

Coordination between Gas and Electric Companies in ERCOT

From January through October 2020, nearly half of the energy produced in the ERCOT region in 2020 has come from natural gas-fired generation. Natural gas power plants rely on an expansive network of underground pipelines that deliver natural gas to generation facilities across Texas. According to the Railroad Commission of Texas, the Lone Star State has the largest pipeline infrastructure in the nation, with nearly 480,000 miles of pipeline.

Because natural gas plays such a significant role in the ERCOT market, any impacts to the natural gas pipeline system may impact ERCOT's ability to provide reliable electricity for Texans. Although the natural gas pipeline infrastructure is vast in Texas compared to other parts of the country, this remains an important consideration for maintaining electric system reliability.

Establishment of the ERCOT Gas-Electric Working Group

In 2013, ERCOT and Transmission Service Providers (TSPs) began working with natural gas pipeline operators to facilitate improved communications between the two industries. In early 2019, at the request of the Railroad Commission and Public Utility Commission of Texas, ERCOT formally established the Gas-Electric Working Group (GEWG), to facilitate information sharing and coordination between the natural gas pipeline industry and the electric utility industry about relevant issues in the ERCOT region.

Topics for the GEWG include, among other things, minimizing natural gas pipeline outages during ERCOT peak electric demand periods and prioritizing electricity needs for natural gas pipeline infrastructure in ERCOT's emergency curtailment and restoration plans.

Recent GEWG Activities

Communication has increased significantly between ERCOT, TSPs, natural gas-fired generation operators and the natural gas industry since the development of the GEWG. Notable achievements include:

- Creating a submission form for natural gas pipeline operators to identify facilities that depend on electric service for operation.
- Developing guidelines for coordination between natural gas pipeline operators and natural gas-fired generation operators regarding planned maintenance activities.
- Approving ERCOT Nodal Protocol Revision Request 997, which requires natural gas-fired generation operators to submit documentation to ERCOT affirming they have coordinated with their interconnecting pipeline operators on outages that may impact their ability to generate power during the summer peak electric demand season.

Upcoming Activities

ERCOT's Planning group performs several assessments to evaluate risks associated with disruptions on the natural gas pipeline network, to ensure electric system reliability and also comply with North American Electric Reliability Corporation (NERC) Reliability Standards. However, ERCOT believes there are opportunities to enhance these studies in collaboration with the natural gas industry.

Through the GEWG, ERCOT has worked to obtain additional natural gas network information to improve its future studies. While the ERCOT Planning group always considers the potential unavailability of any generation unit, it seeks to better understand whether a single disruption to a natural gas pipeline could affect multiple power plants. While the majority of natural gas-fired plants in ERCOT can be served by more than one natural gas pipeline, there is a small percentage that rely on a single pipeline.

Participation

Anyone who is interested in participating in the GEWG or would like more information related to collaborative efforts between ERCOT and the natural gas industry should contact the Chair of the GEWG, Chad Thompson, at chad.thompson@ercot.com.