

W. TEXAS WINDS TO LIGHT UP REGION, AT WHAT COST? **(ABOUT 2.2¢/KWHR)**

By Emily Pickrell

A 3,000-mile network of transmission lines designed to bring wind-generated power from West Texas to homes and businesses from Dallas to San Antonio should be fully operational by Tuesday, year's end.

"There is a vast amount of wind energy that will suddenly be accessible to cities across Texas," said Jeff Clark, executive director of the Wind Coalition, a nonprofit association focused on wind resources throughout the state and the Midwest.

Grid operators are on track to have switched on the last of the power lines developed as part of the Competitive Renewable Energy Zones initiative, a \$6.8 billion effort that began in 2008.

These lines eventually will provide pathways for up to 18,500 megawatts of electricity to travel from thousands of turbines — each as tall as a football field is long — on the windswept plains around San Angelo, Abilene and Amarillo, the Texas Public Utility Commission reports.

The network also will encourage further development of wind resources, state power planners say. That is especially true in the Panhandle, they say, which had no power transmission link to the rest of Texas prior to completion of the new lines.

Texas already leads the nation in wind power with 7,960 turbines, each one with blades of 150 feet or more, capable of generating between 1 and 4 megawatts of electricity. One megawatt is enough to power 500 homes under normal conditions.

The state has capacity, under optimal conditions, to generate 12,000 megawatts, more than twice that of No. 2 producer California.

The new transmission network expands the power grid enough to allow a 50 percent increase in capacity. That means more of the graceful, 300-ton turbines are likely to spin across the horizon.

Price \$2 billion higher

The \$6.8 billion price tag is nearly \$2 billion higher than the 2008 estimates when construction began, mostly because it took 600 more miles than planned to navigate tricky terrain and to follow roads and fences rather than cutting directly through the properties of reluctant landowners.

Some environmentalists expressed concerns about the impact of the lines on sensitive bat and bird populations.

Several property owner groups also objected to the lines, particularly in the Hill Country, where groups such as the Save Our Scenic Hill Country Environment argued that the lines were unsightly and could lower property prices.

Texas ratepayers will see a fee of as much as \$7 added to their monthly bills in the coming years to help cover the construction tab, PUC spokesman Terry Hadley said.

Advocates for the lines say the economic and environmental benefits outweigh the costs.

"It is going to result in a net cost savings to ratepayers," said Glen Hodges, spokesman for renewable power company Pattern Energy. "This low-cost wind power that will come onto the grid will result in a reduction; the net effect should be a reduction in the overall bill."

The transmission lines initially will carry about 11,000 megawatts of power, with more than 7,000 megawatts in additional capacity planned in the coming years.

Supporters say the project already is turning wide-open spaces into economic powerhouses while building a renewable energy renaissance.

“It was designed to double the amount of wind energy in Texas and it is on the way to doing that,” said Greg Wortham, executive director for the Texas Wind Energy Coalition.

Competing for revenue

Texas continues to increase wind-generation capacity at record rates: last year it added an additional 1,000 megawatts of wind power, and has 22,000 megawatts of proposed projects planned for the coming years, according to the Electric Reliability Council of Texas, which manages the grid for most of Texas.

West Texas ranch communities once leery of the wind farms now compete for projects, seeing the tax revenue and economic benefit that wind power has brought the region.

In the Panhandle alone, more than 10,000 megawatts of wind projects planned in the coming years will be able to link to the new lines, according to the Electric Reliability Council of Texas.

“It has helped create a number of new opportunities to develop projects, which is why you are now seeing a flurry of projects in the Panhandle,” said Patrick Woodson, CEO of renewable energy developer E.ON Climate & Renewables. The company has invested more than \$4 billion in wind power in Texas, Woodson said, with much of it going to new projects in the Panhandle.

Some of the new transmission lines started carrying power earlier this year, relieving transmission congestion that built up as wind capacity grew over the past five years

— forcing wind farms to curtail generation to avoid exceeding transmission capacity.

“We used to have a lot of limitations moving power from West Texas to the I-35 sector,” said Dan Woodfin, the director of system operations for the Electric Reliability Council of Texas, referring to the interstate connecting Dallas-Fort Worth with Austin and San Antonio.

“We have seen no limitations now. The wind generators are able to generate as much wind as they can.”

Natural gas plant

The lines aren’t carrying just wind power.

When Texas planners envisioned the new transmission network in the early 2000s, the natural gas boom in Texas’ Permian Basin had not yet begun.

That gas now is available to fuel new power plants. A 168-megawatt natural gas-fired plant, which Golden Spread Electric Cooperative built in 2011 north of Lubbock, will be the first such plant to hook up to the new lines.

