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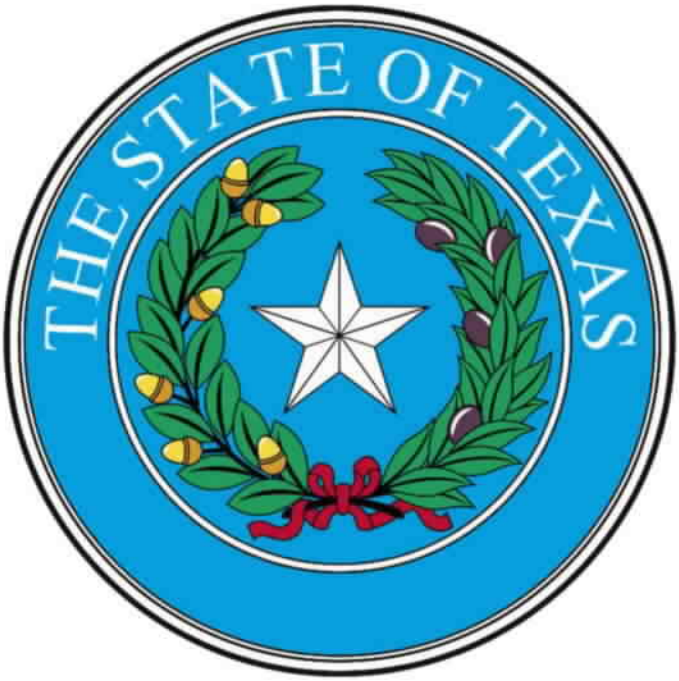


# Texas Electricity Supply Chain Security and Mapping Committee Report

**Relating to Senate Bill 3, 87th Regular Session and Senate Bill 1093, 88th Regular Session Texas Legislature**

January 2025

# Introduction

As part of Senate Bill 3 from the 87th Regular Session (SB3), the Legislature created the Texas Electricity Supply Chain Security and Mapping Committee (the Committee). On January 1, 2022, the Committee submitted a report to the Governor, the Lieutenant Governor, the Speaker of the House of Representatives, the Legislature, and the Texas Energy Reliability Council on the activities and findings of the Committee.[1] In accordance with SB3, the 2022 report:

1) provided an overview of the Committee's findings regarding mapping the electricity supply chain and identifying sources necessary to operate critical infrastructure;

2) recommended a clear and thorough communication system for the Public Utility Commission (PUCT), the Railroad Commission of Texas (RRC), the Texas Division of Emergency Management (TDEM), Electric Reliability Council of Texas, Inc. (ERCOT), and critical infrastructure sources in Texas to ensure that electricity supply is prioritized to those sources during extreme weather events; and

3) included a list of established best practices and recommended oversight and compliance standards to prepare natural gas and electric service facilities to provide service to critical infrastructure in extreme weather events.

While SB 3 required only one Mapping Report from the Committee, the Committee committed to prepare an updated Mapping Report for the Legislature by January of each odd-numbered year. This schedule corresponds with the schedule for the PUCT's Biennial Agency Report as required by Public Utility Regulatory Act (PURA) § 12.203.

[1] Senate Bill 3, 87(R) added Public Utility Regulatory Act (PURA), TEX. UTIL. CODE ANN. § 38.204 (a) (West Supp. 2021), Mapping Report.

This Mapping Report takes a targeted approach and focuses on the Committee's efforts regarding the Electricity Supply Chain Map that have occurred since the initial report was submitted on January 1, 2022.

## Executive Summary

SB 3 created the Texas Electricity Supply Chain Security and Mapping Committee and included the executive director of the PUCT, the executive director of the RRC, the chief of TDEM, and the president and chief executive officer of ERCOT as members. Senate Bill 1093, 88th Regular Session, expanded the Committee to include the executive director of the Texas Department of Transportation (TxDOT).[2] The executive director of the PUCT serves as the chair of the Committee. Among its responsibilities, the Committee must map the electricity supply chain in Texas and identify the critical infrastructure sources in the electricity supply chain.

