

Review of Frontera Facility

Addressing reliability needs for the ERCOT region



The Electric Reliability Council of Texas (ERCOT) has completed its evaluation of a plan to export power to Mexico from the Frontera Facility in the Lower Rio Grande Valley and has reached the following conclusions:

- ERCOT has identified increased concerns related to power supply sufficiency and transmission stability during the 2015-16 timeframe if it cannot rely on this capacity when other generation or transmission facilities serving that region are not available and power demand is high.
- In normal conditions, the system can operate effectively without this capacity.

Background

The Frontera Facility, a 524-megawatt (MW) combined-cycle natural gas-fired power plant in Mission, Texas, was built in 1999-2000 to provide electricity to the ERCOT grid in the rapidly growing Lower Rio Grande Valley region near the U.S.-Mexico border. It is equipped to send power either to ERCOT or Mexico and has export authorization from the U.S. Department of Energy as long as certain reliability and safety criteria are met.

Owners of the plant notified ERCOT in July 2014 of plans to send the power from this switchable generation resource to Mexico, beginning with a 170-MW portion of the plant's capacity in 2015 and increasing exports to 524 MW after ongoing transmission projects in the region are energized in 2016.

When generation or transmission facilities are forced out of service during high-demand periods, electricity supply sometimes cannot keep up with consumer demand in the Valley region. Two large transmission projects are under way to enable more electricity to flow into the region beginning in summer 2016. Considering the Valley's limited electric capacity, ERCOT conducted an analysis to evaluate the potential reliability impacts associated with sending this power to Mexico. (*For more information about reliability concerns in the Valley, [see this fact sheet.](#)*)

Study findings

The study identified potential concerns if this generation is not available to the ERCOT grid during emergency situations prior to the completion of ongoing transmission projects in the Lower Rio Grande Valley in 2016. ERCOT would continue to meet current North American Electric Reliability Corporation (NERC) reliability requirements but would not comply with new requirements that go into effect in 2016.

Without the Frontera Facility, there would be increased potential for rotating outages and transmission instability in some scenarios and reduced operational flexibility during construction of the new transmission facilities, which are critical to future reliability. View the [full assessment here](#).

Next steps

ERCOT is working with the Frontera Facility's owners to maintain reasonable reliability safeguards to ensure the plant will be available if needed in an emergency. Meanwhile, some additional generation resources, which could help address the supply shortage in the Valley, are in various stages of development. The grid operator will continue to monitor the situation to determine whether additional steps are needed to protect future electric reliability in the Lower Rio Grande Valley and the entire ERCOT region.

Link to report: www.ercot.com/content/news/presentations/2014/FRONTERA_Analysis_Report_20141020_FINAL.pdf

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