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OPEN MEETING COVER SHEET

MEMORANDUM AND AGENCY REPORT DRAFT

MEETING DATE:	December 15, 2022
DATE DELIVERED:	December 14, 2022
AGENDA ITEM NO.:	55
CAPTION:	Project No. 54037 – *Reports to the 88th Legislature*
DESCRIPTION:	Memo and Agency Report Draft

Public Utility Commission of Texas

Memorandum

TO: Chairman Peter M. Lake
Commissioner Will McAdams
Commissioner Lori Cobos
Commissioner Jimmy Glotfelty
Commissioner Kathleen Jackson

FROM: Rebecca Zerwas

DATE: December 14, 2022

RE: December 15, 2022 open meeting, Item No. 55
Project No. 54037, *Reports to the 88th Legislature*

Attached is the text of the Biennial Agency Report to the 88th Legislature. Staff requests feedback from the Commission at the December 15, 2022 open meeting regarding the content of the Report. The following items remain outstanding for the completion of the Report and subsequent submittal to the Legislature:

- Formatting of the Report consistent with agency style guidelines and inclusion of previously published reports as appendices.
- Addition of the Interconnection Report scheduled for consideration at the January 12, 2023 open meeting.
- Addition of the Commission's legislative recommendations scheduled for consideration at the January 12, 2023 open meeting.

Introduction

What We Do

The Public Utility Commission of Texas (PUCT) regulates the state's electric, telecommunications, and water and sewer utilities, implements related legislation and helps resolve customer complaints.

Mission

The PUCT protects customers, fosters competition, and promotes high quality and reliable infrastructure.

Purpose and History

The PUCT was established in 1975 "to protect the public interest inherent in public utility rates and services." The Public Utility Regulatory Act (PURA) provisions were enacted and codified to ensure rates, operations, and services that are just and reasonable to consumers and utilities. The Texas Legislature passed legislation in 1995 that significantly altered the PUCT's role by establishing a competitive electric wholesale market. Furthermore, the Federal Telecommunications Act of 1996 significantly impacted the PUCT's responsibilities by allowing competition in telecommunications wholesale and retail services. The Texas Legislature provided additional restructuring of the electric utility industry in 1999, opening many areas of Texas to competitive retail electric provider choice.

The PUCT's mission and focus remains on rate and service regulation, competitive market oversight and compliance enforcement of statutes and rules for the electric and telecommunications industries. Effective oversight of competitive wholesale and retail markets for electric and telecommunication companies is necessary to ensure that customers receive the economic and reliability benefits of competition.

The PUCT initially regulated water utilities, but in 1986 jurisdiction was transferred to the Texas Water Commission. The PUCT took over economic regulation of water and sewer utilities from the Texas Commission on Environmental Quality (TCEQ) in 2013. This transfer included programs governing the regulation of water and sewer rates and services, the certification of service territories, and the ownership of water utilities.

Guide to this Report

Statute requires several reports to the Legislature from the PUCT. For convenience, this report consolidates some of those reports into one document. Specifically, this report fulfills the following requirements:

- Biennial Report, including Legislative recommendations (PURA § 12.203), beginning on page 88;
- Scope of competition in electric markets (PURA § 31.003), beginning on page 17; and
- Scope of competition in telecommunications markets (PURA § 52.006), beginning on page 49.

Public Utility Commission of Texas

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Lori Cobos, Commissioner
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Agency Highlights

During the 2021-2022 biennium, the PUCT faced significant challenges and accomplished numerous objectives in support of its mission to protect customers, foster competition, and promote high-quality, resilient infrastructure. This chapter highlights some milestones, with more information available throughout the report.

New Commissioners

On June 18, 2021, Senate Bill (SB) 2154 (87th Legislature, Regular Session) was signed into law by the governor. SB 2154 amended PURA §12.051(a) to expand the number of Commissioners serving at the PUCT from three to five. Four Commissioners were appointed in 2021, and on August 5, 2022, Kathleen Jackson was appointed as the fifth Commissioner of the PUCT.

			Peter M. Lake Chairman Appointed April 12, 2021
			Will McAdams Commissioner Appointed April 1, 2021
			Lori Cobos Commissioner Appointed June 17, 2021
			Jimmy Glotfelty Commissioner Appointed August 6, 2021
			Kathleen Jackson, P.E. Commissioner Appointed August 5, 2022

Reorganization

Since January 2021, the PUCT has undergone several changes to serve Texans better and address market, compliance, and rulemaking issues that arose after Winter Storm Uri. The following are the organizational changes:

Market Analysis

The Market Analysis division was expanded to include an attorney and an engineer to help handle the complex legal and technical issues facing the competitive Texas electricity market. This legal and engineering expertise allows Market Analysis to provide comprehensive review of topics including new technologies entering the market, complaints against the Electric Reliability Council of Texas (ERCOT), ERCOT Protocol revisions, and compliance with PUCT rules and Commission orders.

New Division: Compliance and Enforcement

In July of 2020, the PUCT's enforcement staff merged into the Legal Division to make more efficient use of agency resources. At that time, the Legal Division's larger team of attorneys offered more flexibility in addressing various legal issues. After Winter Storm Uri, the PUCT determined a division solely committed to ensuring compliance with PUCT rules was appropriate. The Division of Compliance and Enforcement (DICE) was created in August 2021. DICE investigates and enforces potential violations of laws and rules regulating the electric, water, and telecommunications utility industries that have the potential to impact the broader public interest. DICE also participates directly in informal and formal proceedings related to PUCT rule violations and settlements for administrative penalties.

New Division: Rules and Projects

In September of 2021, the Rules and Projects Division (RAP) was created to address the large number of rulemakings required to implement legislation from the 87th Legislative Session. RAP allows subject matter experts to focus on policy implementation and ensures consistency and compliance with the Texas Administrative Procedure Act. RAP also assists in drafting agency reports, performs research on current legal issues, and supports improvements to agency processes.

New Initiative: Multi-Language Team

In February of 2021 the Multi-Language Team was created to enhance communication with Spanish-speaking consumers. The agency's customer protection division (CPD) has traditionally employed bilingual staff who are focused on assisting consumers with utility-related concerns. The Multi-Language team adds subject matter experts in utility regulation and attorneys as a cross-divisional initiative. The team reviews PUCT documents to reflect the language diversity of the State. The Multi-Language Team ensures new and existing forms and notices used or received by utility customers are in plain English and Spanish and therefore understandable to the consumer.

New Initiative: Enhanced Communications

In January 2022, the PUCT began an effort to dramatically improve its external communications with the public, regulated industries, stakeholder groups and media by authorizing the expansion of the agency's Division of Communications. As of November 2022, the division has grown from a single full-time employee (FTE) to four FTE positions, including a director of communications, web and social media content creator, web administrator, and press officer. The PUCT anticipates at least one more FTE to complete the communications team. Expansion of the team has meant a significant increase in social media engagement, primarily by engaging Texans directly with consumer advocacy and assistance-related content, as well as real-time updates during critical events. The division has also been able to increase media interaction and begin website upgrades.

New Division: Office of Public Engagement

In August 2022, the Office of Public Engagement (OPE) was created to increase public participation in agency activities by making the PUCT more accessible for all Texans. OPE serves as a resource to the public to explain PUCT administrative processes and instruct Texans on how to participate in rulemakings, rate cases, hearings, and other important activities the PUCT regularly performs.[1]

Agency's Actions in Response to Winter Storm Uri 2021

In February 2021, Winter Storm Uri produced an extreme cold weather event across the Eastern, Central, and Southern United States. Major load centers across Texas endured sustained and severe low temperatures, dropping to -2°F in Dallas, 13°F in Houston, 12°F in San Antonio, and 6°F in Austin.[2] On the evening of February 14, customers started experiencing service outages as the extreme cold, wind, ice, and snow impacted local electric infrastructure. Electric generation units also experienced forced outages as wind turbines froze and thermal generators tripped offline due to weather or limited fuel resources. On Monday, February 15 at 12:15 a.m., ERCOT declared an Energy Emergency Alert (EEA) Level I event for reserves less than 2,300 Megawatts (MW) and not expected to recover within 30 minutes. The event quickly progressed and by 1:25 a.m., ERCOT had declared an EEA 3 event and ordered firm load shed. The controlled outage orders remained in place till 12:48 a.m. on Thursday, February 18, though some customers remained without power as a result of storm related damages to transmission

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[1] *Office of Public Engagement*, PUBLIC UTILITY COMMISSION OF TEXAS, https://www.puc.texas.gov/agency/about/ope/.

[2] *See ERCOT Response to House Energy Commerce Committee,* ELECTRIC RELIABILITY COUNCIL OF TEXAS, https://www.ercot.com/files/docs/2021/03/23/ERCOT_Response_to_House_Energy__Commerce_Committee_3.18.21.pdf (March 18, 2021). *See also Valentine's Week Winter Outbreak 2021: Snow, Ice & Record Cold*, NATIONAL WEATHER SERVICE, https://www.weather.gov/hgx/2021ValentineStorm.f

and distribution infrastructure. ERCOT did not return to normal operations until 10:35 a.m. on Friday, February 19.

Uri greatly impacted the electric and water industries under the PUCT's regulatory jurisdiction and the customers it's charged to protect. The Texas Comptroller has cited studies that found 69 percent of Texans lost power and 49 percent had a disruption in water service during Uri.[3] Since the PUCT's response during the storm, the agency has been working to address issues raised during and after the storm to ensure grid reliability. These efforts include process improvements, policy initiatives, and increased collaboration with other state agencies and ERCOT. The PUCT has also worked to implement legislation enacted in response to the storm. Key efforts in the PUCTs response are highlighted below. Specific long-term reforms related to ERCOT reliability operations and market design are detailed in a stand-alone section of the report.

The Commission held five emergency Open Meetings to address Uri-related issues between February 15 and February 21. During these meetings the Commission issued a series of orders focused on wholesale market pricing issues in ERCOT and providing ERCOT with discretion to resolve financial obligations resulting from the event. Other actions included ordering transmission and distribution utilities (TDUs) to rotate customers when subject to load shed obligations and providing enforcement discretion for load resources deployed during the event who were unable to follow standard protocols for restoring operations. The Commission later directed ERCOT to work with the Independent Market Monitor (IMM) on protocol revisions to properly reflect load shed in price adders and address pricing anomalies identified during the event. Financial issues have been addressed through the adoption of securitization orders as required by SB 3 (87th Legislature, Regular Session) and contested cases before the Commission and bankruptcy courts.

The Commission also addressed consumer issues in emergency orders. Good cause exceptions were granted to certain customer protection rules to provide relief to electric, water, and sewer customers affected by Uri. The Commission suspended disconnects for nonpayment, waived late fees, and reaffirmed the requirement to offer deferred payment plans to customers that remained in effect due to the Covid-19 pandemic. For electric customers in areas open to competition, the Commission opened the process for REPs to volunteer to offer Provider of Last Resort (POLR) service as financially distraught REPs began to exit the market. This helped provide retail market stability and guarantee competitive rates to affected customers. Many of these actions have been codified in rulemakings to provide immediate relief in any future emergency events.

The PUCT opened its consumer assistance call center on Sunday, February 14, 2021, operating the phones from 2:00 pm – 7:00 pm. This was the first activation of the call center on

[3] *See* Fiscal Notes, *Winter Storm Uri 2021: The Economic Impact of the Storm*, TEXAS COMPTROLLER

a weekend in the PUCT's history. PUCT staff took calls again on Monday, February 15, the President's Day holiday. Staff from across the agency filled in to triple the size of the call center. During the Winter Storm Uri event, from February 14 to February 19, the call center received 4,107 calls, or about a typical week's worth of calls each day.

Immediately following the event, PUCT staff began evaluating ERCOT governance. The efforts looked at the PUCT's complete authority over ERCOT and focused on improvements to communications, governance, and cooperation between ERCOT, Inc. and the PUCT. Several touchpoints for increased engagement have been established, including standing calls between PUCT and ERCOT leadership and the designation by ERCOT of specific subject matter experts to work with staff, including a VP of Corporate Strategy & PUCT Relations as the primary contact and facilitator. SB 2 (87th Legislature, Regular Session) enacted major reforms at ERCOT. SB 2 established a Board of Directors independent of market interests. and requires the Commission to explicitly approve all rules adopted by ERCOT before they may take effect. The Commission has approved Bylaws addressing the revised Board composition along with 125 rule revisions. The PUCT has also worked with ERCOT on refining its roles and responsibilities at the State Operations Center when activated for an emergency event.

Additional efforts have focused on gas-electric coordination, including engagement with the Railroad Commission of Texas (RRC) and formalizing the Texas Energy Reliability Council (TERC).[4] Prior to Uri, TERC was an informal body with leadership from the PUCT, RRC, ERCOT, as well as industry representatives. TERC met daily from February 10-21 to address issues from the well head to gas generation. On February 12, RRC issued an emergency order prioritizing electric generation equal to human needs in the order of natural gas supply.[5] Post-Uri, SB 3 formalized TERC to strengthen coordination between electric and gas industries, ensure high priority human needs are met, and address critical infrastructure concerns. PUCT leadership has been actively involved in TERC and has established additional standing meetings with the RRC executive team to better coordinate efforts. PUCT and RRC have worked together on legislative initiatives including rules regarding critical natural gas facilities and the development of a map viewer under the Texas Electricity Supply Chain Security and Mapping Committee.[6] PUCT has also worked with ERCOT on revised protocols to create a firm fuel product and ensure that facilities

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[4] *Texas Energy Reliability Council*, RAILROAD COMMISSION OF TEXAS, https://www.rrc.texas.gov/gas-services/texas-energy-reliability-council/.

[5] *Railroad Commission Emergency Order*, RAILROAD COMMISSION OF TEXAS, https://rrc.texas.gov/media/cw3ewubr/emergency-order-021221-final-signed.pdf.

[6] Joint News Release, *Texas Adopts First-Ever Electricity Supply Chain Map*, PUBLIC UTILITY COMMISSION OF TEXAS AND RAILROAD COMMISSION OF TEXAS, https://www.puc.texas.gov/agency/resources/pubs/news/2022/042922-joint-rrc-puc-map-press-release.pdf April 29, 2022). *See also Mapping Report*, TEXAS ELECTRICITY SUPPLY CHAIN SECURITY AND MAPPING COMMITTEE, https://ftp.puc.texas.gov/public/puct-info/agency/resources/reports/mapping/2021_Mapping_Agency_Report.pdf (January 2022).

producing natural gas critical to electricity generation does not volunteer to reduce power usage during emergency events.[7]

Winter 2022

Winter 2021-2022 marked the first cold weather season following Winter Storm Uri. In preparation, PUCT implemented targeted reforms and worked closely with ERCOT on a reliability-focused operating approach. ERCOT endorsed a revised 2022 Ancillary Services Methodology that increased the minimum amounts of ancillary services it would procure and moved forward the timelines for deployment. It also noticed the market of its intention to bring more generation reserves online and deploy them earlier if needed to ensure supply would meet demand. Following adoption of the PUCT's weatherization rule, ERCOT conducted 302 inspections of generating units and inspected 22 transmission facilities for weatherization compliance starting in November 2021. ERCOT also reviewed the availability of on-site fuel supplies.

Overall, the grid performed well. There were two cold weather events in February, which caused tight conditions, but no EEAs were declared. A single advisory notice was issued for a Winter Weather Watch spanning February 2nd – 6th. Peak demand for Winter 2022 hit 68,954 megawatts (MWs) (854MW less than the February 2021 record). The load-weighted average real-time energy price for December through February was $38.52 per megawatt-hour (MWh).

Summer 2022

Summer 2022 saw record demand on the ERCOT system. The all-time ERCOT system peak demand record was broken 10 times in total, ultimately hitting 80,038 MW on Wednesday, July 20th between 4-5 p.m. The grid also set a new unofficial weekend peak demand record of 77,359 MW on Saturday, July 9th between 5-6 p.m. Working with PUCT, ERCOT managed tight conditions through reliability actions designed to better capture and mitigate risks. This included amendments to the Emergency Response Service (ERS) rule to provide ERCOT flexibility in the implementation and administration of the program, procurement of increased ancillary service quantities, and committing more generation resources online to meet Physical Responsive Capability (PRC) targets on high variability days.

The grid performed well. Despite repeated instances of tight conditions, no EEAs were declared. ERCOT did issue two watch notices along with conservation appeals on July 11th and again on July 13th. An Advisory due to PRC below 3000 MW was also issued on July 13th, and ancillary services and ERS were deployed in line with Commission directives to utilize the programs prior to reaching emergency conditions. The load-weighted average real-time energy price for June through August was $111.13 per MWh.

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[7] *Firm Fuel Supply Service*, ELECTRIC RELIABILITY COUNCIL OF TEXAS, https://www.ercot.com/services/programs/firmfuelsupply.

ELECTRICITY

Texas is the only state served by all three major electricity interconnections in the United States: The Eastern Interconnection, the Western Interconnection, and ERCOT. Power is generated from fuel sources such as natural gas, coal, nuclear power plants, solar, wind, hydroelectric dams, and batteries. In Texas, retail customers receive service from competitive retail electric providers (REPs); investor-owned vertically integrated utilities; electric cooperatives; and municipally owned utilities (MOUs).

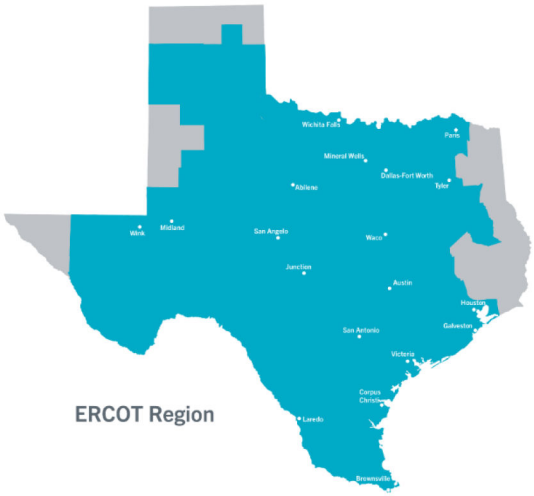

Figure 1. The area covered by the Electric Reliability Council of Texas (ERCOT)

In the El Paso area, the Panhandle, Northeast Texas, and Southeast Texas, more than 1.2 million customers receive their power from one of four investor-owned, vertically integrated electric utilities. These utilities are outside the ERCOT grid and connect to other states. The PUCT regulates the bundled retail rates of these utilities and local reliability. The Federal Energy Regulatory Commission (FERC) has regulatory jurisdiction over interstate wholesale power sales and interstate transmission rates for these utilities.

Throughout the state, MOUs and electric cooperatives serve approximately 4.7 million meters in Texas. There are 75 member-owned electric cooperatives in Texas, governed by elected boards. Additionally, 72 municipalities own and operate utilities, including Austin Energy and CPS Energy in San Antonio. The PUCT does not have retail rate-setting jurisdiction over electric cooperatives or MOUs. However, the PUCT does have limited appellate authority for the retail rates of the MOUs. Also, through its authority over wholesale transmission rates, the PUCT sets the wholesale transmission rates of MOUs and electric cooperatives in ERCOT and regulates reliability issues.