The completed electricity supply chain map identifies and connects the critical natural gas infrastructure needed to supply natural gas to natural gas dependent generators to the electric distribution and transmission system and provides information crucial to emergency management personnel during an emergency.

The Committee's mapping team used data from the PUCT, RRC, ERCOT, TDEM, U.S. Department of Homeland Security's Homeland Infrastructure Foundation-Level Data (HIFLD), S&P Global (a third-party vendor), electric utilities, and electric cooperatives to complete the initial electricity supply chain map, which was approved by the Committee and published in April 2022, several months ahead of the September 1, 2022 deadline set by SB 3. Although SB 3 requires the Committee to update the electricity supply chain map at least once each year, the Committee decided to make biannual updates to the map each year by December 1 in preparation for winter storm season, and by June 1 in preparation for hurricane season. Over the course of subsequent updates, data collected directly from electric utilities and electric

[2] PURA § 38.201(c).

cooperatives has gradually replaced third-party data initially acquired through HIFLD and S&P Global to cover the non-ERCOT regions of the state.

The initial electricity supply chain map included the following information:

1) TDEM regions and disaster districts;

2) electric transmission and distribution system infrastructure

    a. transmission and distribution lines, substations, electric generating facilities, electric service area boundaries;

3) critical natural gas infrastructure

    a. natural gas pipelines, compressor stations, processing plants, underground storage facilities, oil leases and natural gas wells, saltwater disposal wells;

4) electric service area boundaries;

5) 24/7 emergency contact information, owner and operator information, and unique identifying information; and

6) real-time weather information.

Passage of SB 1093 brought important updates to the map designed to provide decision makers with the information needed to coordinate between electric, gas, and water industries. This legislation also recognized the importance of passable roads to service critical infrastructure during emergency events by allowing TxDOT road crews to receive pertinent information during emergencies. Following passage of SB 1093, the mapping team updated the electricity supply chain map to include:

1) TXDOT-provided road layers,

2) water and wastewater treatment plants, and

3) electric service area boundaries provided by each electric utility, transmission and distribution utility, electric cooperative, and municipally owned utility (collectively "electric utilities").

The mapping team implemented updates required by SB 1093 in 2023, the same year the legislation passed. SB 1093 also permits:

1) an electric utility to request view-only access to the critical natural gas facilities in its service area; and

2) a natural gas facility operator to request view-only access to its infrastructure on the map. RRC provides operators with a list of their facilities that are on the map.

## RRC and PUCT Rules Related to the Electricity Supply Chain Map

RRC and PUCT rules provide the framework required to identify sources that serve critical infrastructure needed to create and update the electricity supply chain map. SB 3, sections 4 and 16, and House Bill 3648 from the 87th Regular Session required the PUCT to collaborate with the RRC to adopt a "process to designate certain natural gas facilities and entities associated with providing natural gas in this state as critical during energy emergencies."[3] The PUCT, RRC, ERCOT, and natural gas and electric industry market participants worked together to establish criteria to identify critical natural gas facilities and to prioritize electric service to these facilities. As required by HB 3648[4], both the RRC and PUCT adopted critical natural gas facility rules.

[3] PURA § 38.074(a).
[4] See PUCT, 16 Texas Administrative Code (TAC) § 25.52 and RRC, 16 TAC § 3.65.

## RRC Rule 16 Tex. Admin. Code (TAC) § 3.65-Critical Designation of Natural Gas Infrastructure

The RRC first adopted 16 TAC § 3.65 as required by HB 3648 and section 4 of SB 3 in 2021.[5] The rule was subsequently amended and became effective on November 21, 2022.[6] The rule establishes a process to designate certain natural gas facilities and entities associated with providing natural gas in this state as critical customers or critical gas suppliers during energy emergencies.

16 TAC § 3.65 defines "energy emergency" and "critical customer information" and clarifies how to calculate gas volumes. It also designates the following facilities as "critical gas suppliers" during an energy emergency:

1. gas wells producing gas in excess of 250 Mcf/day;
2. oil leases producing casinghead gas in excess of 500 Mcf/day with some exception for enhanced oil recovery projects;
3. gas processing plants;
4. natural gas pipelines and pipeline facilities including associated compressor stations and control centers;
5. local distribution company pipelines and pipeline facilities including associated compressor stations and control centers;
6. underground natural gas storage facilities;
7. natural gas liquids transportation and storage facilities; and
8. saltwater disposal facilities including saltwater disposal pipelines.

