss of this capacity could create resource adequacy concerns, in turn increasing the likelihood of reliability issues on the transmission grid in some areas. It also could reduce ERCOT's ability to integrate increasing amounts of renewable resources.

With these concerns in mind, ERCOT has joined other system operators in requesting that the EPA consider reliability concerns in the final rule, providing grid operators the tools needed to operate reliably during implementation of the proposed Clean Power Plan.

ERCOT's analysis also indicates energy costs for consumers could increase by as much as 20 percent to account for costs associated with compliance. This does not include the potential impacts of transmission upgrades or other investments that may be needed to support reliability following implementation.

ERCOT's full analysis, "Impacts of Environmental Regulations in the ERCOT Region," is available at:

[www.ercot.com/content/news/presentations/2014/Impacts%20of%20Environmental%20Regulations%20in%20the%20ERCOT%20Region.pdf](http://www.ercot.com/content/news/presentations/2014/Impacts%20of%20Environmental%20Regulations%20in%20the%20ERCOT%20Region.pdf).