ERCOT, Inc. is the regional transmission organization and independent system operator (ISO) for the ERCOT region, which is fully contained within the state.[8] ERCOT manages the flow of electric power to more than 26 million end users and 90% of the electric load in Texas. ERCOT also performs the financial settlement of the wholesale electric market within its region. ERCOT is governed by an independent board of directors and subject to the oversight of the PUCT and the Legislature.

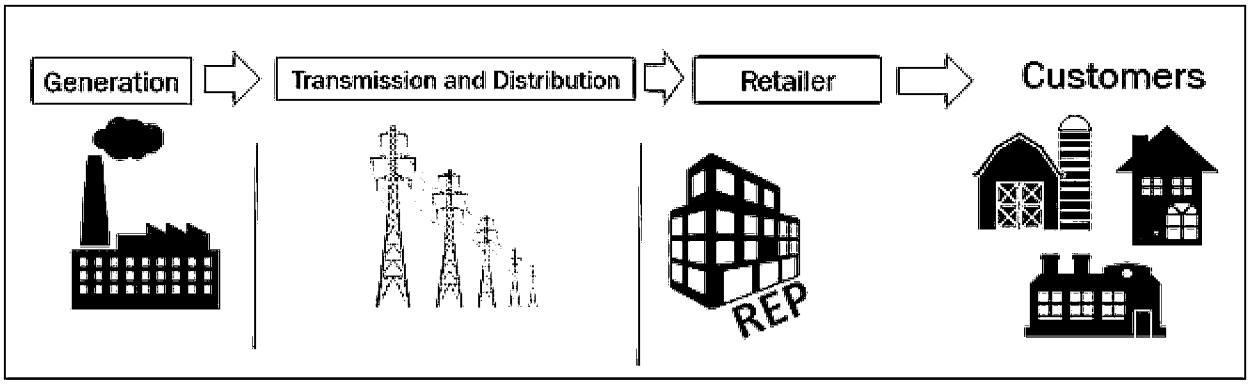

Figure 2. The path of electricity from generation to consumption.

ERCOT Region

The ERCOT region features a competitive retail and wholesale market. Customers within ERCOT that are not served by a MOU or electric cooperative have customer choice in the retail market. REPs that serve these customers buy power in the competitive wholesale market, in which power generators, MOUs, electric cooperatives, and traders in the ERCOT region all participate.

Competitive Retail Market

Retail Electric Providers

Texans in areas open to retail competition choose electricity products from a variety of REPs. A REP buys power from power generators and sells it to its customers. A REP also handles the retail relationship with the customer, including billing and customer service. Nearly all eligible customers have exercised the right to choose their electricity provider since the market opened.[9] During the 2021-22 biennium, the number of REPs and offers in the competitive market areas of ERCOT has increased. Thirty-eight new REPs have been certificated by the PUCT and 19 REPs have relinquished their certificates to operate in Texas. There are currently 138

[8] *About ERCOT,* ELECTRIC RELIABILITY COUNCIL OF TEXAS, https://www.ercot.com/about.

[9] *Provider of Last Resort Counts, ELECTRIC RELIABILITY COUNCIL OF TEXAS.* http://www.ercot.com/content/wcm/key_documents_lists/89277/Observed_Selection_of_Electric_Providers_April_2020.pptx (last updated May 1, 2020).

REPs authorized to sell electricity in the Texas competitive market. Each REP can offer a wide variety of different plans to suit customer preferences.

The wide variety of plans available to customers in the competitive retail market allows customers to choose a plan that best fits their needs and budget. As of March 2022, REPs in the competitive market serve 6,869,461 residential premises, 1,175,922 commercial premises, and 4,715 industrial premises.[10] The average prices available for a 12 month, fixed-rate plan across the TDU service territories in November 2022 ranged from 14.83¢ per kilowatt hour (kWh) to 16.93¢ per kWh[11].

The competitive market offers a variety of plans to customers. As of September 2022, plans are available that offer 100% renewable electricity, time-of-use pricing such as free electricity on the weekends, and prepaid plans. Contract terms vary from one month up to 60 months.

Electricity Brokers

Electricity brokers are relatively new entrants into the competitive market and the services that they offer continue to evolve as the market matures. These electricity brokers do not sell electricity to customers, and a customer does not need to have a relationship with an electricity broker to receive electric service. Most electricity brokers provide shopping services for customers so that they may switch electricity plans among REPs. They also provide supplementary services, such as energy management services or bill management services, to their customers. The PUCT gained regulatory authority over brokers with the passage of SB 1497 (86th Legislature, Regular Session). As of November 2022, there are 1,287 active brokers registered with the PUCT.[12]

Transmission and Distribution Utilities (TDUs)

Within the ERCOT competitive market, an investor-owned TDU is responsible for maintaining the infrastructure that delivers power to the end-use customer. This infrastructure includes high-voltage transmission lines, substations, local distribution lines, and the customer's meter. A TDU's rates are regulated and set by the Commission. TDUs are responsible for managing the reliability of their transmission and distribution system. A TDU delivers electric power to the end-use customer but does not sell power to the end-use customer. In the ERCOT competitive market, the TDU is responsible for the physical infrastructure and the customer relationship is managed by a REP.

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[10] "POLR Counts Energy 2020 Reporting Final" March 2022 http://www.ercot.com/mktinfo/retail

[11] *See* powertochoose.org

[12] https://www.puc.texas.gov/industry/electric/directories/brk/alpha_brk.aspx

Competitive Wholesale Market

Participants in the ERCOT wholesale market own or operate more than 1,030 generation units producing power for 358 load serving entities (LSEs). Owners and investors in power plants decide to invest in or retire units based on expected costs and profits. A robust stakeholder process at ERCOT implements the policies set by the Commission for the wholesale market. The ERCOT stakeholder process, with oversight by the ERCOT Board of Directors and PUCT, continues to implement changes to improve wholesale market efficiency.

Wholesale Market Prices

Wholesale market prices are charged by generators for electric power they produce. Electric power is sold in the wholesale market to buyers, who may be LSEs, like REPs, electric cooperatives, or MOUs. LSEs sell the power at a retail rate to their end-use customers. Most end-use customers do not pay wholesale prices. These customers pay retail prices determined by contract with their provider before the energy purchase in the wholesale energy market. House Bill (HB) 16 (87th Legislature, Regular Session) specifically banned retail rates that are indexed to wholesale pricing for residential and small commercial customers. Larger commercial and industrial customers must specifically acknowledge the potential risks associated with wholesale market price indexed products prior to enrolling in such a contract. In addition, LSEs and power marketers may also participate in the wholesale market to arbitrage prices.

Fuel costs for generation units are a primary driver of electricity costs. Most generation units are fueled by natural gas. There remain coal-fueled plants in Texas, but the number of those plants and the megawatts they produce are steadily declining.

Transmission costs are another factor in electricity costs. Consumers must pay for the poles and wires that transport electricity from point to point. Transmission congestion, when transmission lines have reached their capacity limit to deliver power safely from one point to another, can have a significant impact on cost. If the transmission lines necessary to deliver power from the lowest cost power plant is already at maximum capacity, then electricity must be purchased from a more expensive plant where transmission capacity is available the deliver the power where it is needed. This difference in the prices is the cost of transmission congestion. The cost of transmission congestion is a signal to the market that generation should be added closer to load increase grid efficiency and reduce the congestion.

Increases in energy from renewable resources (wind and solar in particular) also have an impact on the average wholesale price of electricity. These renewable resources have a $0 fuel cost as compared with thermal resources that purchase fossil fuels to generate electricity. The growing prevalence of energy delivered from renewable resources has driven down average wholesale prices because more electricity is being created from zero-cost fuel sources.

Unlike ERCOT, most electricity regions in the United States have capacity markets in addition to their wholesale energy markets. This means ratepayers, in addition to buying electricity, are also required to pay generators for electricity capacity that is committed to be made available at a specified time in the future. The amount of purchased capacity is based on the estimated peak demand on the future system plus an extra amount intended to serve as a buffer. In contrast, in an energy-only market generators are not paid for excess capacity beyond that reserved for reliability-related services. In ERCOT the Operating Reserves Demand Curve (ORDC) adder supplements real-time energy prices to reflect the increased value of dwindling, real-time operating reserves. The ORDC acts as another opportunity for generators to recover their costs and realize profits.

Load-serving entities generally do not buy electricity in real-time through the ERCOT wholesale market. Instead, they enter private contracts with generators. The risk of incurring high prices in the wholesale market provides an incentive for LSEs to "hedge" by negotiating with generators to buy power in advance of real-time operations. These advance purchases are a stable source of revenue for the generators and ensure the LSE is not subject to the price volatility of the real-time market. LSEs are also incentivized to request conservation by their customers to ensure they do not have to purchase power from the real-time market when prices are high, which typically occurs when power is scarce.

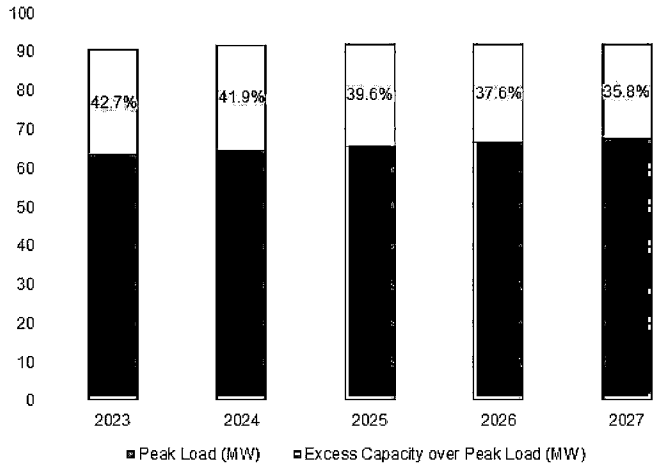

Figure 4. Forecasted Reserve Margin 2023 to 2027 from ERCOT Capacity Demand and Reserve Report May 2022

Meeting Electricity Demand

ERCOT operates an energy-only market, meaning that the Commission does not set a mandatory reserve margin. Instead, generators in ERCOT decide whether to participate in the market based their perception of its profitability. ERCOT currently produces two reports that assist investors in deciding whether to build new generation in ERCOT. These are known as the

Capacity, Demand, and Reserves Report (CDR) and the Seasonal Assessment of Resource Adequacy (SARA). These reports are important because they indicate estimated new generation needed to serve future load and can be used to plan for the risk of outage going into an upcoming season. ERCOT publishes the CDR twice a year for the summer and winter seasons of the following year. The CDR details generation capacity that is either currently online or has met certain financial milestones and is expected to be online in the coming years. This amount of total electric capacity is then compared to the forecasted highest (or peak) demand for electric power by customers. The difference between the amount of expected available capacity and the amount of forecasted peak demand is the calculated annual reserve margin (generation in excess of forecasted demand). Similarly, the SARA is published for each season, with a final report on expectations for the upcoming season and a preliminary report on the following season. The SARA is an overview of available generation capacity, demand scenarios, and weather conditions that could cause reliability events on the system. The PUCT and ERCOT are reviewing these reports to ensure they are providing adequate indicators to investors and the public.

Historically, electricity demand is highest in the summer, largely due to the increased need to power air conditioning. Beginning with Summer 2021, the PUCT expanded its public communications for seasonal preparedness by holding press conferences jointly with ERCOT leadership to highlight grid reliability efforts. These events also discuss ERCOT's SARA and CDR reports. These press conferences are held before summer and winter seasons, which historically are the seasons when electricity demand is highest. These press conferences are in addition to seasonal preparedness efforts, begun in 2017 to evaluate potential electricity demand against expected unit retirements and delivery constraints in the coming summers. The PUCT works in close coordination with ERCOT and the Railroad Commission of Texas to facilitate communication among electricity market participants and fuel suppliers to protect and strengthen system reliability. ERCOT also hosts an annual summer preparedness communication workshop where LSEs, generators, TDUs, other market participants, and ERCOT discuss potential communication issues.

Finally, ERCOT has worked to improve market transparency on rescheduling of planned outages by the operator and to ensure that the market better understands its forecasting tools. The PUCT continues to monitor these issues to ensure the health of the market and system reliability.

The market continues to evolve and the PUCT is conducting substantial resiliency and market redesign, particularly as changes in fuel sources affect the management of the system. For example, renewable resources have grown because of growth in consumer demand for renewable energy and continued federal subsidies. The growth of intermittent renewable generation in ERCOT has added to the complexities of ERCOT's market and system operations.

Peak net load, which measures customer demand less the contribution from intermittent renewable resources, is becoming an increasingly important metric for ERCOT.

Independent Market Monitor (IMM)

PURA § 39.1515 requires the PUCT to contract with an independent entity to act as the wholesale electric market monitor.[13] Potomac Economics, a consulting firm, currently serves as the independent market monitor, or IMM. The IMM reports annually on the state of the ERCOT market. This report examines whether market power exists and whether attempts have been made to exercise it. The IMM report identifies market inefficiencies and recommends improvements. In addition, the IMM recommends changes to ERCOT's protocols and processes to improve market efficiency. In both the 2020 and 2021 *State of the Market Reports* for the ERCOT electricity market, the IMM found that the ERCOT wholesale market performed competitively.

Outside ERCOT: Vertically Integrated Utilities

Electric utilities outside of the ERCOT region remain vertically integrated. The utility is responsible for owning generation, transmission, and distribution assets and selling power to end-use customers. Those utilities are El Paso Electric Company, Southwestern Public Service Company (SPS/Xcel), Southwestern Electric Power Company (SWEPCO), and Entergy Texas, Inc. The Commission sets retail rates for the vertically integrated utilities. Customers served by these utilities do not have a choice of provider.

FERC has regulatory jurisdiction over wholesale power transactions and transmission rates for vertically integrated utilities in the non-ERCOT areas of Texas. The Legislature has granted the PUCT authority to retain outside counsel and consultants to help protect the interests of Texas ratepayers and stakeholders. These consultants participate in a variety of activities before FERC, including rulemakings, contested cases that may affect Texas jurisdictional rights or utilities. They also represent the PUCT in court proceedings where FERC decisions affecting Texas or its utilities are challenged. The PUCT and its counsel monitor those FERC proceedings to decide when Texas's interests call for participation. The PUCT takes part in discussions at the stakeholder level and works with other state commissions to address matters before an issue is filed at FERC.

Southwest Power Pool (SPP)

SPP is the FERC authorized regional transmission organization and ISO for areas of Northeast Texas and the Texas Panhandle. SPP oversees the bulk electric grid and wholesale

[13] Public Utility Regulatory Act, Tex. Util. Code Ann. §§ 11.001-58.302 (West 2016 & Supp. 2018), §§ 59.001-66.016 (West 2007 & Supp. 2018) (PURA).

power market in the central United States on behalf of a diverse group of utilities and transmission companies. The PUCT works with outside counsel and other state regulatory bodies to participate in FERC proceedings and rulemakings that impact the SPP tariff. The PUCT is primarily concerned with ensuring fairness of costs that may be allocated to Texas customers and ensuring fair treatment of our member utilities in the SPP footprint. SPP covers 14 states, including parts of Texas, Arkansas, Iowa, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, South Dakota, Wyoming, and all of Kansas and Oklahoma. The SPP footprint for Texas includes SWEPCO, SPS/Xcel, several electric cooperatives, and various MOUs in parts of northeast Texas and the Texas Panhandle.

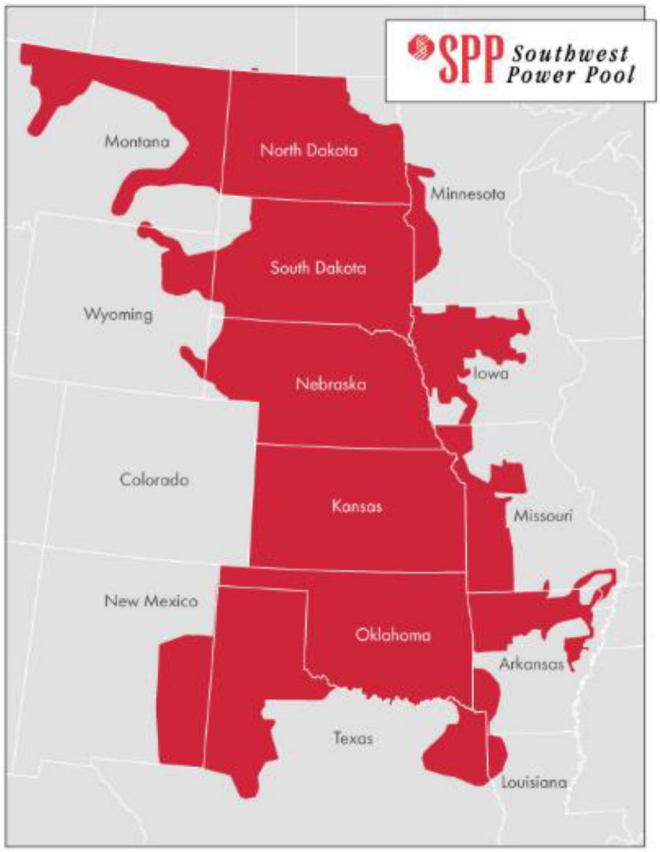

Figure 5. The area covered by the Southwest Power Pool (SPP) in the US

Commissioner Will McAdams represents the PUCT as a voting member on SPP's Regional State Committee (RSC), which consists of the state regulatory agencies in the region. The RSC meets quarterly and is the decision-making authority at SPP on issues such as allocating costs for transmission upgrades, allocation of Financial Transmission Rights, and generation resource

adequacy across the SPP region. The SPP Market Monitoring Unit, its version of an IMM, has reported that SPP market results were competitive overall in 2019.[14]

Midcontinent Independent System Operator (MISO)

MISO is a regional transmission organization and ISO that serves all or part of 15 states in the central United States and the Canadian province of Manitoba. The part of eastern Texas served by the vertically integrated utility, Entergy Texas, Inc., is within the MISO footprint. The PUCT works with outside counsel on FERC proceedings about the MISO tariff. The PUCT advocates for the right to address generation resource adequacy at the state level, increased regulatory certainty, fair transmission cost allocation across MISO states, and increased market transparency and efficiency. The MISO IMM concluded that the MISO energy and ancillary services markets generally performed competitively in 2021.[15] Potomac Economics is the IMM for both MISO and ERCOT.

[14] *State of the Market 2019* at 11, SPP MARKETING MONITORING UNIT, https://www.spp.org/documents/62150/2019%20annual%20state%20of%20the%20market%20report.pdf (May 11, 2020).