[5] This legislation is codified at Tex. Nat. Res. Code § 87.073 and PURA § 38.074 (West Supp. 2021)
[6] 47 Tex. Reg. 7661 (Nov. 21, 2022).

16 TAC § 3.65 also defines "critical customers," which are a subset of "critical gas suppliers." Critical customers are critical gas suppliers who need electricity to operate. The rule requires a critical customer to send certain information, such as account number and premise identifying information, to its electric utility for load shed planning purposes during an energy emergency.

16 TAC § 3.65 permits facilities that are not designated as critical gas suppliers or critical customers to apply for critical designation if the facility's operation is required for another critical facility to operate. Additionally, a facility that is not designated as critical but is later included on the electricity supply chain map must apply to the RRC to be designated as critical.

Section 4 of SB 3 prohibits RRC from designating a facility as critical unless the facility is prepared to operate during a weather emergency. Critical gas suppliers shown on the electricity supply chain map published by the Committee must weatherize their facilities according to RRC's Weather Emergency Preparedness Standards Rule[7]. Under Rule § 3.65, only facilities not included on the electricity supply chain map may apply for an exception to this requirement. Additionally, 16 TAC § 3.65 requires operators of critical facilities to provide critical customer information to the RRC and the operators' electric delivery service providers. The RRC shares this information with the PUCT and ERCOT to support the creation of the electricity supply chain map.

## PUCT Reliability and Continuity of Service Rule - 16 Tex. Admin. Code (TAC) § 25.52

The PUCT amended 16 TAC § 25.52 to implement the provision in HB 3648 requiring the PUCT to collaborate with the RRC to establish a process to designate certain natural gas facilities and entities associated with providing natural gas in this state as critical during energy emergencies.[8] The rule defines the terms "critical natural gas facility" and "energy emergency"

[7] 16 TAC § 3.66.
[8] *See* Tex. Nat. Res. Code § 81.073(a) (West Supp. 2021).

and clarifies that critical natural gas standards apply to each facility in Texas designated as a critical customer under the RRC's Rule § 3.65. Section § 25.52 applies to transmission and distribution utilities (TDUs), municipally owned utilities (MOUs), and electric cooperatives (Coops). Under the rule, critical natural gas facilities must provide critical customer information to their electric delivery service providers and to ERCOT using RRC's form CI-D and any attachments.

The rule requires the PUCT to maintain a list of utility email addresses for critical natural gas facilities to communicate their critical customer information. If a utility's contact information changes or is inaccurate, the utility must provide the Commission with updates within five business days of the change or of becoming aware of the inaccuracy. The rule also requires utilities to evaluate critical customer information for completeness within ten days of receipt.

Each utility must provide written notice to an operator of a natural gas facility about its critical designation status, the date of its designation, and any additional classifications assigned to the facility by the utility. The utility must also inform the operator that its critical status does not guarantee an uninterrupted supply of energy.

Under PUCT Rule § 25.52, utilities or an independent system operator cannot release critical customer information without authorization by the PUCT or the operator of the critical facility. This prohibition, however, does not apply to the release of such information to the PUCT, the RRC, the utility from which the critical natural gas facility receives electric delivery service, the designated transmission operator, or the independent system operator or reliability coordinator for the power region in which the critical natural gas facility is located.

The rule also specifies that a critical natural gas facility is a critical load during an energy emergency. Utilities must treat facilities that self-designate as critical using the voluntary *Application for Critical Load Serving Electric Generation and Cogeneration form* as critical facilities, as circumstances require.

