



*Promoting Clean Energy and Economic  
Opportunity for All Texans*

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## **Natural gas, renewable energy can provide all of the new electric power Texas will need in the future at little increased cost to consumers**

*New TCEC-led report finds market forces are driving Lone Star State toward a cleaner grid*

AUSTIN – Natural gas and renewable energy can provide all of the new electric power that Texas will need in the foreseeable future, researchers with the Brattle Group find in a new report prepared for the Texas Clean Energy Coalition (TCEC).

Released today, “Exploring Natural Gas and Renewables in ERCOT Part IV: The Future of Clean Energy in ERCOT,” looks at the Texas generation mix over the next 20 years and forecasts how market and regulatory factors affect how electricity will be generated in ERCOT, how much it will cost, and how much CO<sub>2</sub> will be emitted.

As Texas expands its historic energy leadership into clean energy, blazing new trails in natural gas extraction methods, utility-scale solar PV and boasting the nation’s largest fleet of wind turbines, the new paper finds that market forces are largely driving Texas toward a cleaner electric grid.

“Based on widely recognized market trends, it is very possible that natural gas prices will stay low (perhaps less than \$4/MMBtu) and that solar prices will continue to drop significantly,” said Brattle Principal Dr. Ira Shavel, a noted energy economist. “Over the next 20 years, due to the free market alone ERCOT can expect to see a cleaner grid that relies on Texas-produced natural gas, wind and utility-scale PV solar power at little additional cost to consumers.”

To reach these forecasts, Brattle researchers examined market factors including the availability of cheap, abundant natural gas and the falling cost of utility-scale solar PV technology (PV), along with regulatory factors such as enhanced energy efficiency programs and potential new federal regulations on power plant emissions.

TCEC Chairman Kip Averitt, a former state senator and chairman of the powerful Senate Natural Resources Committee, credits past actions by state decision makers for paving the way for this market transition, adopting one of the first Renewable Portfolio Standards (RPS) in the country, deregulating the Texas electric market and investing in the Competitive Renewable Energy Zones (CREZ) for new transmission lines to bring wind and solar power from West Texas to urban population centers east of I-35.

“We hope this new information will help state leaders further understand the forces at work in the Texas electric marketplace and prevent distortions that might interfere with our transition to a cleaner, cost effective electric grid,” Averitt said.

Among the findings in the report:

- The price of natural gas is the largest driver of how electricity will be generated in ERCOT over the next 20 years. Any impact from other market factors or currently proposed new federal environmental regulations would be comparatively minimal.
- Persistently low natural gas prices could drive older, costlier coal-powered plants out of the ERCOT grid. Sixty percent (12 GW) of the coal-fired electric generation now operating in ERCOT could likely be retired by the early 2020s.
- With low natural gas prices, natural gas combined cycle (NGCC) plants – along with utility-scale solar PV technology and wind power – will provide all new generation in ERCOT. About eighty-five percent of ERCOT system generation will come from natural gas, wind and solar power, with NGCC plants providing the lion’s share of new power generation.
- Both wind and large-scale solar PV power will see major additions of new generating capacity even with low natural gas prices – 9 GW for wind and 13 GW for solar.
- As the low natural gas price drives ERCOT away from coal and toward Texas-produced clean fuels, CO<sub>2</sub> pollution from plants in the ERCOT grid will drop significantly. Annual CO<sub>2</sub> emissions in ERCOT will drop by an average of 28 percent below 2005 levels – an average of 61 million short tons less of carbon in Texas air every year.
- Texas consumers will get a cleaner ERCOT grid that relies on Texas-produced fuels -- without paying more than they do today, thanks to abundant and cheap natural gas resources. Wholesale electricity prices will stay around \$41/MWh, similar to 2014 prices. This means little to no price increase (other than for inflation).
- The cleaner ERCOT grid powered by Texas-produced natural gas, wind and solar power will make proposed new federal regulations largely irrelevant. If market forces are allowed to work unimpeded, the transition to Texas-produced clean energy will reduce CO<sub>2</sub> emissions below the requirements of proposed new standards in the EPA’s controversial Clean Power Plan through 2035. Likewise, the EPA’s Regional Haze Rule (if implemented) would have only a marginal impact (less than 15 percent) on projected coal plant retirements between now and 2022.
- By accounting for enhanced energy efficiency to reduce demand for electricity by an additional 5 percent, the need for electric plants on the ERCOT grid could be reduced, helping keep CO<sub>2</sub> emissions and electric prices down.

Since 2013, TCEC has sponsored a series of studies by The Brattle Group to analyze how natural gas and renewable energy might interact in the Electric Reliability Council of Texas (ERCOT) grid in future years, depending on a range of market and regulatory factors.

This research is designed to enable state decision makers to chart their own course for the development of the Texas electric market and prevent market distortions that could interfere with

the transition to a cleaner electric grid or drive up electric prices for Texas consumers and businesses.

The complete report is available on the TCEC website at [www.texascleanenergy.org](http://www.texascleanenergy.org).

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**About the Texas Clean Energy Coalition**

The Texas Clean Energy Coalition is an alliance of business and economic development groups, faith-based organizations, the Latino and African-American communities, labor, and academia dedicated to building a clean energy economy that creates jobs and economic growth in the Lone Star State. Its goal is to educate Texans and support a state energy policy that promotes clean energy markets, job growth, energy security and Texas' energy leadership in the U.S. and around the world. For more information, visit the coalition Web site at [www.texascleanenergy.org](http://www.texascleanenergy.org).