[15] *2021 State of the Market Report for the MISO Electricity Markets*, POTOMAC ECONOMICS, June 2022. Available at: https://www.potomaceconomics.com/wp-content/uploads/2022/06/2021-MISO-SOM_Report_Body_Final.pdf

Figure 6. The area covered by the Midcontinent Independent System Operator (MISO) in the US

Commissioner Lori Cobos represents the PUCT as a voting member of the Organization of MISO States (OMS). The OMS meets monthly and coordinates regulatory oversight in the MISO region and makes recommendations to MISO, FERC, and other entities. Commissioner Cobos also represents the PUCT as a voting member of the Entergy Regional State Committee (ERSC). The ERSC consists of regulators from Arkansas, Louisiana, Mississippi, Texas, and the Council of the City of New Orleans. The ERSC provides retail regulator input on the Entergy transmission system, including the cost allocation for certain transmission projects and the addition of transmission projects to the Entergy construction plan.

MISO-SPP Seams Issues

SPP and MISO are electrically interconnected. This connection can cause congestion as electricity flows across the lines between the two grids; thus, there is a need to coordinate power flows between SPP and MISO. This also affects transmission planning. Improved coordination between both organizations means that customers may benefit and avoid the cost of overbuilding transmission on each side. Some states, like Texas, are in both organizations, enhancing the need for coordination.

State utility commissioners in SPP and MISO have recognized that these issues prevent efficient economic transmission planning, market and operational issues, and resource integration along the SPP-MISO "seam". In late 2018, the MISO OMS and the SPP RSC jointly formed a Seams Liaison Committee to identify issues and potential solutions to enhance the benefits to customers from better coordinated seams policies. In 2021, the Seams Liaison Committee provided recommendations to further their goals. These recommendations touched on several key policy issues, including creating a new transmission project category on the MISO-SPP seam, and prioritizing interregional transmission planning.[16]

After finalizing these recommendations, the Seams Liaison Committee shifted into a more limited, monitoring mode, with members actively working within the MISO and SPP stakeholder processes to implement these recommendations.

Western Electric Coordinating Council (WECC)

WECC is a regional entity that includes the area surrounding El Paso and extends from Canada to Mexico, including the provinces of Alberta and British Columbia, the northern part of Baja California, and all or portions of the 14 western states. WECC is the regional entity responsible for bulk electric system reliability in the western interconnection and associated compliance monitoring and enforcement. WECC connects electric utilities in the West to operate at a common, synchronized frequency, with 38 separate balancing authorities. Unlike ERCOT, SPP, and MISO, WECC does not have a single regional transmission organization or an organized wholesale energy market. El Paso Electric Company is the only electric utility in Texas that is a member of WECC.

Cyber Security

A significant issue in the electric industry is cybersecurity. In 2019, SB 475 (86th Legislature, Regular Session) established the Texas Electric Grid Security Council.[17] Members include the chairman of the PUCT, the chief executive officer of ERCOT, and the governor's designated representative. This council serves as an advisory body to facilitate the creation, coordination, and dissemination of best security practices for the electric industry. The council has held quarterly meetings since September 2019.

In response to the significance of the security of the electric infrastructure, the PUCT established the Critical Infrastructure Security and Risk Management division in September

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[16] OMS and RSC Seam Liaison Committee (SLC) Final Recommendations2021. Available at: https://www.misostates.org/images/stories/Filings/Board_comments/2021/RSC_Final_Recommendations_for_SLC.pdf

[17] S.B. 475, 87th Leg., Reg. Sess. (Tex. 2021).

2019. The division utilizes cybersecurity and emergency management practices to facilitate collaboration between utilities and the PUCT.

The North American Electric Reliability Corporation (NERC) holds a Grid Security Exercise, or "GridEx" every two years. GridEx is a simulated operational exercise for electric utilities, governmental entities, critical infrastructure partners, and supply chain organizations to test responses to cyber and physical security threats. The objectives for GridEx include exercising incident response plans, expanding local and regional response, and improving communication. During the two-day GridEx event, participants respond with simulated internal and external operational activities as they would during an actual event, including sharing information within their organizations and externally according to their established procedures. After GridEx concludes, NERC holds an invitation-only discussion for industry executives and senior government officials. PUCT and ERCOT staff participate in the GridEx exercises.

In 2021, the PUCT conducted a cybersecurity-focused Tabletop Exercise with regulated electric utilities in collaboration with the Department of Energy (DOE) and the National Association of Regulatory Utility Commissioners (NARUC). The PUCT served as the pilot state regulator to test the newly developed Tabletop Exercise Guide for state commissions. In 2022, the PUCT executed two remote tabletop exercises and facilitated an in-person, two-day cybersecurity symposium and training event for utilities.

Emerging Issues

Since the end of the 87th Legislative Session, the PUCT has undertaken a full-spectrum review of the ERCOT market.[18] A range of policy changes have been ordered to improve reliability and resiliency during the most extreme circumstances - past, present, and future – that the electric system could face. This review is detailed in the section titled "Resiliency and Market Design." The issues highlighted below are emerging issues regarding specific technologies, growth areas, and events the PUCT continues to monitor and address through individual projects as appropriate.

Energy Storage

Battery energy storage continues to proliferate in ERCOT due to improved technologies and decreased cost. To date, ERCOT market procedures have generally been designed to accommodate resources that solely inject power onto the grid (like power plants) or solely take power from the grid (like customers). With energy storage, both properties exist – the ability to act as a customer and take electric service and the ability to act as a resource to put power on

[18] See generally, Review of Wholesale Electric Market Design, Project 52373.

the grid. Battery energy storage technology can provide benefits to customers, but its integration must be thoughtfully managed.

In September 2022, MISO included Electric Storage Resources in its market portfolio for the first time. This new resource type enables batteries, pumped storage facilities, and compressed air energy storage to participate in MISO's energy and operating reserves markets as supply and demand. The near-term benefits of the new Electric Storage Resource model are modest due to the small volume of storage resources in MISO. However, this new resource type will allow MISO to accommodate the expected increased storage participation in the coming years.

SPP's Electric Storage Resources Steering Committee that was set up in early 2020, finished its work and completed many new policies and procedures to integrate electric storage resources into the SPP grid. New policies were approved by the SPP Board throughout 2021. FERC filings are pending.

Distributed Energy Resources

Electricity markets and grids have seen an increasing number of resources on the distribution system. For example, rooftop solar panels, conventional back-up generators, small scale batteries, and other small-scale resources are becoming more common in ERCOT and are classified as "distributed energy resources." These units are significantly smaller than traditional generation units, typically about 10 MW or less. Since these resources are smaller than traditional resources, the interconnection processes are less detailed but still requires the utility ensure safety and reliability of the resources and the bulk power system. The Institute of Electrical and Electronic Engineers (IEEE) developed a new standard for electric grid operators to help incorporate these technologies in a way that provides system security and reliability.

The PUCT also continues to discuss more changes for incorporating distributed energy resources and advancements in technology. These include shortening timelines for interconnection, standardizing interconnection fees, standardizing information required for utility studies to ensure clear expectations, distributed energy resource aggregations, updating the cost allocation methodology for resources interconnecting on the distribution system, and moving to a grid model that accounts for the distributed energy resources that are interconnected. These changes will ensure a level playing field and provide clarity to market participants.

Demand Response

Demand response refers to customers reducing electricity usage in response to expected high market prices or to provide reliability benefits. Structured demand response programs are available to electricity customers across the state. These programs are offered by investor-owned utilities (IOUs), MOUs, and electric cooperatives. In the competitive choice areas of

ERCOT, these programs may also be offered by REPs. These programs encourage customers to reduce electricity usage when called upon by the program provider, often in exchange for an incentive payment.

In the ERCOT market, demand response also has a key role in supporting the region's resource adequacy. Price signals encourage market participants and their customers to reduce power consumption at key times. When electric power is most in demand, saving an additional MW of consumption is more cost effective than supporting an additional electric power plant coming online to provide power, if needed. Demand response programs continue to evolve as the market becomes more sophisticated and familiar with the programs. PUCT and ERCOT continue to discuss how to better understand the effect of demand response on the market.

The PUCT oversees the demand response programs delivered by the state's eight IOUs. While most of the demand response offered through the IOU's programs is provided through medium to large commercial customers, residential demand response is an increasing resource. For IOUs in ERCOT, the demand response programs have traditionally been designed to operate during the summer peak period when demand for electricity is at its highest. The programs can be activated when called upon by ERCOT during an EEA 2 event or by the IOU to address a local system emergency. SB 3 (87th Legislature, Regular Session) granted the TDUs (i.e. ERCOT IOUs) the ability to design and operate a load management program outside the summer peak for nonresidential customers to be used during an EEA2 event or when the utility has otherwise been directed to shed load. The TDUs developed programs for the 2020-2022 winter period and have provided notice that they intend to continue programs for the 2022-2023 winter period. To monitor the growth of demand response providers in the SPP and MISO footprints, in 2019 the PUCT opened a project for SPP and MISO to file a list of new demand response providers registering with those grid operators. The PUCT continues to supervise demand response development in these areas.

West Texas Transmission

Oil and gas extraction and processing in West Texas has led to record growth in electricity demand in this area. In addition to demand for electricity, West Texas continues to see growth of renewable generation resources. This added power flow must be carefully managed by the ERCOT grid operator. These factors have all contributed to transmission congestion in the West Texas region.

Five of the ten most frequent transmission constraints in 2021 were in the load zone that serves West Texas.[19] The PUCT has been engaged with both utilities and customers to ensure

[19] 2021 State of the Market Report for the ERCOT Electricity Markets, Potomac Economics (May 2022) at p. A-49. Available at: 2021-State-of-the-Market-Report.pdf (potomaceconomics.com)

that electric service quality remains reliable and to examine options for improved load forecasting and transmission planning. Utilities that serve the west Texas region continue to work with ERCOT and the PUCT to build new infrastructure to serve the demand in the region.

Large Flexible Loads

Since 2021, many cryptocurrency miners and datacenters have sought interconnection to the ERCOT system. These types of customers are often referred to as large flexible loads because of the relatively large MW demand of the facility paired with its ability to quickly ramp up or down in response to price signals. They are different from other large loads because (1) the loads are seeking to interconnect and be operational within six months of siting a location for their facilities, (2) there is no historical data available to affirm expectations for the large flexible loads' behaviors, (3) the loads can start up and shutdown in seconds, which will result in much vaster fluctuations in energy demand for ERCOT to manage, and (4) the loads are likely to be extremely price responsive, which will result in the facilities being turned on and off more frequently.

ERCOT has created the Large Flexible Load Task Force to review new issues that could arise with the anticipated influx of these large flexible loads, which can draw as much as 2,000 MWs from the grid at a given time—equal to the output of the largest power plant in Texas. The task force is reviewing the timelines necessary for interconnecting these large flexible loads, options for including these large flexible loads in load shed plans, and new measures necessary to ensure reliability of the ERCOT system.

Aggregate Distributed Energy Resource (ADER) Pilot Project

The governing document for phase I of the ADER pilot project was adopted by the Commission on November 3, 2022 following approval by the ERCOT board. The pilot will examine how aggregated resources can support reliability and enhance the wholesale market. ERCOT seeks to understand how ADER programs can incentivize investment, potentially reduce the need for transmission and distribution investments, and support better load management during emergencies.

Phase I will enroll up to 80 MW of aggregated resources. An ADER consists of multiple premises connected at the distribution system level that can aggregate to respond to ERCOT dispatch instructions. This can be a combination of generation, energy storage, or controllable load with the capability of 1 MW or less. ADERs will use the existing Aggregate Load Resource participation model at ERCOT with some changes. Each local aggregation must have the capability to provide at least 100 kW through demand response and injection capability. These aggregations will also be eligible to provide up to 40 MW of non-spinning reserve service, which can be started or interrupted within 30 minutes as needed.

The pilot is designed with limits by load zone and by Qualified Scheduling Entity (QSE) to allow for diverse geographical and technology participation. All sites within an individual ADER must be within a single Load Zone and distribution utility service territory. ERCOT will begin ADER qualification testing in January 2023.

Lubbock Transition to Competition

In February 2022, the Electric Utility Board of the City of Lubbock passed a resolution to implement retail electric competition in the Lubbock Power and Light (LP&L) service area. LP&L is the MOU serving the City of Lubbock. It serves over 108,000 electric customers, including Texas Tech University, and has a peak electric load of approximately 640 MW. This will be the first MOU to opt into retail electric customer choice since the start of competition.

Upon the transition to competition, LP&L will cease serving retail customers and will operate solely as a TDU. LP&L has an ongoing campaign to educate customers on retail choice and to assist them in selecting a REP. LP&L has issued a bid for REPs to serve customers who do not choose a REP before the date of competition. PUCT staff has been working on the terms and conditions for access that will apply in the LP&L territory and any future MOUs or cooperatives who elect retail choice in the future. Electric choice for LP&L is expected to begin in October 2023.

LP&L had previously initiated two cases to transfer its service territory from SPP to ERCOT. In March 2018, the Commission approved LP&L's application to transfer 470 MW of load into ERCOT. The transfer was completed in May 2021. There is approximately 170 MW of LP&L load remaining in SPP. LP&L has filed a petition at the Commission to request to transfer the remaining load to ERCOT. That docket is currently pending.

El Paso Electric Energy Imbalance Market (EIM)

In February 2021, El Paso Electric, the integrated utility serving the western tip of Texas, elected to join California ISO's (CAISO) western EIM in 2023. The EIM is an energy trading function of CAISO's broader power markets that allows entities outside of the footprint to buy and sell excess generation capacity in real-time. The EIM will benefit El Paso Electric's resource adequacy, reliability, and generation costs by allowing it to procure additional resources to balance load in short notice and at market-based prices. This is expected to lower overall costs and allow for the integration of additional renewable resources in the service territory. El Paso Electric may also sell any excess generation capacity through the EIM.

Rulemakings

Oversight of Wholesale Market Participants

Project No. 50602, Rulemaking to Review 16 TAC § 25.503, Oversight of Wholesale Market Participants

In February 2021, the Commission approved amendments to 16 TAC §25.503, relating *to Oversight of Wholesale Market Participants*. These amendments updated the process used by the Commission to select the entity to monitor wholesale market reliability-related requirements for ERCOT.

Electric Weatherization Standards

Project No. 51840, Rulemaking to Establish Electric Weatherization Standards

In October 2021, the Commission adopted new 16 TAC § 25.55, implementing the provisions of SB 3 (87th Legislature, Regular Session) related to weatherization requirements and weather emergency preparedness reports. The rule requires generators to implement winter weather readiness recommendations identified in the 2012 Quanta Technology Report on Extreme Weather Preparedness Best Practices (2012 Quanta Report) and to fix all known, acute issues that arose from winter weather conditions during the 2020-2021 winter weather season.

The rule requires transmission service providers to implement key recommendations contained in the 2011 Report on Outages and Curtailments During the Southwest Cold Weather Event on February 1-5, 2011, jointly prepared by FERC and NERC, and to fix any known, acute issues that arose during the 2020-2021 winter weather season.

Further, the rule requires all generation and transmission resource owners to file a notarized attestation from the highest-ranking representative, official, or officer with binding authority over each of the above entities attesting to the completion of all required actions.

Project No. 53401, Electric Weatherization Standards Phase II

In September 2022, the Commission adopted new 16 TAC §25.55 relating to Weather Emergency Preparedness. The adopted rule is the second of the two phases in the PUCT's development of robust weather emergency preparedness standards to ensure that the electric industry is prepared to provide continuously reliable electric service. Specifically, it requires generation entities and transmission service providers in ERCOT to maintain weatherization preparation standards for both winter and summer seasons. The new rule requires ERCOT to conduct on-site inspections of every generation resource and transmission facility in its footprint. Additionally, the new rule requires utilities who do not comply with weatherization preparedness standards to undergo an independent assessment by a qualified professional engineer.

Critical Natural Gas Facilities and Entities

Project No. 52345, Critical Natural Gas Facilities and Entities

In November 2021, the Commission adopted amendments to 16 TAC §25.52, relating to *Reliability and Continuity of Service*.

The rule was adopted in collaboration with the RRC as directed by SB 3 and HB 3648 (87th Legislature, Regular Session). The rule increases the coordination between the electric and gas industries during energy emergencies. The rule requires a critical natural gas facility, or a "critical customer" as defined by the RRC, to provide critical customer information to the utility from which it receives electric delivery service and require the utility to incorporate this information into its load-shed and power restoration planning. The RRC adopted its own new rule, §3.65, relating to Critical Designation of Natural Gas Infrastructure, which will operate in conjunction with the amendments.

The rule also implements SB 1876 (87th Legislature, Regular Session) to PURA §38.072 by adding end stage renal disease facilities to the list of health facilities prioritized during system restoration following an extended power outage.

Review of Certain Retail Electric Customer Protection Rules

Project No. 51830, Review of Certain Retail Electric Customer Protection Rules

In December 2021, the Commission adopted amendments to implement PURA §17.003 and new §39.110 along with added customer protections and disclosure requirements. The rules require REPs and electric utilities to provide clear and uniform information to customers and limit the offering of wholesale indexed products by banning the sale of such products to residential or small commercial customers and placed conditions on the enrollment of larger customer classes.

Electric Service Emergency Operations Plans

Project No. 51841, Review of 16 TAC § 25.53 Relating to Electric Service Emergency Operations Plans

In February 2022, the Commission adopted new 16 TAC §25.53, relating to *Electric Service Emergency Operations Planning*.

This rule implements standards for emergency operations plans for electric utilities, TDUs, power generation companies, MOUs, REPs, and ERCOT as required by Tex. Util. Code §186.007 as amended by SB 3 (87th Legislature, Regular Session).

Administrative Penalty Authority

Project No. 52312, Review of Administrative Penalty Authority

In February 2022, the Commission adopted amendments to 16 TAC §22.246, relating to *Administrative Penalties*, and §25.8. relating to *Classification System for Violations of Statutes, Rules, and Orders Applicable to Electric Service Providers*.

These rules implement an amendment to the PURA §15.023 enacted by the 87th Texas Legislature that establishes an administrative penalty not to exceed $1,000,000 for violations of PURA §35.0021 or §38.075, each relating to Weather Emergency Preparedness. In response to filed comments, these rules also clarify the application of certain statutory provisions relating to the commission's penalty authority and applicable remedy periods.

Middle Mile Broadband

Project No. 52845, Middle Mile Broadband

In March 2022, the Commission adopted new 16 TAC §25.218 relating to *Middle Mile Broadband*.

This rule facilitates implementation of middle mile broadband service in unserved and underserved areas of Texas by allowing amenable electric utilities to lease excess fiber capacity to internet service providers ISPs.

These electric utilities must submit written middle-mile broadband service plans for review by the Commission as required by Chapter 43 of PURA as amended by HB 3853 (87th Legislature, Regular Session).

Review of §25.505 ERCOT Scarcity Pricing Mechanism

Project No. 51871, Review of the ERCOT Scarcity Pricing Mechanism

In June 2021, the Commission adopted amendments to 16 TAC §25.505, relating to *Reporting Requirements and the Scarcity Pricing Mechanism in the ERCOT Power Region*.

These amendments modify the value of the low system-wide offer cap (LCAP) by eliminating a provision that ties the value of the LCAP to the natural gas price index and replaces it with a provision that ensures resource entities can recover their actual marginal costs when the LCAP is in effect.