Finally, PUCT Rule § 25.52:

1) requires a utility to prioritize critical natural gas facilities for continued power delivery during an energy emergency;

2) allows a utility to use its discretion to prioritize power delivery and power restoration among critical natural gas facilities and other critical loads on its system, as circumstances require; and

3) requires a utility to consider any additional guidance or prioritization criteria provided by PUCT, RRC, or the reliability coordinator for its power region to prioritize among critical natural gas facilities and other critical loads during an energy emergency.

## Tiering Guidance for TDUs Serving Critical Natural Gas Facilities

Since Winter Storm Uri, electric utilities have experienced a substantial increase in the number of registrations from natural gas facilities seeking critical load designation. Transmission and Distribution Utilities (TDUs) have expressed concern that the increase in the number of critical load registrants may make it difficult for TDUs to effectively rotate outages during a load shed event. TDUs have been working with natural gas industry market participants to define tiers of criticality so that during a load shed event, TDUs will have an established prioritization structure of critical infrastructure for load shed purposes. Natural gas industry market participants addressed the tiering concept for natural gas facilities in the RRC's initial critical designation rulemaking and in the PUCT critical designation rulemaking. The RRC also provided the PUCT with information outlining the facilities that the RRC knows are most important to the natural gas supply chain during an energy emergency.

The PUCT considered this input when issuing tiering guidance pursuant to the PUCT's jurisdiction and the requirements of SB 3 in PURA § 38.074(b)(2) and (3). The PUCT expects each electric utility to develop its own critical load classifications and criteria for prioritizing critical loads for power delivery and power restoration during energy emergencies based on

the unique features of its system. The guiding consideration for these plans should be the safety and wellbeing of the public along with the preservation of critical facilities and infrastructure. Regarding critical natural gas facilities, during an energy emergency, utilities should strive to maximize the fuel supply to power generation facilities. PUCT staff provided the following guidance in January 2022 to the PUCT's regulated industry on the designation of load shed tiers during a weather emergency:

### Tier One

Tiers One and Two are subdivided into two groups. Tier One A is prioritized over Tier One B. Tier Two A is prioritized over Tier Two B.

A.

- Pipelines that directly provide natural gas to ERCOT identified Black Start Service facilities and other natural gas fired electric generation;
- Natural gas local distribution company critical pipelines or pipeline facilities;
- Underground natural gas transportation and storage facilities;
- Natural gas liquids transportation and storage facilities; and
- Associated pipelines, compressor stations, and control centers for facilities in Tier One A.

B.

- Natural gas wells and oil leases producing natural gas in excess of 5000 Mcf/day;
- Gas processing plants with a capacity of at least 200 MMcf/day;
- Associated pipelines, compressor stations, and control centers for facilities in Tier One B; and

- Associated saltwater disposal wells supporting the wells and leases for facilities in Tier One B.

## Tier Two

A.

- Natural gas wells and oil leases producing natural gas in excess of 1000 Mcf/day but no more than 5000 Mcf/day;
- Gas processing plants with a capacity of at least 100 MMcf/day but no more than 200 MMcf/day;
- Associated pipelines, compressor stations, and control centers for facilities in Tier Two A; and
- Associated saltwater disposal wells supporting the wells and leases for facilities in Tier Two A.

B.

- Natural gas wells and oil leases producing natural gas in excess of 250 Mcf/day but no more than 1000 Mcf/day;
- Gas processing plants with a capacity of at least 100 MMcf/day;
- Associated pipelines, compressor stations, and control centers for facilities in Tier Two B; and
- Associated saltwater disposal wells supporting the wells and leases for facilities in Tier Two B.

### Tier Three

- Natural gas wells and oil leases producing natural gas less than 250 Mcf/day;
- Associated pipelines, compressor stations, and control centers for facilities in Tier Three;
- Associated saltwater disposal wells supporting the wells and leases for facilities in Tier Three; and
- Any additional facilities identified as critical on Railroad Commission of Texas Form CI-D, including processing, metering, and similar support facilities and equipment.[9]

## Workflow and Individual Committee Member Updates

The Committee has met regularly since August 2021. Mapping and IT personnel from the PUCT, RRC, TDEM, ERCOT, and TxDOT work on multiple aspects of the electricity supply chain map, and Committee members have signed a memorandum of understanding (MOU) to establish a process to share confidential datasets between agencies.

