ERCOT GENERIC TRANSMISSION CONSTRAINTS (GTCs)

In Texas, summer means spiking temperatures – and added strain on our electrical grid.

Victoria Electric Cooperative (VEC) continually monitors the grid conditions from The Electric Reliability Council of Texas (ERCOT). VEC is preparing for controlled outages in preparation of transmission overloading.

ERCOT is responsible for ensuring that the supply of electricity is sufficient to meet member demand (load) for electricity in most of the state. In order to monitor and control electrical grid performance, ERCOT has created specialized constraints called Generic Transmission Constraints (GTCs). These constraints are intended to manage the flow of power over a group of transmission elements, rather than just individual lines or equipment. They help maintain stability and other non-thermal reliability limits that may not be considered by other market mechanisms.

The South Texas Import Generic Transmission Constraint (GTC) established by ERCOT significantly impacts power flows into the region south of San Antonio and west of Houston, including areas of Corpus Christi, Victoria and the Rio Grande Valley.

When will the constraint be activated?

The GTC is activated only when there is a high demand for power transfers into South Texas. This will normally be triggered by a combination of peak load conditions (typically caused by high heating or air conditioning use) coupled with a lack of power plant availability. The lack of power plant availability could be due to planned or unplanned power plant outages, or a lack of renewable generation caused by a lack of wind or solar availability. These conditions trigger a significant need to import power from northern parts of the state to meet local demand. However, it is expected that this combination of conditions will rarely occur.

What happens when the constraint is activated?

The impact to the public will be minimized by ERCOT as much as possible. Before ERCOT asks consumers to take any action, ERCOT will attempt to maximize the tools available to them. These tools include increasing South Texas power plant generation as much as possible, reconfiguring the transmission system to increase flows south of San Antonio, and directing certain industrial and commercial loads who are participating in ERCOT programs to reduce their usage. If these steps do not relieve the transmission overloads, ERCOT as a last resort will direct cooperatives, the Brownsville Public Utilities Board, and AEP to implement rolling outages in certain counties south of San Antonio to preserve the stability of the grid.

How does this impact VEC?

Should ERCOT initiate these GTCs, our generation and transmission provider, South Texas Electric Cooperative (STEC) will in turn ask the cooperatives they support to reduce load in order to meet the constraint requirements. This reduction, at the distribution level is commonly known as rotating outages.

Rotating Outages, are temporary and systemic outages to balance the supply and demand of electricity. To limit the duration of outages in a specific area, VEC will administer the rolling outages one area at a time.

This is normally performed as a last resort in a series of emergency procedures performed once a shortage in the power supply is detected. Depending on the demand on the grid, weather conditions, etc., ERCOT could potentially give little notice about rolling outages, and in many cases, emergency situations like this escalate rather quickly. Currently, we estimate that for every 100 MW that is directed by ERCOT to shed, VEC will have to shed 1.33 MW which is equivalent to about 265 homes.

How long does a rolling outage last?

The emergency's severity dictates the duration of the event. Of course, the utility company will do their utmost to limit each area's duration. Once the energy emergency has ended, ERCOT will declare an end and operations will return to normal.

What is being done to correct the issue?

To eventually exit these constraints, several transmission upgrades are planned, such as two San Antonio South Reliability Projects (expected to be completed in 2027 and 2029) and the Lower Rio Grande Valley Transmission Improvement Project (expected to be completed in 2027). These measures are part of ERCOT's broader strategy to manage the evolving demands on the grid and ensure a reliable power supply for South Texas. Once these transmission upgrades are completed, it is expected that the need for the GTC will no longer exist.

What to do when you have experienced the rolling blackout?

Turn air conditioner unit off until power has been restored. When power is restored, the surge can sometimes cause electric problems or damage to your unit. Shutting off your A/C can help avoid this risk.

How can I prepare?

It takes being prepared with the right information to keep your family comfortable and safe. Have the rights supplies ready as well. Read our quick tips on how to prepare for a power outage.

As a customer, what can I do to help prevent rolling blackouts?

Extreme weather causes power outages, including rolling outages. Furthermore, it heightens the demand for more electricity, and one of the best ways we can help reduce energy demand is to lower our usage.

- To help circulate air, use ceiling fans. Turning the fan in a counter-clockwise motion will help release a downdraft, helping cool a room.
- Avoid using power-hungry appliances from 3 PM to 7 PM. Be sure to set the thermostat to a higher temperature when no one is home.
- Raise your thermostat's temperature by 2-3 degrees, most especially during peak hours.

- Residential members dependent on electric-powered medical equipment, such as those designated as Critical Care are encouraged to have a solid back-up plan in the event they lose electricity.

- For more information with regard to GTCs in ERCOT:

  https://www.ercot.com/files/docs/2020/11/27/The_Use_of_GTCs_in_ERCOT_July_2020.pdf

  For more information including a map of the proposed transmission improvements, please visit: 05-gtc_update_stx-export-and-import-aug1-ros-3.pdf (ercot.com)

- Contact VEC at 361-573-2428 for any other questions or concerns.

- For updates on power outages and restoration efforts, visit our website at www.victoriaelectric.coop or follow us on Facebook.