Project No. 52631, Review of the ERCOT Scarcity Pricing Mechanism

In December 2021, the Commission adopted amendments to 16 TAC §25.505, relating to *Reporting Requirements and the Scarcity Pricing Mechanism in the Electric Reliability Council of Texas Power Region*.

These amendments changed the value of the high system-wide offer cap (HCAP) by lowering it from $9,000 per MWh and $9,000 per MW per hour to $5,000 per MWh and $5,000 per MW per hour.

Project No. 53191, Reorganization of §25.505

In April 2022, the Commission repealed 16 TAC §25.505 relating to *Reporting Requirements and the Scarcity Pricing Mechanism in the Electric Reliability Council of Texas Power Region* and adopted new 16 TAC §25.505 relating to *Resource Adequacy Reporting Requirements in the Electric Reliability Council of Texas Power Region*, new 16 TAC §25.506 relating to *Publication of Resource and Load Information in the Electric Reliability Council of Texas Power Region*, and new 16 TAC §25.509 relating to *Scarcity Pricing Mechanism for the Electric Reliability Council of Texas Power Region*.

The rules separate the provisions of repealed §25.505 into three new rules:

- New §25.505 prescribes resource adequacy reporting requirements in the ERCOT region and requires ERCOT to give to the commission a biennial report on the operating reserve demand curve;
- New §25.506 sets forth the requirements for the publication of resource and load information in ERCOT; and
- New §25.509 establishes a scarcity pricing mechanism for the ERCOT market.

Additionally, the proposed new rules decouple the value of lost load from the system-wide offer cap in effect and require ERCOT to submit to the commission a biannual report on the operating reserve demand curve.

Power Outage Alert Criteria

Project No. 52287, Power Outage Alert Criteria

In May 2022, the Commission adopted new 16 TAC §25.57, relating to *Power Outage Alert Criteria*. This rule establishes the criteria for the content, activation, and termination of regional and statewide power outage alerts as required by Tex. Gov't. Code §411.301(b), enacted by the 87th Texas Legislature as part of SB 3. Specifically, this rule requires ERCOT to notify the PUCT's executive director when ERCOT issues load shed instructions or ERCOT's forecasts indicate system-wide generation supply is likely to be insufficient to meet demand

within the next 48 hours. After receiving such a notification, the Executive Director will consider all relevant information provided by ERCOT and, if appropriate, recommend that the Texas Department of Public Safety issue a power outage alert. The rule also establishes similar procedures for power regions other than ERCOT.

Statutory Definitions

Project No. 52313, Statutory Definitions

In May 2022, the Commission adopted amendments to 16 TAC §25.5, relating to *Definitions for Chapter 25*. Changes to §25.5 revise definitions to comport with changes made by HB 1572 and Senate Bill SB 1202 (87th Legislature, Regular Session). The amendments adopted the statutory definition of "electric generation equipment lessor or operator" and amended the definitions of "retail electric provider" and "electric utility" for clarify regarding operation and rental of third-party electric generation equipment and electric vehicle charging equipment.

Emergency Response Service

Project No. 53493, Emergency Response Service

In August 2022, the Commission adopted amendments to 16 TAC §25.507, relating to *ERCOT Emergency Response Service (ERS)*. The rule increases the annual budget for ERS to $75 million and allows ERCOT to exceed this amount, subject to Commission approval, by up to $25 million for ERS contract term renewals. The adopted rule also provides ERCOT greater flexibility to procure ERS for longer amounts of time with a contract term from individual ERS resources to better address seasonal needs and makes other administrative changes to the program.

Transmission Planning Criteria

Project No. 53403, Transmission Certification Criteria

In November 2022, the Commission adopted amendment to 16 TAC § 25.101, relating to *Certification Criteria* to implement the provisions of SB 1281 and HB 1510 (87th Legislature, Regular Session). The rule introduces a consumer economic benefit test for new transmission projects. The economic analysis test will identify transmission lines that will reduce transmission costs to consumers.

The amended rule also includes a new biennial *Grid Reliability and Resiliency Assessment* conducted by ERCOT and designed to identify projects to enhance the grid's reliability and resiliency. The Commission created new resiliency criteria for the approval of transmission projects that will reduce the impacts of extreme weather on customers.

ERCOT Export Tariff

Project No. 53169, ERCOT Export Tariff

In November 2022, the Commission adopted amendments to 16 TAC §25.192, relating to *Transmission Service Rates* to modify the transmission charge for exporting power outside the ERCOT region. The amended rule implements a flat transmission charge for exporting power outside the ERCOT region and eliminates increased charges for exports during the Summer.

The amended rule will also provide additional transparency on transmission charges associated with DC ties by requiring ERCOT to file a monthly report with the Commission that states the total amount of energy imported and exported over each DC tie.

ELECTRICITY: RESILIENCY AND MARKET DESIGN

The PUCT is undertaking a full-spectrum review of the ERCOT market to improve reliability and resiliency during the most extreme circumstances the electric system could face. These changes resulted from both implementing bills that the 87th Legislature passed in response to Winter Storm Uri, and a proactive effort from the newly appointed Commissioners to identify improvements that could be made to ERCOT Inc., the ERCOT grid, and the competitive wholesale market design. This review addressed ERCOT governance, generation resource resiliency, transmission constraints, customer protection, transparency, and communication, stability in financial markets, and improvements to market price signals.

Market Design Blueprint

Starting in late Summer and continuing throughout Fall 2021, the Commission held extensive public work sessions. These full-day sessions consisted of testimony from utility experts, ERCOT operators, IMM, state climatologist, former regulators, stakeholders, and market participants from every ERCOT market segment – wholesale, retail, transmission, and consumers. Newly appointed Commissioners asked questions and examined every angle of the ERCOT market to identify weaknesses and opportunities for improvement.

These sessions culminated December 2021 with the adoption of a two-phase blueprint for ERCOT market redesign that codified incremental changes adopted by the Commission and expanded market reforms.[20] The Commission then issued an order that spurred a range of market enhancements, the creation of a new winter-weather power procurement, and a plan to explore more fundamental changes to the ERCOT market requirements that financially reward dispatchable resources for performance during times of energy scarcity.

Phase I

Phase I of the Blueprint includes near-term operational market enhancements prioritized by the PUCT to improve reliability in ERCOT. The changes incentivize the utilization of dispatchable generation through market signals, give ERCOT more tools to improve reliability, avoid scarcity conditions, and enhance the participation of consumers across the system to reduce demand before reaching emergency conditions.

Specific changes adopted under Phase I include enhancements to market signals, reliability tools for ERCOT market operations, and additional and improved ancillary services.

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[20] *See Review of Wholesale Electric Market Design*, Project No. 52373, Item No. 336

Market signals

Commissioners directed ERCOT to modify the ORDC to improve reliability and incent more generation to come online sooner to meet real-time conditions. The ORDC allows prices to rise in real-time as resource scarcity occurs. As the reserve margin of additional generation resources available shrinks, the ORDC incentivizes an economic and efficient response from both generators putting power on the grid and consumers that can respond by reducing their consumption. The ORDC changes included reducing the offer cap from $9,000 per MWh to $5,000 per MWh and changing the Minimum Contingency Level (MCL) to 3,000 MWs. The reduction of the offer cap ensures that customers will not pay the high sustained price cap that occurred during Winter Storm Uri. Changes to the shape of the curve signal scarcity pricing sooner and incentives generation resources to come online sooner and encourages flexible consumers to reduce demand. Changes related to the ORDC were implemented January 1, 2022, in anticipation of the 2022 winter season.

ERCOT/Market Tools

The resource mix in ERCOT is constantly changing, and Texas's unique geography and load growth must be met with additional ways to enhance grid stability. The PUCT has responded by creating new operational tools for these new challenges.

Ancillary Services

ERCOT Contingency Reserve Service (ECRS). The Commission ordered ERCOT to accelerate the development of the ECRS product to provide the grid operator an additional operational reliability tool. ECRS is power that is available to manage increased variability and ramping issues due to high renewable generation penetration. ECRS will be market-ready in Spring 2023.

Fast Frequency Response Service (FFRS). The Commission ordered ERCOT to move forward with the new ancillary service product that will serve as a fast-responding regulation service able to respond quickly and predictably to changes in the grid frequency. These frequency changes can become more common as the diversity of the ERCOT fleet increases. FFRS went live in October 2022.

Loads in Non-Spinning Reserve Service. The Commission ordered ERCOT to expand the eligibility of resources to participate in the Non-Spinning Reserve Service. This will allow for non-controllable load resource participation. Protocol changes effectuating participation were approved in November 2022.

Voltage Support Compensation. The ERCOT grid must maintain a constant frequency by balancing power supply and demand. Voltage support is a critical ancillary service provided by generators, storage resources, and transmission reactive devices to maintain the voltage within a narrow range for efficient and reliable operation of the transmission system. Resources in

ERCOT provide voltage support service without compensation as part of their interconnection requirements. The Commission ordered ERCOT to develop a product to compensate resources for voltage support services to help maintain grid stability as inverter-based resources, such as wind, solar, and storage, enter the market.

Operational Tools

Firm Fuel Product. In response to directives in SB 3 (87th Legislature, Regular Session), PUCT ordered the development and procurement of a Firm Fuel Supply Service (FFSS) to pre-purchase power from generators that is both dispatchable and able to operate continuously for several days during extreme winter conditions. The initial FFSS resources will be procured for a one-year contract term while the PUCT determines future eligibility and term requirements for an expanded program. Amendments to the ERCOT Settlement and Billing system needed to facilitate FFSS were adopted in March 2022. The first ERCOT RFP seeking to procure between 3,000 and 4,000 MW of power from existing resources for Winter 2023 was issued in September 2022.

Emergency Response Service Reform. ERS is an emergency demand response program that ERCOT procures and implements. Phase I adopted critical changes to enhance ERS. Funds were reallocated within the program to ensure enhanced readiness for extreme winter weather. ERS deployment was moved up consistent with the changes to the ORDC to ensure the emergency measure is utilized before the grid reaches the MCL and enters emergency conditions. The Commission took action on ERS in Fall 2021 and adopted a rule in August 2022 that increased the budget and modified the program year.

Demand Response. The Commission directed ERCOT to pursue technical upgrades and improvements to price signals that will allow more consumers of all size to participate in demand response such as moving from zonal to nodal pricing and customer load aggregations (virtual power plants). PUCT and ERCOT staff worked with stakeholders on an ADER pilot project to test the impacts of small-scale DER aggregation in the ERCOT market and targeting 2023 for activation. The Commission approved governing documents for the ADER pilot in November 2022.

Phase II Market Changes

The Commission has engaged Energy and Environmental Economics, Inc. (E3), an outside economic and reliability consultant, to evaluate a range of potential new reliability mechanisms and long-term changes to the ERCOT market. New market design concepts will incentivize the retention of existing and investment in new dispatchable generation that has the flexible capabilities necessary to meet the full range of grid conditions. The evaluation includes quantitative testing that analyzes the potential cost and reliability results that could be expected from adopting modeled proposals

The consultants released the final report in November 2022.[21] They evaluated the following seven market designs:

- Energy Only
- Load Serving Entity Reliability Obligation
- Forward Reliability Mechanism (FRM)
- Performance Credit Mechanism (PCM)
- Backstop Reliability Service (BRS)
- Dispatchable Energy Credits (DEC)
- Hybrid - DEC and BRS

E3's analysis recommended that the PUCT implement a FRM. PUCT staff filed a memo on November 10, 2022, noting that the PCM design met the Commission's principles and criteria laid out in the comprehensive market design Blueprint. The PUCT also called for public comments on the study. Because staff determined the PCM most closely meets the criteria in the market design Blueprint stakeholders were encouraged to focus comments on the PCM.

Performance Credit Mechanism

The Commission is evaluating a hybrid mechanism called the PCM. This proposal places a financial responsibility on the customer-facing LSEs, which include REPs, MOUs, and electric cooperatives to ensure ERCOT market participants have procured sufficient generation for a range of scenarios to maintain a reliable grid. The PCM is a new and separate reliability service that does not impact the competitive market. The PCM is voluntary forward offer market for generation facilities paired with an *ex-post* obligation for LSEs. It allocates load share requirements to LSEs during the hours of greatest scarcity in ERCOT. The PCM seeks to ensure that LSEs have secured enough power from generators that can modulate and increase output to meet their customers' and the grid's reliability needs across a range of scenarios. The PCM provides a forward price signal to generators to encourage physical commitment to the market's electricity demand and drive investment in dispatchable resources. The PCM is designed with clear performance standards, dynamic sizing, and is proportional to ERCOT system needs. It establishes clear and measurable performance standards and compensates resources based on capability and a real-time availability based on a backward-looking assessment. The PCM is built on existing ERCOT frameworks and does not interrupt the real-time market.

Backstop Reliability Service

[21] *See Review of Wholesale Electric Market Design*, Project No. 52373, Item No. 382

The Commission is evaluating whether a reliability service product such as BRS should be adopted as a bridge to the longer-term grid reliability solution. The BRS provides an additional cushion of dispatchable generation to help prevent emergency conditions. BRS would allow ERCOT to procure qualified dispatchable generation resources on a competitive basis to serve as a backstop to be deployed only after generation in the real-time energy market and ancillary services have been exhausted. The BRS would send price signals to incent new investment and provide an incentive to existing dispatchable generation fleet to remain in service.

Enhanced Operational Control and Improvements to Electric Grid Reliability

Discussions between PUCT and ERCOT Inc. leadership regarding enhanced operational controls for the ERCOT grid began in May 2021 in advance of the summer season. A series of reliability actions were implemented starting in July 2021. These actions focused on increased reserve margins, amending protocols to allow for the deployment of reliability tools earlier (i.e. before entering emergency conditions), and increased transparency.

With regard to increased operating reserves, ERCOT has targeted a minimum of 6500 MW of PRC on high variability days. PRC is representative of the total amount of frequency responsive resource capability on-line in real-time. ERCOT has increased the minimum quantities of Responsive Reserve service and Non-Spinning Reserve services for peak load hours on all days. The threshold for deployment of these resources has also been adjusted to more accurately reflect system needs and provide grid operators the ability to deploy resources earlier, reducing the likelihood of entering emergency conditions. ERCOT is also committing more generation resources online and managing planned outage requests to ensure targeted levels of capacity. Systems were updated to ensure long-lead time units could receive reliability commitment instructions earlier, diversifying the resource mix eligible to be called online by ERCOT. The amount of capacity permitted to take a planned outage at a given time must now be set by ERCOT and the grid operator will review, coordinate, and approve outage requests for all generation resources.

In addition to updated ancillary service methodology, procedures for ERS and certain utility level measures were amended to allow for greater deployment flexibility. ERS has been amended to expand the budget, grant ERCOT the ability to deploy resources prior to an EEA alert, to remove limits on deployments, and limit the ability for resources to schedule unavailability during a contract period. The PUCT worked with ERCOT on protocols to instruct TDUs to use distribution voltage reduction measures prior to an EEA alert if it is determined, they would not be needed in the case of a load shed event. Restrictions on utilizing under frequency load shed feeders to meet load shed obligations when adequate percentages could be otherwise maintained were also removed.

The PUCT has also worked with ERCOT on changes related to data transparency. Specifically, ERCOT will be able to provide important information about resource outages to the public in a more complete and timely manner. ERCOT will post a public report three days after each operating day with information on generation resource forced outages, maintenance outages, and forced derates. The report will include the name of the affected resource, fuel type, information regarding the outage duration, any information regarding the cause of the event. In the case of an EEA event, this information may be immediately disclosed to state governmental authorities upon request. Protocol changes also included provisions requiring better information from resources regarding forced outages, forced derates, and start-up failures.

The Commission has approved revision requests for all ERCOT rules and protocols associated with these reliability enhancements.

System Wide Offer Cap (SWOC)

After the heat wave in 2011 forced ERCOT to declare EEAs to meet system demand, the Commission agreed to increase the HCAP to $9,000 per MWh, over several incremental upward shifts:

- From $3,000 per MWh to $4,500 per MWh on August 1, 2012;
- Up to $5,000 per MWh on June 1, 2013;
- Up to $7,000 per MWh on June 1, 2014; and
- Up to $9,000 per MWh on June 1, 2015.

The $9,000 price cap was seldom reached after it was implemented. However, after the extreme winter weather event of February 2021, the Commission decided to reevaluate the HCAP and determined that setting the cap at $5,000 per MWh struck the best balance of ensuring appropriate generation is brought to the market using market-based mechanisms and incentivizing demand response during scarcity events while limiting extraordinary financial liability for all market participants and protecting customers.[22] This change went into effect on January 1, 2022. The Commission also directed ERCOT to set the offer cap for ancillary services equal to the system wide offer cap for energy and approved the subsequent protocol changes.

Customer Protection

The Commission has ordered a range of customer-facing changes to the ERCOT market that protect Texas ratepayers from extreme prices, alert customers to potential outages, and designate certain facilities as critical during a rolling power outage, which prioritizes system reliability and human needs.

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[22] *See Review of the ERCOT Scarcity Pricing Mechanism*, Project No. 52631, Item No. 45.

After HB 16 passed, the Commission implemented rules eliminating wholesale-indexed products for residential and small-commercial customers.[23] This rule removes an enormous risk from average consumers by banning REPs from selling plans that pass along major price spikes in the wholesale cost of electricity directly to household bills. This prohibition was also extended to the POLR service so customers would not be adversely harmed by indexed rates if their REP involuntarily exited the market.[24] Historically, POLR rates were indexed to wholesale market prices. While not prohibited from offering wholesale-indexed products to larger, more sophisticated customers, REPs must provide and obtain a signed acknowledgement of risk from large and medium commercial customers who choose a contract indexed to the ERCOT wholesale market prices. The rule also includes transparency requirements for REPs that increase their responsibility to give clear, advanced notification when the customer's electric plan is reaching the end of its term and disallows a REP from putting a residential customer onto an adjustable-rate plan without the customer's knowledge. The Commission also reiterated that "fixed means fixed" and that fixed price contracts were not allowed to be changed due to increases in ancillary service charges or other increased costs that REPs experienced due to the winter storm.

Winter Storm Uri also exposed critical care and critical load customers who did not have their critical status linked to their electricity account. In addition, many critical care and critical load customers were under the impression that having that status on their account guaranteed uninterrupted electric service. The Commission amended TAC §25.479 to require electric utilities and REPs to periodically provide information to customers concerning load shed events, type of customers eligible for critical care or critical load designation and how to reduce electricity use at times when involuntary load shed events are implemented.

Financial Improvements

The Commission has taken major steps to shore up financial markets and credit requirements for participants that ultimately protect consumers and place financial risk on the market participants rather than consumers.

Following Winter Storm Uri, market participants that could not pay for the power purchased in the market left billions of dollars in unpaid invoices with ERCOT. These unpaid debts would ultimately have to be paid by consumers for decades to come and push many REPs into bankruptcy, reducing consumer choices and making the market less competitive.

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[23] H.B. 16, 87th Leg., Reg. Sess. (Tex. 2021).