To keep the electricity supply chain map current, the PUCT receives updated electric generation and transmission datasets securely from mapping and IT staff at ERCOT and electric utilities outside of the ERCOT region. Additionally, electric utilities securely provide electric distribution datasets on a regular, biannual, basis. The PUCT also receives updated critical natural gas infrastructure data securely from mapping and IT staff at RRC on a regular, biannual, basis. PUCT mapping staff converts information into a format that can be used by the PUCT's mapping software, and aggregates it into a single, reliable, database of integrated gas and electric industry information for inclusion in the electricity supply chain map.

[9] See Project No. 52345, Critical Natural Gas Facilities and Entities, Item No. 51, January 14, 2022.

## A. PUCT

PUCT shares regular, biannual updates for generation, transmission lines, and distribution lines, which are acquired from Texas utilities. Updates on water and wastewater treatment plants are acquired from the Texas Commission on Environmental Quality (TCEQ).

The Committee allows electric utilities, as permitted by SB 1093, to sign a Non-Disclosure Agreement for view-only access to the electricity supply chain map. The PUCT coordinates with each entity and provides the opportunity to securely view critical natural gas facilities on the map. An electric utility may only view critical natural gas facilities on the map located in its service area.

## B. RRC

RRC shares regular, biannual updates for eight critical infrastructure layers. These are the natural gas pipelines directly serving generation, gas processing facilities, pipeline compressor stations, off-lease compressor stations, saltwater disposal wells, gas wells, oil leases, and underground storage facilities.

## C. TDEM

TDEM works closely with staff representing the PUCT and RRC at the State Operations Center (SOC) to ensure the mapping team collects and includes on the electricity supply chain map the attribute data for each piece of critical infrastructure that will be the most useful in an emergency. Additionally, TDEM provides updates to the map on a regular, biannual basis that results in streamlined communication and coordination with the appropriate TDEM personnel during an emergency. These updates include boundaries and emergency contact information for TDEM regions, disaster districts, and Councils of Government (COGs).

## D. ERCOT

ERCOT securely provides updates on power generation facility, transmission line, and substation data to the PUCT on a regular, biannual basis.

### E. TxDOT

The Committee uses TxDOT roadways in the electricity supply chain map. These are integrated with two TxDOT-customized basemaps made available to map users. TxDOT Maintenance Sections are also shared in the map. These sections show who is responsible for overseeing maintenance activities on TxDOT roadways within that section. The datasets provided by TxDOT are continuously and automatically updated to reflect changes in geospatial information and attribute data.

## Current Data Collection Challenges Related to the Electricity Supply Chain Map

A continuing challenge for the Committee is obtaining and mapping the electric distribution infrastructure that serves the critical natural gas infrastructure identified under RRC and PUCT rules. Because the PUCT lacks direct access to electric utility distribution level mapping data, the Committee must request this information from the electric utilities serving the infrastructure. To expedite this process, the Committee provides the electric utilities with lists of premise identifiers associated with the critical infrastructure sources identified by RRC. This information allows the electric utilities to identify and provide the associated distribution level information to the Committee for mapping. Under the RRC's critical facilities rule, a natural gas facility must provide its premise identifier to the electric utility that serves the facility to be considered a critical load. The RRC must share this data with the Committee. The data is used to build out the electricity supply chain map and to provide the map's end users with information relevant to maintaining electric service in an emergency event.

SB 1093 requires TDUs, Coops, and MOUs to submit service area boundary maps to the PUCT in a geographic information system (GIS) format. This has reduced the time required to link premise identifiers with electric distribution infrastructure, particularly in cases where data collection or data entry errors may have occurred. In those cases, the electric utilities use other clues in the data to help research the correct premise identifier, thereby linking the appropriate

distribution-level GIS data. Operators are then asked to resubmit the correct premise identifier for the critical natural gas infrastructure to the RRC.

## Conclusion

The Committee has met statutory objectives. Continued participation by all Committee members will help ensure the electricity supply chain map continues to be a useful tool in emergency planning and response.