“The network itself is agnostic,” said Hadley, the Public Utility Commission spokesman. “It doesn’t know what type of fuel source it is delivering.” emily.pickrell@chron.com twitter.com/emilypickrell

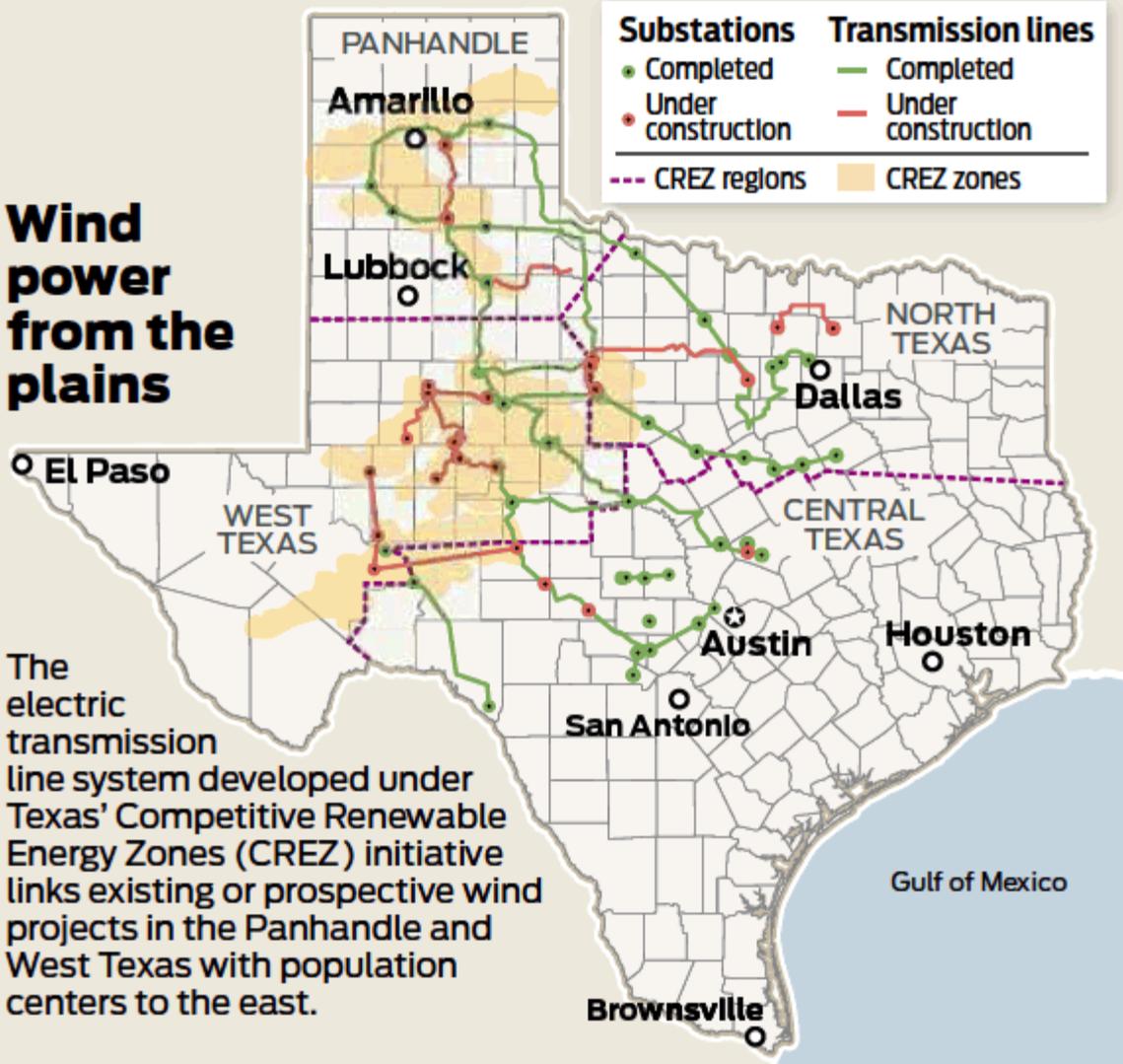


Carolyn Mary Bauman / Fort Worth Star-Telegram

Sleek white wind turbines, 25 stories tall, rise from the plains of West Texas in Big Spring. Texas is one of the windiest states in the nation, and the Panhandle and West Texas are the state's windiest regions.

Wind power from the plains

The electric transmission line system developed under Texas' Competitive Renewable Energy Zones (CREZ) initiative links existing or prospective wind projects in the Panhandle and West Texas with population centers to the east.



Ken Ellis / Chronicle