[24] *See Review of Wholesale-Indexed Products for Compliance with Customer Protection Rules for Retail Electric Service*, Project 51830, Item No. 37.

Credit Requirements for Market Participants

During Winter Storm Uri, many market participants were unable to pay counterparties for the power that they procured from ERCOT to serve their customers. Following Uri, it was discovered that many of the payment defaults accrued to market participants with unsecured credit limits. This increased the overall default amounts that must be uplifted to other market participants such as load (e.g., consumers). At that time, certain market participants could transact in the market with unsecured credit limits based on agency credit ratings, equity, or net worth. It was determined that the accounting for unsecured credit limits was not consistent with actual creditworthiness, particularly in distress scenarios. Subsequent protocol changes now require market participants operating in the ERCOT market to put up additional financial collateral to prevent these widespread defaults from being uplifted to consumers. Additional protocol revisions granted ERCOT authority to prevent a principal of a terminated market participant from reentering the market by forming a new entity.

Securitization

The debts left on the ERCOT balance sheet ultimately must be paid by the remaining market participants. Because companies may pass these costs along to consumers, legislation to securitize the debts through debt-obligation bonds was passed.[25] This allows affected companies the ability to spread repayment over time, rather than bill consumers in one tranche. This method of repayment stabilizes the financial foundation of the ERCOT market while dampening the high cost to consumers.

In October 2021, the Commission approved two debt obligation orders to stabilize the wholesale energy market after the economic impacts of Winter Storm Uri, pursuant to HB 4492 (87th Legislature, Regular Session).[26] The first debt obligation order authorized approximately $800 million that was used to compensate short-paid wholesale market participants and reimburse ERCOT for money that it used to partially fund these short-paid wholesale market participants. Proceeds of this debt obligation order were distributed in November 2021. The second debt obligation order authorized approximately $2.1 billion that was used to provide liquidity to wholesale market participants that were subjected to extraordinary costs to prevent defaults and maintain competition in the wholesale energy market. Proceeds of this debt

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[25] H.B. 4492, 87th Leg., Reg. Sess. (Tex. 2021).

[26] *See Application of Electric Reliability council of Texas Inc. for a Debt Obligation Order pursuant to Chapter 39, Subchapter M, of the Public Utility Regulatory Act*, Project No. 52321, Item No. 214; and
Application of *Electric Reliability council of Texas Inc. for a Debt Obligation Order pursuant to Chapter 39, Subchapter N, of the Public Utility Regulatory Act*, Project No. 52322, Item No. 312

obligation order were distributed in June 2022.[27] ERCOT worked with the Commission to develop protocols regarding the collection and distribution methods of the funds.

Power Outage Alert system

The Commission has adopted a rule to alert Texans when statewide power outages could occur.[28] If ERCOT determines that the possibility of outages is likely within 48 hours, it must notify the PUC Executive Director. The new rule allows the PUC Executive Director to authorize the Texas Department of Public Safety to issue, update, and terminate a power outage alert for a power region where system-wide load shed instructions have been issued or are likely to be issued because of inadequate power supply. Notice to the public may include information alerting customers to the possibility of outages in their region, locations to receive assistance in the power region if an outage occurs, and other relevant information regarding the present outage.

Transmission

The Commission took historic steps to fortify the transmission system in the Rio Grande Valley. This area of Texas has been a challenge to service geographically, but recent population and load growth has made connecting it a priority. The Commission ordered a second circuit to be built in an existing right of way to send additional power to the region. Additionally, the Commission identified and accelerated new reliability lines across the region so that the most affordable power can reach customers in the region.

The Commission implemented SB 1281 (87th Legislature, Regular Session), which introduces a consumer economic benefit test for new transmission projects.[29] The economic analysis test will identify transmission lines that will reduce transmission costs to consumers. Congestion costs occur when transmission lines reach their capacity to transfer power, and more expensive energy must be dispatched from plants where transmission capacity is available to reach the area. Introducing the consumer economic benefit test will identify lines where the construction cost will be offset by the savings on congestion rents.

ERCOT Governance:

The Legislature reaffirmed the Commission's complete authority over ERCOT and making fundamental changes to ERCOT Inc. governance in enacting SB 2 (87th Legislature, Regular Session).[30] Specifically, SB 2 restructured the ERCOT Board of Directors, removing industry

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[27] *See generally HB 4492 Securitization*, Electric Reliability Council of Texas, https://www.ercot.com/about/hb4492securitization/.

[28] *See Power Outage Alert Criteria*, Project 53403, Item No. 35.

[29] *See Review of Chapter 25.101*, Project 53403, Item No. 86.

[30] S.B. 7, 87th Leg., Reg. Sess. (Tex. 2021).

segment affiliated Directors and introducing new qualifications and a selection committee for appointments to the new Board. The first new Directors were announced October 11, 2021, including the appointment of a new Chair. The Board approved amendments conforming the Bylaws to the legal requirements imposed by SB 2 on October 12, 2021. No changes beyond those required to conform with SB 2 were included in the proposed amendments. The Commission approved the Bylaws changes on October 20, 2021.[31]

The final new Directors were announced on December 28, 2021. Since that time, the Board, including the PUCT Chair as an ex-officio Director, continues to review ERCOT governing documents and processes considering SB 2. On September 9, 2022, ERCOT opened public comment on additional proposed amendment to the Bylaws. These amendments would clarify the role of ERCOT's Corporate Members, expand the ability of Directors to fully participate by teleconference, add a requirement for minimum qualifications and a certification process for Corporate Member's Technical Advisory Committee (TAC) Representatives, and other changes to better align with the intent of SB 2. Additional discussion has centered on the role of TAC and stakeholders in the ERCOT rule development processes and how items requested by the Commission or Board can be expedited or otherwise prioritized. The Commission must approve any changes to the bylaws or protocols.

SB 2 also requires the Commission to explicitly approve any rules adopted by ERCOT before they may take effect. Previously, changes to ERCOT guides and protocols took effect after approval by the Board and only ERCOT Bylaw changes required explicit approval by the Commission. PUCT staff has developed a process of evaluating and recommending action on each new ERCOT rule passed by either TAC or the ERCOT Board. A staff memo is filed before an Open Meeting, and the Commission can deliberate on the rule changes. Based on a staff memo recommending approval, the Commission approved the first set of ERCOT rules on July 15, 2021. To date, the Commission has approved 125 ERCOT rule changes, including 63 Nodal Protocol Revision Requests (NPRRs). A list of the Commission approved revision requests is provided in the appendix.

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[31] *See Petition of the Electric Reliability council of Texas Inc. for Expedited Approval of Bylaws Amendment*, Project No. 52683, Item No. 5.

TELECOMMUNICATIONS

The telecommunications market in Texas is made up of voice, broadband, and cable and video services. Wireless technology continues to dominate the voice market. With Voice over Internet Protocol (VoIP) technology, any broadband internet connection can also provide voice service. The PUCT regulates only the intrastate rates and services of some providers of traditional voice service provided through facilities that are largely wired and are commonly referred to as landline or wireline services.

Voice Telecom Service

Landline Service

Intrastate landline service, including basic local telephone service (BLTS), is provided over traditionally copper-wired facilities. Today this service is often provided via a combination of copper-wired, fiber-wired, and fixed wireless facilities. These facilities may be used in providing other voice telecommunication services, such as interstate calling, and information services. The PUCT regulates some aspects of the companies that provide intrastate landline service under five chapters of PURA.

Voice over Internet Protocol

VoIP enables voice communications over a broadband connection and allows users to both place and receive calls. Copper, fiber, fixed wireless, coaxial cable, and electric power lines can provide broadband for VoIP services. VoIP continues to be a popular alternative to landline services as broadband subscribership increases. For a customer who is a broadband subscriber, VoIP can be a less expensive alternative to landline services. The PUCT does not have regulatory authority over VoIP.

Wireless

Many Texans use wireless service as a replacement for landline service. Wireless service is made up of mobile phone service technologies that include cellular non-smart mobile phones, cellular smartphones, and satellite phones. While calls can be placed and received wirelessly, at some point, wireless phone calls travel over wired infrastructure to reach their destination. The PUCT does not have regulatory authority over the provision of wireless service.

Market Share of Voice Services

The voice services market in Texas is no longer dominated by companies using landline infrastructure. Some customers keep wireline service for additional applications such as a backup to wireless service, for alarm systems, or for use with a fax machine. Data shows that 68.7% of households have “cut the cord” and rely solely on wireless service for voice telecommunications, while only 1.7% of households rely exclusively on wireline service. For households with children, reliance on wireless service is even more pronounced, with only 0.4%

of households relying on exclusively on wireline service. This suggests that the preference for wireline reliance skews to an older demographic and that the trend toward wireless service can be expected to continue.

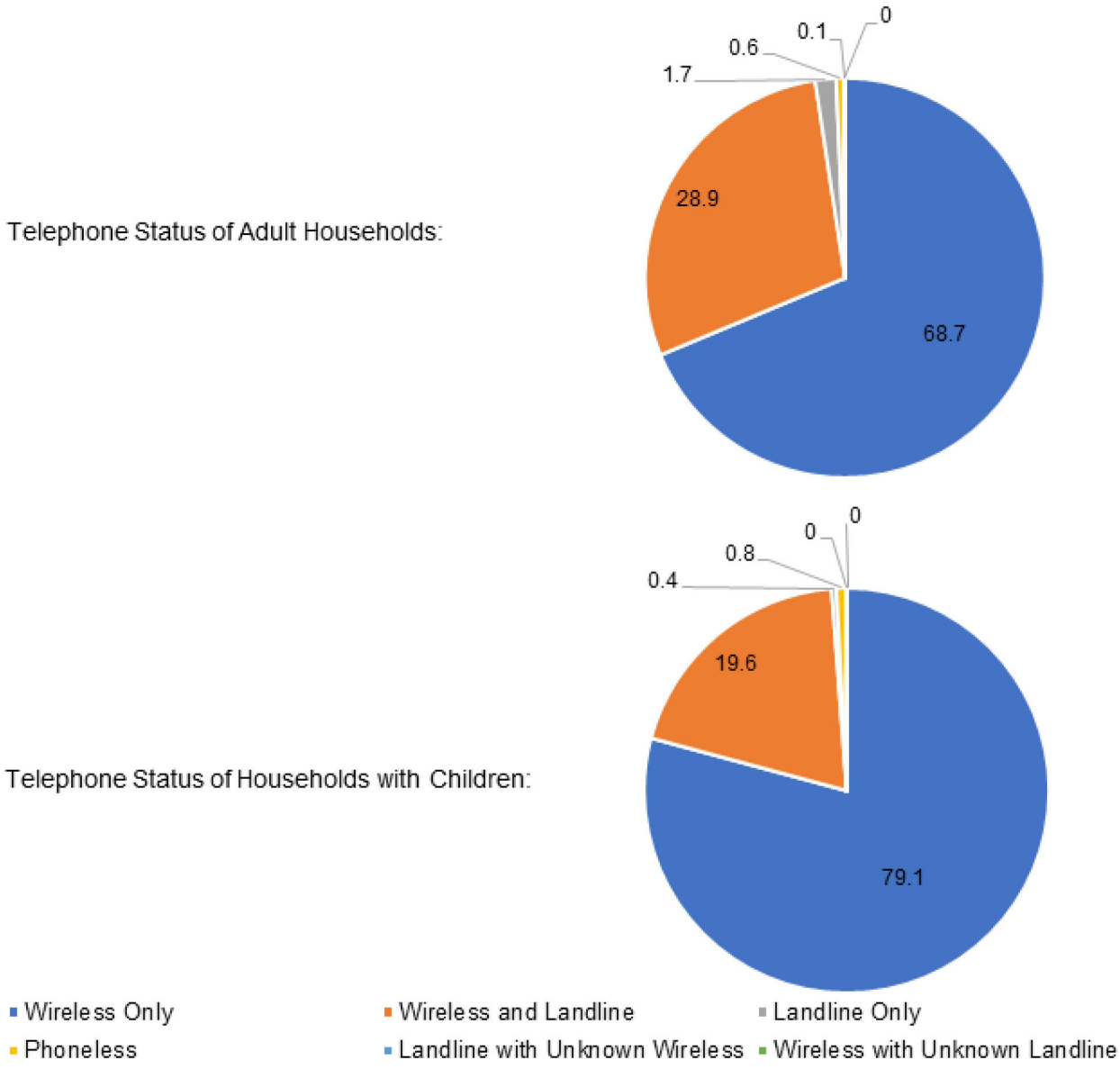


Figure 1 Percentage based telephone status of adult households and households with children in the US

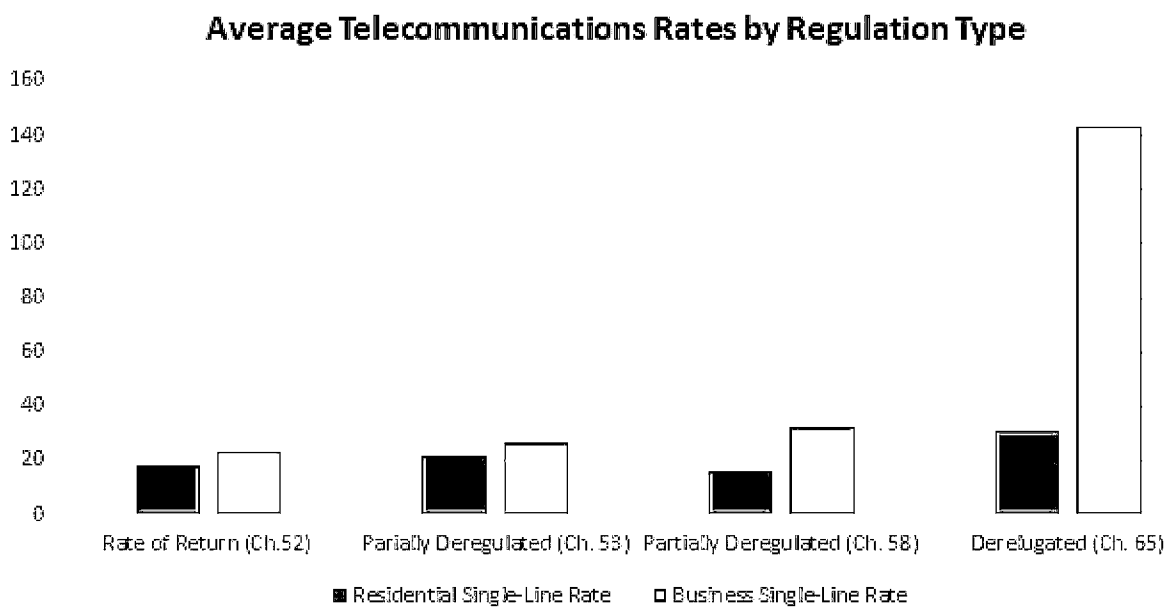
Jurisdiction

Incumbent Local Exchange Carriers (ILECs)

ILECs are entities that held a CCN for landline service as of September 1, 1995. Through multiple chapters, PURA allows for five distinct classifications of the 61 Texas ILECs.

Summary of PURA ILEC Regulation

PURA Chapter	Type of Regulation	General Description of ILEC	Universal Service Support	Average Residential Single-Line Rate	Number of ILECs
52	**Rate-of-return (fully regulated)** must maintain tariff with the PUCT; must request PUCT review to change rates.	≤ 31,000 lines usually serve rural parts of Texas	eligible for support	**$18.29**	**44** *Examples:* Big Bend Telephone Company; Hill Country Telephone Cooperative
53	**Rate-of-return (partially deregulated; cooperatives only)** must maintain tariff with the PUCT; can change rates with formal notice	≤ 31,000 lines usually serve rural parts of Texas	eligible for support	**$21.48**	**3** *Examples:* Valley Telephone Cooperative; Colorado Valley Telephone Cooperative
58	**Incentive** met multiple infrastructure milestones as of January 1, 2000; pricing flexibility for existing services only; can change rates with informal notice	≥ 31,000 lines serving off-shoots of urban areas	eligible for support	**$15.99**	**11** *Examples:* CenturyTel; Windstream
59	**Incentive (new services)** met multiple infrastructure milestones as of January 1, 2000; pricing flexibility for new and existing services; can change rates with informal notice.	No ILECs currently choose Ch. 59 regulation	eligible for support	**--**	**0**
65	**Deregulated** do not maintain a tariff with PUCT; can change rates at own discretion Note: If an entire ILEC territory is not deemed competitive, the ILEC is considered "transitioning."	Large ILECs that serve areas deemed competitive typically serve populated urban areas	**NOT eligible** for high-cost support, but **are eligible** for social service support (transitioning companies can receive high-cost support for areas still regulated)	**$30.75**	**3** *Examples:* AT&T; Frontier Communications; CenturyLink (Transitioning)



ILECs and Competitive Local Exchange Carrier (CLEC) Affiliates

Many regulated ILECs provide non-regulated services through their ILEC designation or a CLEC affiliate. CLECs are providers that entered the market after September 1, 1995. As of November 2022, the PUCT has 291 registered CLECs and 61 registered ILECs.

For an ILEC to provide landline services outside of its service area, it must obtain a certificate from the Commission unless certain exceptions apply. A CLEC affiliate similarly cannot offer landline service to customers within an ILEC's territory. However, a CLEC may offer broadband and video services within an ILEC's territory, including VoIP service as an alternative to the ILEC's landline services. Many of the facilities that CLECs use (for voice, broadband, and video services) are rented from an ILEC. These are the same facilities being used to serve the ILEC's customers and the services may be in direct competition with the ILEC.

Rates Around the State

Local telephone rates for business customers are typically higher than those charged to residential customers. In most cases, rates in rural areas served by small companies are less than the rates charged by larger ILECs serving customers in more urban areas. For example, Eastex Telephone Cooperative, Inc., an ILEC serving customers in small and rural areas in East Texas, offers residential landline service at a rate of $22.50. Conversely, AT&T provides service in most large urban areas throughout Texas and offers residential landline service at a rate of $44.00 per month. AT&T is a fully deregulated company, and their rate exchanges, except for certain grandfathered rates, are uniform throughout AT&T Texas' deregulated service territory.

Similarly, the rates for single-line business service by small and rural ILECs are often less than those charged by ILECs providing single-line business service in urban areas. For example, Frontier Communications charges a single-line business rate of $49.99 in its exchanges found in larger urban areas. Conversely, West Plains Telecommunications, Inc. offers single-line business service in small and rural areas, subsidized by the Texas Universal Service Fund (TUSF), at a rate of $22.18. Frontier Communications is a deregulated company with pricing flexibility not available to Chapter 52 companies like West Plains Telecommunications, Inc. The rates for companies that provide multi-line business service are also generally higher than the rates charged for single-line business service. The general pricing scheme for this service also follows the pattern described above. A deregulated company offering service under Chapter 58 or 65 can offer business service at a higher rate because the company is deregulated (Chapter 65) or has greater pricing flexibility (Chapter 58). Small and rural ILECs remain fully regulated and are thus limited in their ability to offer higher rates.

Registration with the Commission

To provide local exchange telephone service, BLTS, or switched access service in the State of Texas, a person must obtain a CCN, a Certificate of Operating Authority (COA), or a Service Provider Certificate of Operating Authority (SPCOA) from the PUCT. Since the deregulation of the local exchange market in 1996, all certifications for telephone service are either COAs or SPCOAs. For the fiscal year (FY) 2022 the PUCT processed a total of 40 COA and SPCOA dockets.

Similarly, to provide cable or video service in the State of Texas, a person must obtain a State-Issued Certificate of Franchise Authority (SICFA) from the PUCT. As of November 2022, there are 79 active SICFAs doing business in Texas

Texas Universal Service Fund (TUSF)

The Federal Communications Act of 1934, as amended by the Telecommunications Act of 1996[32], designated interstate landline service as a universal service that all Americans are entitled to access[2] at just, reasonable, and affordable rates.[33] This act also created the federal Universal Service Fund to offer support to aid companies providing landline service. Federal universal service was later expanded to include VoIP data and wireless/broadband data.[34]

Established in 1987 and revised in 1995, TUSF was created to implement a competitively [35]neutral mechanism to enable all residents of the state to obtain intrastate landline service, or

[32] 1934 and 1996 Acts: 1934 Communications Act, ch. 652, 48 Stat. 1064. (1934) (codified as amended at 47 USC 254 (1996)). See also 1996 Telecommunications Act, ch. 652, 110 Stat. 71. (1996).

[33] See generally FCC 97-157.

[34] *See* FCC 11-103, ¶4 at 24-25

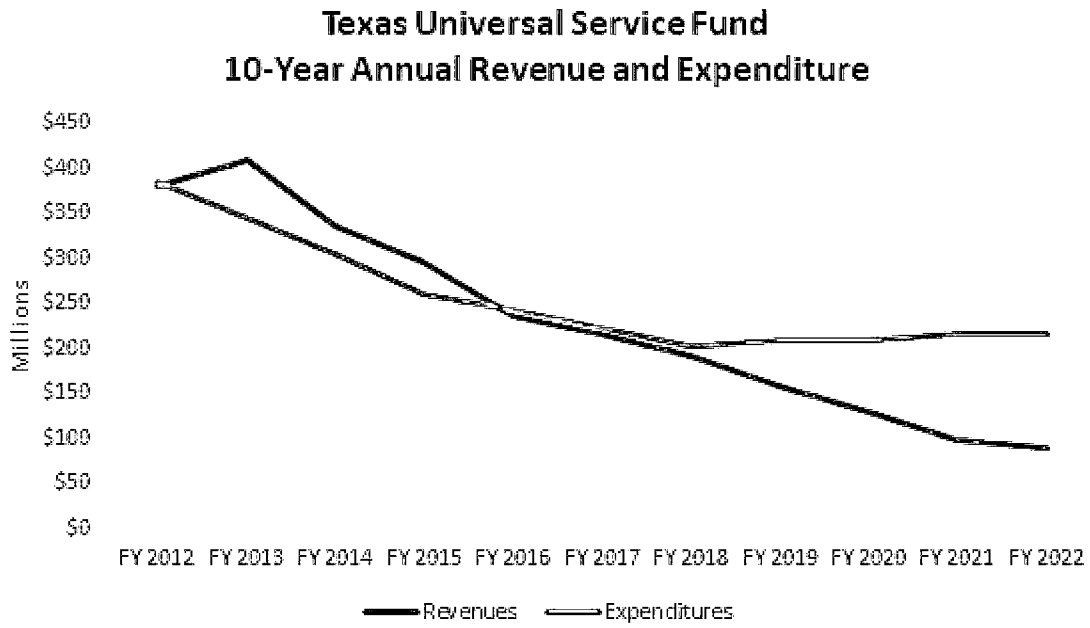
[35] See Review of TUSF Rate, Project 50796, Item No. 60.

BLTS. The PUCT is charged with adopting and enforcing rules requiring local exchange companies to establish universal service and administering the TUSF in a way that ensures reasonable rates for BLTS. The programs currently supported by the TUSF are discussed further below.

The TUSF is funded through a surcharge based on an estimate of ILEC and CLEC customers' intrastate telecommunications service usage. Typically, ILECs and CLECs pass through the surcharge costs to customers on their bills. The Commission reviews the fund requirements and may change the TUSF rate to meet the obligations of the fund.

The TUSF surcharge is only assessed on the estimated intrastate voice service portion of Texas ILECs' and CLECs' taxable receipts. The TUSF surcharge is not assessed on data services. Accordingly, it is only collected by ILECs and CLECs on the estimated intrastate voice portion of their customers' bills. In FY 2019, wireless service providers (including Texas ILECs and CLECs) reevaluated their service packages to determine how much of the package was devoted to voice service compared to data services. When those studies were completed, the companies determined that a much smaller part of service packages were devoted to providing voice service than previously estimated and adjusted accounting practices to collect the TUSF surcharge only from the portion of the customer's bill devoted to voice service. Since the accounting change, a smaller amount of taxable receipts is eligible for TUSF surcharge assessment and funds into the TUSF program have been reduced. This created a significant unanticipated shortfall in TUSF revenues, as shown below.

December 2020 was the last fully funded monthly TUSF obligation. From January 2021 to September 2022, the fund paid 15% - 35% of high-cost expenditures. On July 14, 2022, the Commission raised the TUSF assessment from 3.3% to 24%, effective August 1, 2022. The increase in the TUSF assessment rate will allow the PUCT to pay current obligations each month along with obligations in arrears. It is estimated that it will take 12 months to fully pay down the obligations in arrears, at which time the Commission can lower the assessment to a rate sufficient to meet current obligations.



Programs Funded by TUSF

TUSF funds eleven programs separated into two major categories: high-cost programs and social service programs. The high-cost programs mainly help telecommunications providers provide landline service at reasonable rates in high-cost-to-serve rural areas of Texas. The social service programs provide financial assistance for voice services for low-income customers and support programs for Texans with disabilities such as relay services for hearing-impaired customers. Expenses for the High-Cost Support programs include approximately 90% of the total TUSF expenditure. On the following pages are breakdowns of the programs that fall under high-cost or social service support.

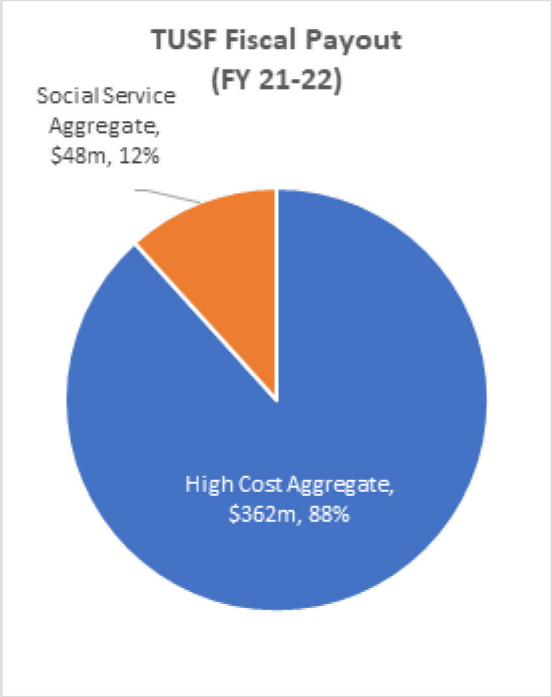
High-Cost Programs

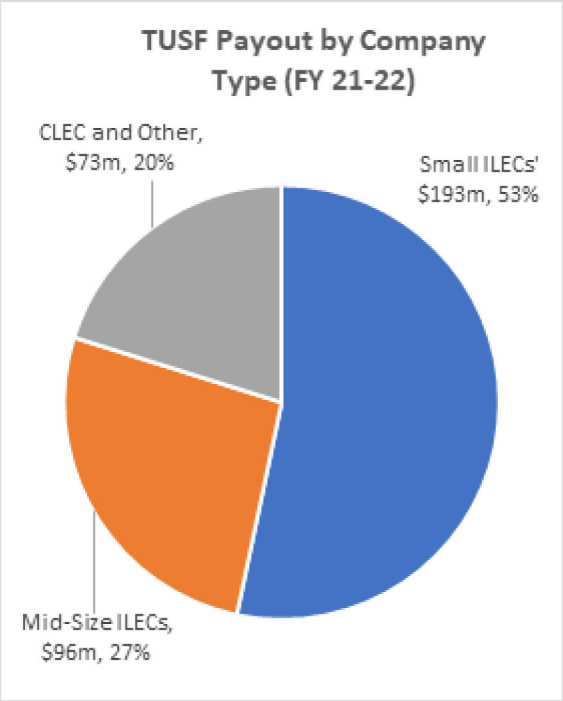
Program	Description	2021 Payout	FY 2022 Payout
Texas High-cost Universal Service Plan (THCUSP)	Support for **large** phone companies offering landline service in **high-cost-to-serve areas and rural areas**.	$85,027,341	$80,876,913
Small and Rural ILEC Universal Service Plan (SRIUSP)	Support for **small and rural** companies offering landline service in **high-cost-to-serve and rural areas**.	$89,391,493	$87,611,349
Additional Financial Assistance (AFA)	Additional revenue for ILECs drawing funds from the THCUSP or SRIUSP under certain conditions (see PURA §§ 53.105, 53.151, and 53.406). Has never been used to seek additional support.	$0.00	$0.00

PURA § 56.025 Make-Whole Provision	Support for ILECs that serve **< 31,000** access lines to maintain reasonable rates for landline service. ILECs can request additional support from the **TUSF to match projected funding loss from changes to federal or state legislation**.	$4,360,782	$13,922,230
IntraLATA Support	Universal Service Fund Reimbursement for Certain IntraLATA Service. Reduces certain rates for **schools, libraries, nonprofit telemedicine centers, not-for-profit hospitals, and health centers**.	$192,885	$135,950
High-cost Uncertified	High-cost Universal Service Plan for Uncertificated Areas where an **Eligible Telecommunications Provider (ETP) volunteers** to -provide BLTS. Financial assistance for ILECs that serve uncertificated areas of the state and have volunteered to provide landline service to residential and single-line business premises.	$200,632	$200,138
	Total	$179,173,133	$182,746,580

Social Service Programs

Program	Description	2021 Payout	FY 2022 Payout	FY 2022 Participation
Lifeline	Reduces monthly voice rates **for low-income customers**.	$8,967,809	$4,633,902	764,456
Texas Relay Service	Allows Texans with speech or hearing disabilities to communicate using **specialized devices and operator translations**.	$1,010,395	$824,878	32,042 (completed calls)
Specialized Telecommunications Assistance Program (STAP)	Reduces the costs **of telephone equipment** for customers with speech or hearing disabilities.	$16,137,996	$15,879,662	15,072 vouchers
Audio Newspaper Program	Free telephone service that allows blind and visually impaired persons access to the text of newspapers by using **synthetic speech**.	$427,585	$514,704	54,801 Registered users
Tel-Assistance Support	Reduces monthly voice rates **for low-income customers**. No longer an active program. Only customers who were receiving it prior to its discontinuation and did not want to switch to Lifeline still receive support through Tel-Assistance.	$1,225	$939	122
	Total	$26,545,010	$21,854,085	





Emerging Issues

Continued Need for POLR Designation

A telecommunications POLR is an ILEC or CLEC obligated to provide landline service at a reasonable cost to requesting customers throughout its service territory. This ensures that customers are not denied access to service and have an opportunity to receive non-discriminatory landline service. Through POLR obligations, ILECs and some CLECs are obligated to provide facilities and services to any customers within their service territories, even if this requires building infrastructure for a single customer to use.

Since POLR requirements were established, the telecommunications market has changed remarkably. The availability of alternative voice services (predominantly wireless) and continued buildout of facilities means customers in competitive areas of Texas may be able to access voice services from a variety of providers at a reasonable cost. Beginning in 2015, companies serving competitive areas could request to be relieved of their POLR obligation. Companies have also started to contemplate the use of alternate technologies to meet POLR obligations.

Definition of "Universal Service," "High Cost," and "Rural"

When the concept of universal service was established, landline voice telephony over copper-wire access lines was the primary telecommunications method. As a result, landline service was the technology supported by the Federal Universal Service Fund (FUSF) and State Universal Service Funds (for Texas, the TUSF). Since that time, technology and facilities have evolved. In 2011, the FCC began amending the FUSF programs to support wireless and

broadband service.[36] Changes have included retiring programs that support landline service and creating new programs to support wireless and broadband.

As standard telecommunications service shifts away from landline to broadband service, the question of what constitutes meaningful "universal service" is evolving.

In Texas, broadband[6] is now the primary communication method, and wireless voice services are now more prominent than landline services using voice data.[37] The PUCT does not have regulatory authority over the provision of wireless or VoIP services. However, the PUCT has authority over "voice data" for TUSF funding. "Voice data" is becoming increasingly merged into and indistinguishable from "wireless data," making the basis for funding universal service difficult to determine.

In 2021, Texas was the fastest growing state according to U.S. Census statistics and had an estimated population of 29,527,941.[38] The significant growth in population poses questions to what the term "rural" means in the context of TUSF program funding. Some areas of the state that were previously rural spaces with low population density are transitioning into suburban and urban centers as Texas grows but are still deemed "rural" for purposes of TUSF. The Legislature's intent for the term and, consequently, how the term can be quantified per that intent, will inform the Commission's ability to revise TUSF's applicability and program design in the future.

Neither "high-cost," nor "rural" is defined for this purpose in PURA or PUCT rules.

Sustainability of the Texas Universal Service Fund

As discussed under the "Texas Universal Service Fund" header, the global transition from voice data to wireless data is a solvency issue for the TUSF.

Since Q1 of FY 2018, the TUSF balance has decreased. Beginning in Q3 of FY 2019, the ending balance of the TUSF year began to precipitously decline year over year, starting with

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[36] See generally FCC 17-166. The FCC is authorized to regulate all aspects of telecommunications and carriers providing "interstate telecommunications." Companies providing interstate voice data, VoIP data, and wireless/broadband data are required to contribute to the FUSF.

[37] The Texas Legislature has specifically defined "broadband service" under PURA § 43.003 as "retail Internet service…with the capability of providing a download speed of at least 25 megabits per second and an upload speed of at least 3 megabits per second." See PURA § 43.003. See also Tex. Gov't Code 490I.0101. The Legislature's definition of "broadband service" is consistent with the FCC's definition. See FCC 15-10, ¶3 at 3.

[38] "With a population of 29,527,941 in 2021, Texas had the largest annual and cumulative numeric gain, increasing by 310,288 (1.1%) and 382,436 (1.3%), respectively." *See* https://www.census.gov/newsroom/press-releases/2021/2021-population-estimates.html

losses of approximately 10-20% of the total fund balance and ending with losses of approximately 20-33% annually.

Historically, the PUCT collects approximately $100 million for the TUSF annually, however, this amount is decreasing every year.[39] In FY 2020, approximately $198 million was disbursed from the TUSF. Therefore, to maintain the solvency of the TUSF, the PUCT would have to either dramatically reduce TUSF support or collect an additional $100 million (for a total of $200 million) annually.

In June 2020, the Commission considered whether to raise the assessment rate to maintain support for all TUSF programs. It was determined that increasing the assessment fee from 3.3% to 6.4% as proposed by PUCT staff would not sustain funding for all the programs in the long term. Additional increases to the assessment would be needed as revenue continued to decline. As a result, the Commission chose not to increase the TUSF assessment rate at that time given the COVID-19 pandemic and resulting economic crisis, particularly since the increase would not have guaranteed long-term solvency.[40] As of Q2 of FY 2021, the Commission had reduced TUSF disbursements by 60-70% of actual amounts to prevent insolvency of the fund.

Another threat to the solvency of the TUSF program is PURA § 56.025(c). This provision requires the PUCT to use TUSF funds to make companies whole for reductions in federal USF support due to an order, rule or policy of the Federal Communications Commissions. The requirements of PURA § 56.025(c) could worsen the already precarious financial condition of the TUSF.

TUSF Litigation

On January 20, 2021, the Texas Telephone Association (TTA), on behalf of and with its participating members, filed a lawsuit in Travis County against the Commission. The suit alleged that, in reducing the disbursements to TUSF participants in Q2 of FY 2021, the Commission acted without authority and violated state law.[41]

Summary Judgment was issued by the 200th District Court of Travis County on June 7, 2021, in favor of the PUCT.[42] On June 25, 2021, the case was appealed by TTA, and on June 30, 2022, the Third Court of Appeals rendered judgment in favor of the appellants, reversed the District Court, voided the Commission actions in 2020, and enjoined the Commissioners from not fully

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[39] For FY 2021, the PUCT collected approximately $98 million for the TUSF.

[40] At the June 12, 2020, Open Meeting, the then-Commissioners declined to adopt PUCT staff's recommendation and did not increase the §26.420(f)(6) assessment from 3.3%. *See Review of TUSF Rate*, Project 50796, Items No. 2 and 15.

[41] *See Plaintiff's Original Petition*, Cause No. D-1-GN-21-000311, TRAVIS COUNTY DISTRICT COURT, 200th District.

[42] *See* Cause No. D-1-GN-21-000311*, Case Summary*, Travis County.

funding or reducing disbursements to the TUSF.[43] On July 14, 2022, the Commission raised the TUSF assessment from 3.3% to 24%, effective August 1, 2022, in accordance with the judgment from the Third Court of Appeals.[44] The Commission began paying current months' requests for reimbursements for eligible carriers beginning in October 2022.

On August 30, 2021, AMA TechTel filed a lawsuit in Travis County against the Commission.[45] On November 17, 2021, the district judge granted the injunction, and on November 18, 2021, the Commission appealed the case to the Third Court of Appeals.[46] The Third Court of Appeals granted injunctive relief requiring the Commission to reimburse AMA TechTel past due TUSF disbursements. As of October 2022, the Commission has paid all past due TUSF disbursements to AMA TechTel.

On November 10, 2021, Alenco Communications, Inc. (Alenco) filed an application at the PUCT to recover funds from the TUSF. The application requests a prorated, monthly distribution of TUSF funds from the current TUSF balance and seeks to prioritize disbursements to Alenco over other TUSF funding recipients. The Commission dismissed this case on July 14, 2022.[47]

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[43] Cause No. 03-21-00294-CV. *Judgement of Texas Court of Appeals, Third District*, 3RD COURT OF APPEALS.

[44] *See Review of TUSF Rate*, Project 50796, Item No. 60.

[45] See Cause No. D-1-GN-21-004498, Case Summary, TRAVIS COUNTY

[46] See Cause No. 03-21-00597-CV, Case Summary, 3RD COURT OF APPEALS.

[47] See Applications…to Recover Funds from the TUSF… Project 52808, Item No. 39.

WATER AND SEWER

The PUCT is charged with overseeing the financial and managerial aspects of water and sewer utility services in Texas. The PUCT regulates the retail rates of water and sewer IOUs. The Commission has limited appellate jurisdiction over the rates of MOUs, districts and river authorities, water supply corporations (WSCs), and affected counties' wholesale and retail water and sewer rates.[48] The Commission issues and regulates any amendments or change in control of CCNs for water and sewer service providers. The Commission also appoints temporary managers for abandoned or non-functioning IOUs to ensure that customers receive continuous and adequate service.[49] PUCT staff assist the utilities in staying in compliance by answering compliance-related questions and raising awareness about the rules and regulations. TCEQ controls the health and safety of water and sewer utility services in the state. PUCT and TCEQ coordinate on temporary managers and receiverships to ensure continuous service for Texans.

There are 3,989 water and sewer service providers holding CCNs under the PUCT's jurisdiction.[50] As of the end of FY 2022, these CCNs encompass 10,744,157 water connections serving residences and businesses in the state. A CCN grants its holder the exclusive right to provide retail water or sewer utility service to an identified geographic area. Texas Water Code (TWC) Chapter 13 requires a CCN holder to provide continuous and adequate service to the area within its CCN boundary.[51] Most Texans are served by large and medium-sized retail public utilities, including municipalities, districts, river authorities, and water supply and sewer service corporations. Small retail public utilities, typically serving fewer than 2,300 connections, serve the rest of the population. Counties that meet certain economic criteria or are within 100 miles of the US-Mexico border (Affected Counties) and all IOUs, WSCs, and sewer service corporations must hold a CCN to provide water and sewer services. Municipalities, districts, and counties other than Affected Counties are not required to have a CCN to serve in areas that are not already being lawfully served by another retail public utility. However, some municipalities and districts choose to obtain a CCN to protect their service area from encroachment. The chart in Figure 1 depicts the percentage of the CCNs by type of retail water and sewer providers.

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[48] Tex. Water Code Ann. § 13.042. Available at: https://statutes.capitol.texas.gov/Docs/WA/htm/WA.13.htm

[49] Tex. Water Code Ann. §13.4132.

[50] *See Water and Sewer Industry, Market Directories: Water and Sewer Utilities Serving Texas* PUBLIC UTILITY COMMISSION OF TEXAS, https*://www.puc.texas.gov/industry/water/directories/default.aspx*.

[51] Tex. Water Code Ann. § 13.042.

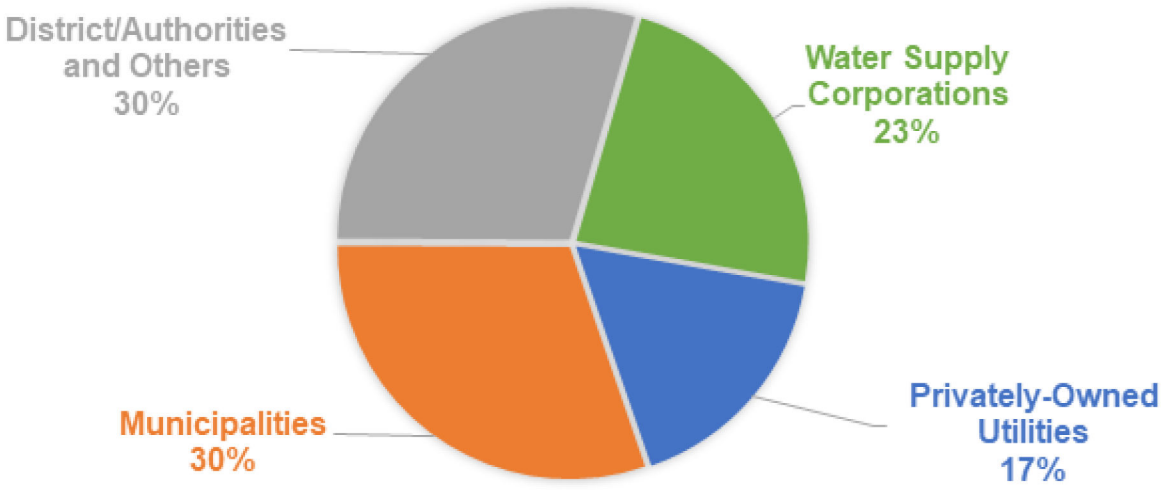

Figure 1. Percentage of water and sewer CCNs by service provider type

Primary Service Provider Types

Investor-Owned Utilities

Private companies offering sewer or potable water services are called IOUs. IOUs provide service for a profit and range in size from small sole proprietorships or partnerships to large corporations. IOUs must hold a CCN to provide water or sewer services. As of the of end of FY 2022, PUCT regulated 553 active CCNs held by IOUs.

Water Supply Corporations

WSCs are member-owned and member-controlled nonprofit businesses that offer sewer or potable water services. Each entity sets up bylaws and articles of incorporation that govern how it operates.[52] WSCs that only provide sewer service are also referred to as sewer service corporations. A WSC must hold a CCN to provide the public retail water or sewer service.[53] As of the end of FY 2022, the Commission regulated 758 WSCs.

Exempt Retail Public Water Utilities

Certain IOUs and WSCs are exempt from the requirement to hold a CCN to provide retail water utility service. Exemptions are available for utilities serving fewer than 15 service connections and are not owned or affiliated with a retail public water utility or any other entity that provides potable water service. This exemption is not available for utilities that provide sewer service. If the exempt utility is a MOU, it must register with the PUCT and declare its

[52] *See generally* Tex. Water Code Ann. Chapter 67.
[53] Tex. Water Code Ann. § 13.242(c).

existence.[54] The Commission has appellate jurisdiction over exempt utilities' rates.[55] If 50 percent or more ratepayers request intervention, the PUCT will review a utility's rates. As of the end of FY 2022, 39 exempt retail public water utilities were registered with the PUCT.

Districts

A district is a local governmental entity that provides water, sewer, or both services to its customers and residents.[56] A district does not have to hold a CCN to provide retail water or sewer service to its customers unless it intends to provide service in an area already served by a retail public utility.[57] The most common types of districts are Municipal Utility Districts, Water Control and Improvement Districts, and Special Utility Districts.

River authorities are a type of district.[58] As political subdivisions of the state, river authorities operate major reservoirs and are granted authority to control and distribute the waters of a specific geographic region. River authorities may provide water, sewer, or both services, along with other services such as water conservation, irrigation, flood control, firefighting, garbage collection, and recreation facilities. Like districts, river authorities do not have to hold a CCN.[59]

The number of districts, including river authorities, that opted to obtain a CCN from the PUCT was 960 in FY 2022.

Municipally Owned Utilities

Many Texans receive water and sewer service from a MOU. A MOU includes any retail public utility owned, operated, and controlled by a municipality or by a nonprofit corporation whose directors are appointed by one or more municipalities.[60] Like districts, MOUs do not have to hold a CCN to provide retail water or sewer service inside or outside their extraterritorial jurisdiction.[61] However, a MOU must obtain a CCN if it wishes to serve customers in an area already served by another retail public utility.[62] In FY 2022, 990 MOUs held CCNs.

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[54] Tex. Water Code Ann. § 13.242(c).
[55] Tex. Water Code Ann. § 13.042(d).
[56] Tex. Government Code Ann. § 49.001(1).
[57] Tex. Government Code Ann. § 49.215(d).
[58] Tex. Government Code Ann. § 49.001(8).
[59] Tex. Government Code Ann. § 49.215(d).
[60] Tex. Water Code Ann. § 13.002(13).
[61] Tex. Water Code Ann. § 13.242(c).
[62] Tex. Water Code Ann. § 13.247(a).

Certificates of Convenience and Necessity

The Commission has sole jurisdiction over water and sewer CCN regulations.[63] The PUCT must ensure that a CCN applicant has the financial, managerial, and technical capability to run a utility.[64] Any overlaps in a proposed service area with neighboring utilities, cities, or districts must be resolved before the CCN is granted.[65] If the service area requires the construction of a new water or sewer system, the CCN applicant must also obtain engineering plan approval from TCEQ.

Utilities seeking to obtain a new CCN or amend an existing CCN to change the boundaries of its certified service area must file an application with the PUCT.[66] Decertification, expedited release, and streamlined expedited release proceedings remove all or a part of a certificated service area from a CCN.[67] A utility that receives a request to provide service to an area outside its CCN boundaries must first amend its CCN and add the requested area to lawfully provide service to the new area.[68] Political subdivisions such as municipalities, districts, and counties may obtain a CCN but are not required to do so unless they plan to provide service in an area where another utility is already lawfully serving.

During FY 2021 and FY 2022, the Commission finalized 317 CCN-related applications, including requests for new CCNs, amendments, decertification, and expedited release cases. Figure 2 shows the quarterly number of finalized CCN-related applications in the FY 2021 and FY 2022.

[63] Tex. Water Code Ann. § 13.041(a).
[64] Tex. Water Code Ann. § 13.241.
[65] Tex. Water Code Ann. § 13.242(a).
[66] Tex. Water Code Ann. § 13.244(a)
[67] Tex. Water Code Ann. § 13.254.
[68] Tex. Water Code Ann. § 13.242(a).

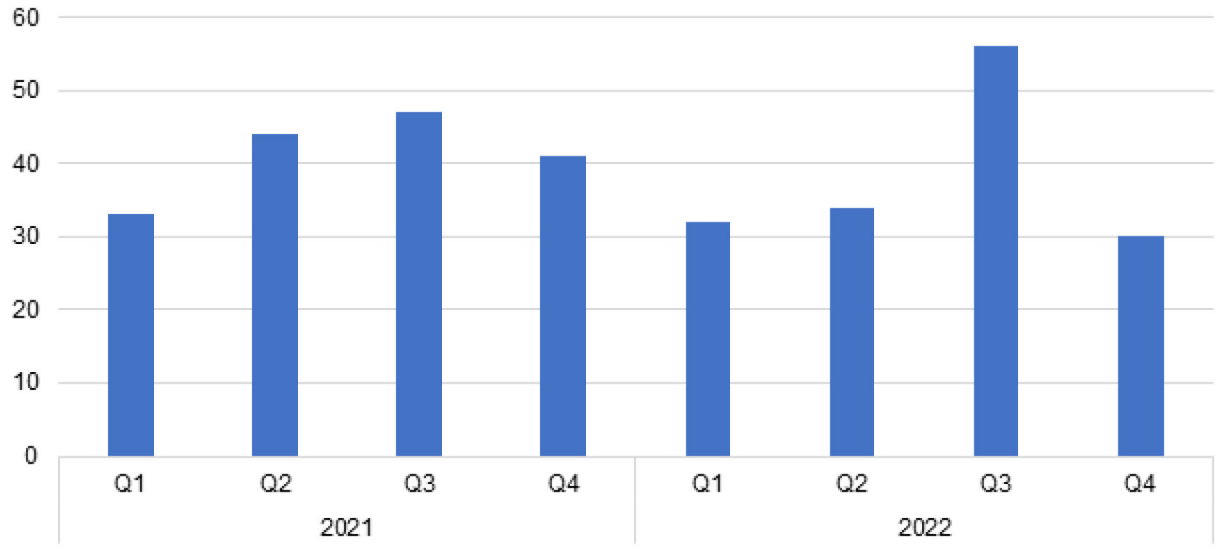

Figure 2. The number of finalized CCN-related applications in each quarter of the 2021 and 2022 fiscal years.

Utility Acquisitions

Any change of control, such as a sale or acquisition of a CCN holder's water or sewer system, requires notice to customers and neighboring utilities and approval from the Commission. A sale may also require the transfer of the CCN to the purchaser. The transfer and related sale of facilities is commonly known as a sale, transfer, or merger (STM). The acquiring entity may be either an existing utility or a new market entrant. Like the process for granting a new CCN, during a STM proceeding the Commission examines the financial, managerial, and technical capability of the acquiring entity to provide continuous and adequate service to the service area defined by the CCN, plus any areas already served by the acquiring entity. The applicant's financial health, compliance history with TCEQ's health and safety standards, and any customer complaint history are considered in the proceeding. To obtain Commission approval, the applicant must also show that the proposed STM is in the public interest.[69]

There has been an increase in acquisitions of smaller water and sewer utilities by larger IOUs during the past few years. With the continued growth of the Texas economy, several IOUs, including those based in other states or countries, are actively pursuing acquisition and consolidation of smaller utilities in Texas. Economies of scale provide value to IOUs through regulatory and operational efficiencies. In addition, new regulatory processes, such as fair market value and filed rate doctrine help facilitate transactions.

[69] Tex. Water Code Ann. § 13.251.

Expedited Release

The owner of a tract of land of at least 50 acres can petition the PUCT to receive service from a different retail public utility through an expedited release proceeding. The petition can include all or a part of the tract. The landowner may initiate such a petition requesting service from another provider if the CCN holder for its geographic area is either not providing service or if the service cost is so prohibitively expensive as to constitute a denial of service. Petitions for expedited release must identify an alternative provider that can provide service in the level and manner requested by the landowner. The CCN holder can oppose the expedited release and may refute any information submitted by the petitioner. The landowner requesting the expedited release must provide adequate and just compensation to the CCN holder for release.[70] An expedited release can occur anywhere in the state, except within cities with a population more than 500,000 or platted subdivisions.[71]

Streamlined Expedited Release (SER)

The owner of a tract of land of at least 25 acres that is not receiving water or sewer service may petition for a streamlined expedited release from the current CCN holder for its geographic area. The landowner must provide adequate and just compensation to the CCN holder for such a release.[72] Streamlined expedited release is available in the following 33 counties under TWC §13.2541: Atascosa, Bandera, Bastrop, Bexar, Blanco, Brazoria, Burnet, Caldwell, Chambers, Collin, Comal, Dallas, Denton, Ellis, Fort Bend, Galveston, Guadalupe, Harris, Hays, Johnson, Kaufman, Kendall, Liberty, Montgomery, Parker, Rockwall, Smith, Tarrant, Travis, Waller, Williamson, Wilson, or Wise Counties.

CCN Revocations

Revocation of a CCN is necessary when the CCN holder does not provide or is incapable of providing continuous and adequate retail water or sewer service.[73] This failure could be the result of the utility's insolvency, the dissolution of the company that owns the CCN or the death of the CCN holder. A revocation may also be necessary if the utility has never provided service and has no active plans to do so in the future. Because a CCN grants the holder an exclusive right to provide utility service to a defined geographic area, other potential service providers are prevented from providing water sewer service to customers in the area. DICE conducts investigations and initiates proceedings to revoke the CCNs of failing utilities. The CCN must be revoked to limit harm to customers and ensure a quality provider may instead serve the area.

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[70] Tex. Water Code Ann. § 13.254(a-1) and (a-3).

[71] Tex. Water Code Ann. § 13.254(a-2).

[72] Tex. Water Code Ann. § 13.2541.

[73] Tex. Water Code Ann. § 13.254(a).

Ratemaking

Water and sewer utilities must have sufficient revenues to cover daily operations, repair and replace equipment, and repay debts. A utility must maintain a strong balance sheet and sufficient cash flows to attract investors or lenders to raise the funds necessary to invest in capital-intensive systems. A utility must also generate enough annual cash flow to repay any accrued debt and to pay for operating expenses.

A utility's primary revenue source is the payment of customers' bills. The rates charged to customers must be established to recover the utility's reasonable and necessary cost of providing service. These include the costs for production, treatment, storage, collection, and distribution.

Rates must be periodically reviewed and, if necessary, reset to reflect a utility's change in costs. Stagnant rates can result in a utility collecting insufficient revenues over time and may prevent investment in system repairs or improvements necessary to maintain service or increase efficiency. This is particularly true for smaller utilities with limited access to capital markets to fund investment. Conversely, a utility could over-earn if its rates are not reviewed in a timely manner. Over-earning allows benefits to accrue for shareholders or owners at the expense of the ratepayers.

PUCT rate cases establish just and reasonable rates for water and sewer utilities. During FY 2021 and FY 2022, the Commission finalized 121 water and sewer utility rate applications. Figure 3 shows the quarterly numbers of completed rate applications in FY 2021 and FY 2022.

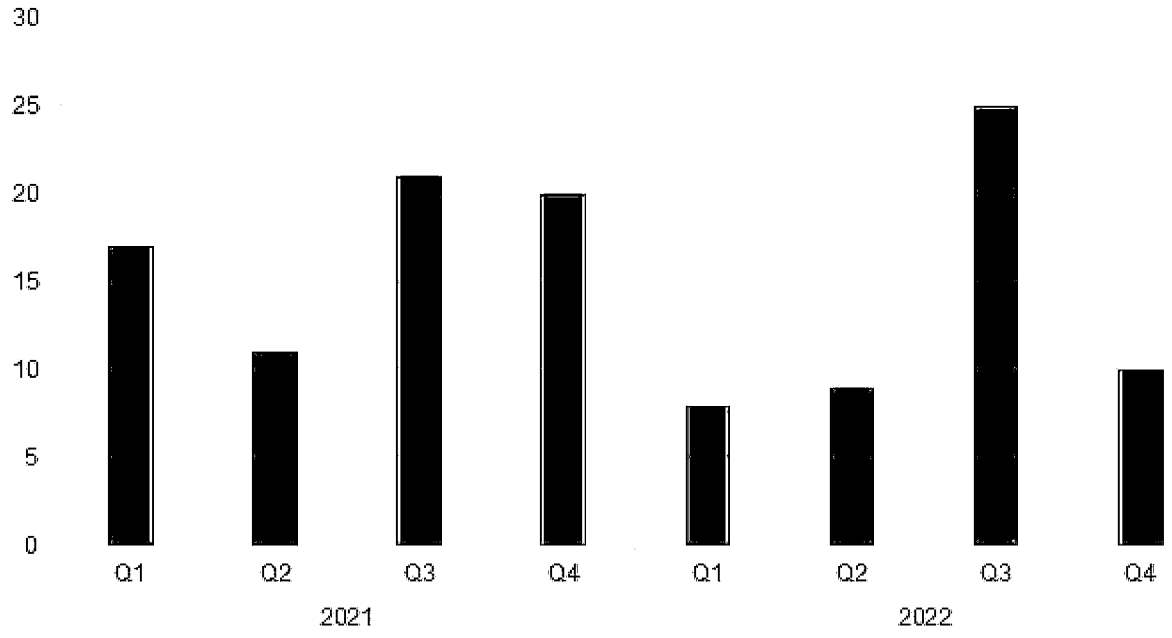

Figure 3. The number of finalized rate applications in each quarter of the 2021 and 2022 fiscal years

Jurisdiction

Original jurisdiction over fees charged by water and sewer providers depends on the utility's type and location.

The Commission has original jurisdiction over IOUs' retail water and sewer rates in most cases. The Commission has appellate jurisdiction over the rates of IOUs where the service area is within a municipality's corporate boundaries. In this case, the municipality has original jurisdiction over the retail rates unless the city surrenders its rate jurisdiction to the PUCT. The following cities have surrendered to the Commission jurisdiction over IOUs' rates within its corporate boundaries:

- City of Coffee City – effective 12/4/1993;
- City of Nolanville – effective 04/18/1996;
- City of Aurora – effective 04/04/1997;
- City of Arcola – effective 05/05/1998;
- City of Waco – effective 02/07/2012;
- City of San Antonio – effective 01/30/2014;
- Village of Jones Creek – effective 12/04/2014; and
- City of Hideaway – effective 09/26/2016.

The Commission has limited appellate jurisdiction over the retail rates of WSCs, Affected Counties, and districts, including river authorities. The governing board of a WSC or a district sets retail water and sewer rates for its customers. After the board approves a rate change, if 10% or more of the customers protest, the rates can be appealed to the Commission. The Commission also has limited appellate jurisdiction over the rates of customers served by MOU but residing outside of the governing city's territorial limits. The city council or a separate board established for customers may set rates for services provided by MOUs. Customers that reside outside of the city limits and are therefore not represented by the MOU's governing body may appeal these ratemaking decisions to the PUCT. To date the PUCT has not received an appeal regarding the retail rates of an Affected County. Figure 4 shows the percentage of service connections over which the PUCT has appellate or original jurisdiction.

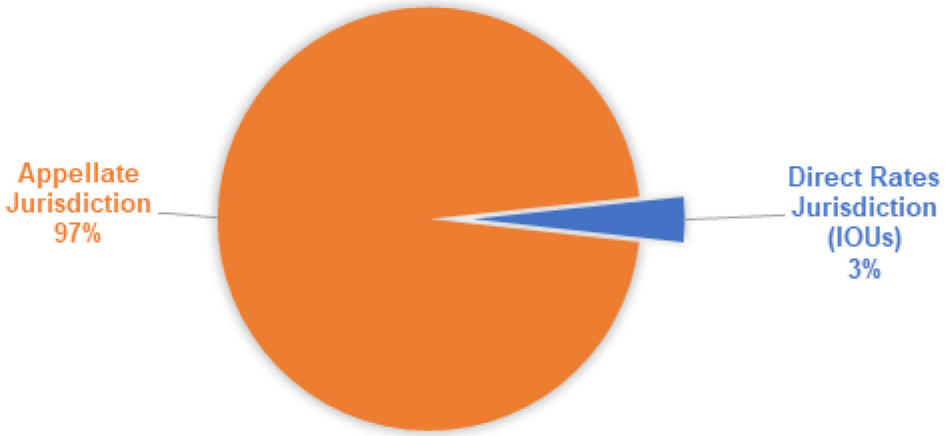

Figure 4. PUCT Jurisdiction by connection count.

Formal Ratemaking Proceedings

A utility must file its rate case with the regulatory authority with original jurisdiction over its water or sewer rates. Although homeowner associations, property owners' associations, and cooperatives are nonprofit entities, TWC treats them as utilities for ratemaking purposes. Utilities can file for a rate change no more than once in a 12-month period.

Rate-filing requirements for IOUs under PUCT jurisdiction vary depending on the utility's classification. TWC classifies water or sewer utilities by the number of active connections served. Sewer utility connections are not counted for classification purposes unless the utility only provides sewer service. The number of connections determines the classification as either a Class A, B, C, or D utility, as shown in Table 1.[74] The percentages of the number of utilities and the total served connections by each utility class are shown in Figure 5.

Table 1. IOU Classification is based on the number of connections.

IOU Classification	Number of Connections
Class A	10,000 - greater
Class B	2,300 - 9,999
Class C	500 - 2,299
Class D	0 - 499

[74] Tex. Water Code Ann. § 13.002(4-a)-(4-d).

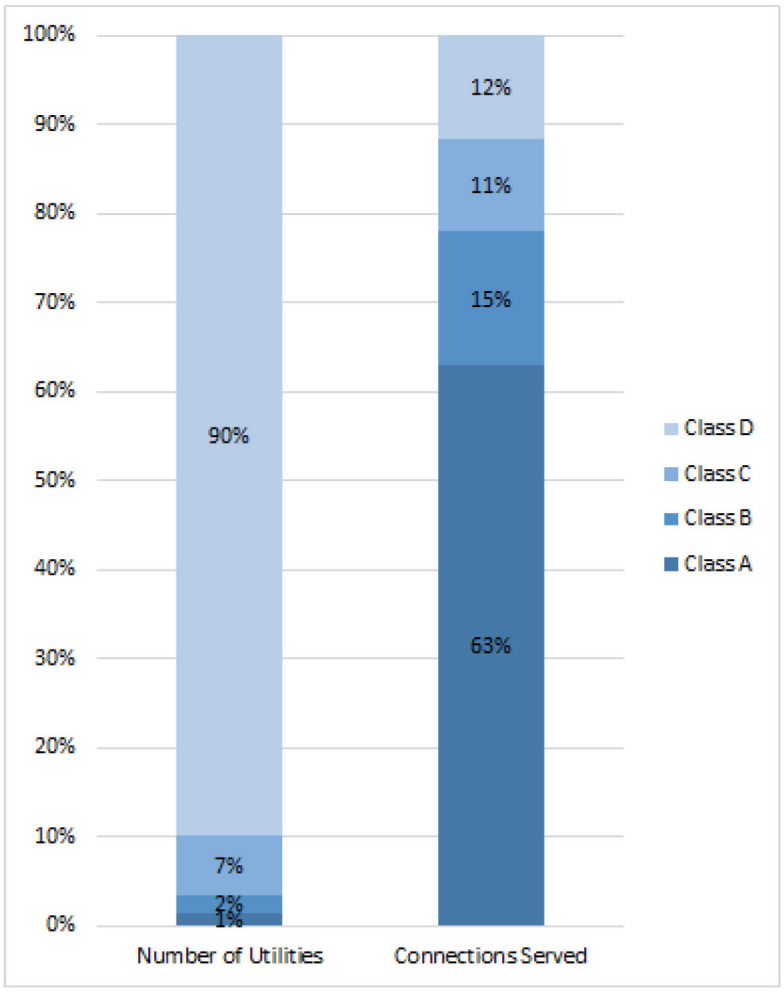

Figure 5. Percentage of utilities and connections by utility class.

Class A utilities have the most stringent rate-filing requirements. A Class A utility must show cost information, provide rate schedules, and include written testimony supporting the requested rates. The utility must also provide all information regarding affiliate charges. The rate application must include a notice to affected ratepayers and the regulatory authority with jurisdiction over its rates.[75]

Class B[76] and Class C[77] utilities have simplified filing requirements that require fewer rate schedules and less detailed financial information. Written testimony is not required unless a formal hearing is requested. Class B and Class C utilities must also provide all information regarding affiliate charges and comply with notice requirements for affected ratepayers and the regulatory authority with jurisdiction over its rates.

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[75] Tex. Water Code Ann. § 13.187.
[76] Tex. Water Code Ann. § 13.1871.
[77] Tex. Water Code Ann. § 13.18715.

Class D utilities have the simplest rate filing requirements. A Class D utility may apply to implement an annual rate adjustment of up to five percent without a hearing. The utility must provide notice to its customers at least 30 days before the effective date of the proposed change. This simplified rate adjustment treatment may be utilized up to four times before a comprehensive base rate proceeding is required. A Class D utility must file the more detailed Class C utility application for a comprehensive base rate proceeding or a rate increase over five percent.[78]

Pass-Through Adjustments

A pass-through adjustment is a minor rate change that allows a retail public utility to obtain a rate increase or decrease to account for changes in costs imposed by governmental entities and wholesale water providers. These costs are typically outside the utility's control and are not reflected in the utility's cost of service. Pass-through rate adjustments are typically processed within 60 days and provide timely recovery of a utility's costs. A utility can apply for an update to the pass-through rate each time the governmental entity increases or decreases the rates to the utility. These changes may happen several times a year. To recover the adjusted rate and meet the revenue requirement, the utility must separate the costs of a pass-through rate from the other charges.

Alternative Ratemaking

SB 700 (86th Legislature, Regular Session) established alternative ratemaking methodologies for water and sewer rates and established a system improvement charge (SIC).[79] These methodologies include the use of multi-step rates, the cash needs method, and the ability to request the addition of a new customer class. Alternative ratemaking provides utilities and the PUCT additional tools to implement rate changes outside intensive base rate proceedings.

Multi-step rates allow the utility to implement rates over time without filing multiple rate applications. Once established in a comprehensive base rate proceeding, multi-step rates allow a tiered approach to raise rates over time and reduce rate shock on customers. The cash needs method enables a utility to recover operating expenses, debt service costs, and an additional margin consisting of either an operating margin or an incremental revenue amount. The cash needs method is only available to a Class C or Class D utility and the utility must support its use. Specifically, the method must be deemed necessary for the utility to provide continuous and adequate service or other good cause exists. Generally, a utility may request the addition of a new customer class or classes in its tariff and extend the timeline for a comprehensive rate case. The utility's application must demonstrate that the rates are based on standard cost-of-

[78] Tex. Water Code Ann. § 13.1872.

[79] Tex. Water Code Ann. § 13.183(c) and (e).

service and rate design principles. Revenues to be recovered from the new class must be a limited percentage of the utility's total annual revenue.

A SIC allows a utility to seek recovery of the cost of eligible facilities through a rider instead of a comprehensive base rate case. Unless a hearing is requested or the filing is deemed insufficient, a SIC application can be processed within 120 days after filing. SIC helps ensure the timely recovery of utility infrastructure investments. Costs recovered through a SIC are subject to reconciliation in the utility's next comprehensive rate case, required within four to eight years, depending on the utility's size.

Submetering and Allocation

Businesses such as apartments, condominiums, manufactured home communities, office parks, and marinas may provide water or sewer service to their tenants. These businesses obtain water and sewer services from a utility and may choose to pass the bills on to tenants through submetering or allocation. For submetering, the business is responsible for installing and maintaining individual meters, so customers are billed for actual usage. If allocating, the business must use specific formulas based on characteristics such as the number of occupants and size of the unit to charge the tenants an equitable share of the total usage. The PUCT has jurisdiction over business owners, operators, or managers who submeter or allocate their units. Businesses are responsible for following the PUCT's rules which provide safeguards for tenets and ensure just and reasonable rates.

Property owners that submeter or allocate utility charges must register with the PUCT. There are currently 3,689 entities registered to submeter and 7,071 registered to allocate the water or sewer utility service charges to tenants. The high number of entities submetering and allocating services presents challenges for ensuring customers are properly informed and billed. Many property owners are unaware of the legal requirements surrounding submetering and allocation. Submetering and allocated bills complaints typically include disputes regarding billing or allocation methods, lack of communication, limited notice of billing changes, or billing changes made without update to the tenant's lease agreement. There are also frequent changes in ownership and owners changing billing procedures without approval by the Commission. Many underlying noncompliance issues appear to stem from ignorance of the rules rather than intentional noncompliance.

Distressed Utilities

While health and safety issues fall within TCEQ's jurisdiction, the PUCT is responsible for ensuring that utilities provide continuous and adequate service to their customers. A healthy rate structure is necessary for the sustainability of a utility's operation. The PUCT is responsible for ensuring that utilities have rates that generate enough funds to safely maintain and operate the system.

While a utility must demonstrate the financial, managerial, and technical capability to provide continuous and adequate service to obtain a CCN, these capabilities can diminish over time. This is especially true with smaller utilities that may have their financial, managerial, and technical capability tied to a single person. Additionally, lack of access to financial resources is a significant challenge for smaller utilities. It is difficult to generate sufficient revenues through rate increases, given the limited number of customers. Inadequate revenues and insufficient access to capital can make it difficult or impossible for a utility to make necessary improvements to its system.

Utilities in financial distress may fail to perform basic business tasks such as answering customer calls, reading meters, billing according to the utility's tariff, maintaining adequate records, or paying electricity and wholesale water supply bills. TWC provides temporary management, supervision, and receivership as tools to assist these utilities. These tools can help utilities get the qualified management they need to provide continuous and adequate service in compliance with PUCT and TCEQ regulations. The PUCT can assist these utilities in finding new ownership.

Temporary Management

A temporary manager may be appointed to operate a nonfunctioning water or sewer utility that has discontinued or abandoned operations.[80] Both TCEQ and PUCT have jurisdiction to appoint a willing person, municipality, or political subdivision to temporarily manage a utility. Only IOUs may be placed in temporary management.

A temporary manager has the power and duty to ensure the continued operation of the utility and the provision of continuous and adequate water or sewer service to customers. This includes reading meters, billing customers and collecting revenues, making necessary repairs to the system, and conducting required sampling. Temporary managers must meet detailed reporting requirements including monthly reports on the utility's properties, business transactions, the status of systems, significant events, and customer complaints.[81] PUCT staff

monitor each filing for compliance with the rules throughout the temporary manager's tenure.

In the case of an abandoned utility, immediate action may be needed to protect customers and ensure public safety. The PUCT's Division of Utility Outreach (DUO) oversees identifying abandoned utilities, finding suitable and willing temporary managers, referring the utilities for temporary management or receivership, and coordinating with other state agencies. DICE

[80] Tex. Water Code Ann. §13.4132.

[81] Tex. Water Code Ann. §13.4132(c).

provides legal and investigative support during the appointment process and, upon referral from DUO, prepares the petition to appoint a temporary manager. The PUCT's executive director can issue an emergency order and appoint a temporary manager for an abandoned utility. The Commission must ultimately approve, modify, or set aside the emergency order. Appointments can also be made by order of the Commission after a hearing.

When the temporary manager is appointed, the Commission sets a compensation fee for the manager's time and services that will be added to the customers' bills. The temporary manager can also apply for temporary rates to cover the reasonable costs associated with the utility's operations and maintenance. This rate may cover the costs the temporary manager incurs to make service available or to bring the nonfunctioning system into compliance with PUCT and TCEQ's requirements. Upon filing notice, the temporary manager may immediately begin imposing the temporary rates. The Commission must approve or adjust the temporary rates within 90 days of implementation. Temporary rates may continue after a nonfunctioning utility is acquired by another utility for a period determined by the Commission.

Since the beginning of FY 2021, the Commission has appointed nine temporary managers to abandoned water utilities encompassing 14 public water systems. As of the end of FY 2022, there were 11 utilities encompassing 16 active public water systems under temporary management.

Receivership

PUCT and TCEQ each have the authority to refer a water or sewer utility to the Office of the Attorney General (OAG) to seek the appointment of a receiver for a nonfunctioning system. The OAG may seek a court-ordered appointment of a receiver to manage and operate a nonfunctioning water or sewer utility.[82] A receiver has more power over a utility than a temporary manager, including the ability to seek court approval to sell the utility. A receiver is also authorized to charge temporary rates; however, the Commission must set those rates. Table 2 summarizes and compares the authorities and responsibilities of temporary managers and receivers according to TWC.

[82] Tex. Water Code Ann. § 13.412

Table 2. Comparison of authorities and responsibilities between temporary managers and receivers.

	Temporary Manager	Receiver
Eligibility	May be a natural person, partnership, water supply or sewer service corporation, or corporation.	Must be an individual – not an entity, group, or organization. A receiver is accountable to the state district court.
Process to appoint	Appointed by order of the PUCT or TCEQ and accountable to the appointing agency.	Appointed by the court with Commission's referral and accountable to the state district court and the appointing agency.
Reporting	Must submit monthly reports to both TCEQ and PUCT.	Must submit monthly reports to the Court, TCEQ, and PUCT.
Authority to sell	Cannot sell the system.	May file a motion at the court and seek authorization to submit an STM to the PUCT and sell the system.
Compensation	The PUCT sets a temporary manager's fee which is added to the customer's bills.	The court sets a receiver's fee which is added to the customer's bills.
Rates	May apply to the PUCT to charge temporary rates.	May apply to the PUCT to charge temporary rates.

As of the end of FY 2022, eight utilities were in receivership, four of which had STMs either in progress or completed.

Supervision

Under TWC, the PUCT is the only agency with the authority to place a utility under supervision. A utility may be placed under supervision if it has exhibited gross or continued mismanagement, gross or continued noncompliance with TWC Chapter 13, or has exhibited noncompliance with Commission orders.[83]

When a utility is placed under supervision, the PUCT may require the utility to abide by specific conditions and requirements. This could include placing restrictions on hiring, salary or benefit increases, capital investments, borrowing, issuance of stocks, and the use of funds. The PUCT may also impose conditions on the priority of payments and other financial obligations. Currently, the PUCT lacks the resources to utilize this tool and there are no utilities under supervision.

PUCT Resources

Working with utilities in temporary management or receivership situations requires significant agency resources. PUCT staff spends considerable time helping temporary managers

[83] Tex. Water Code Ann. § 13.4131

through temporary rate applications and, if necessary, helping them obtain or amend a CCN. Staff also assist the temporary manager or receiver with coordination between local, state, and federal agencies and explain reporting requirements. Staff often hold customer meetings and contact neighboring utilities and other entities to facilitate the acquisition of the nonfunctioning utility.

In some cases, the period of temporary management must be extended, or a new temporary manager must be found. This can occur because the existing temporary manager is no longer willing to continue with the appointment or the purchasing party is no longer interested in buying the nonfunctioning utility. The average time a nonfunctioning utility remains in temporary management, supervision, or receivership is between two and four years.

Since January 2021, the Commission has closed five temporary management appointments, with four systems having finalized STMs and one returning to the original owner. The Commission has completed processing the transfer of four utilities in receivership and worked closely with the OAG and TCEQ to dismiss the receivers. All these utilities were abandoned, and customers were experiencing substantial issues with their services. With new owners, the systems have restarted regular operations.

Emerging Issues

Consolidation and Regionalization of Retail Public Utilities

As federal health and safety regulations on public water and sewer systems increase, many retail public utilities must make large capital investments to stay in compliance with revised standards. Without a substantial rate increase, these utilities are unable to make these needed investments. In lieu of increasing their rates, many utilities contact the PUCT to express an interest in selling their systems. Some entities have already found a potential buyer, while others need help finding a purchaser. In some instances, the utility has already been sold, but because the sale was not approved through the STM process required by TWC § 13.301, the sale is rendered void.[84]

The PUCT's DUO works closely with retail public utilities seeking to find a viable entity to acquire, purchase, or consolidate their systems with another utility. DUO also works with entities that have acquired or sold systems without first going through the required regulatory approvals to become compliant, by helping them navigate the regulatory process and understand applicable rules.

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[84] Tex. Water Code Ann. § 13.301

Assisting Utilities During and After Winter Storm Uri

Water systems across Texas were affected by the 2021 Winter Storm Uri event and many customers experienced the loss of water service. PUCT worked with water and electric utilities to identify affected water facilities and help restore and maintain electric service. PUCT worked with TCEQ to identify water utilities without power and required boil water notices to safely restore service. PUCT also implemented a temporary moratorium on water utility disconnections during recovery from Winter Storm Uri.

In the aftermath of Winter Storm Uri, some utilities had difficulty paying their electric bills due to insufficient revenue from water sales and the inability to disconnect for nonpayment. PUCT staff worked with the water and sewer utilities' electric providers to ensure continuous electricity for the utility. Electric providers set up payment plans to help affected water and sewer utilities have the time necessary to pay their bills in full.

Critical Water Facilities

SB 3 (87th Legislature, Regular Session) requires entities that meet the new definition of "affected utility" under TWC §13.1394 to file specific information to help identify emergency contacts and facility locations in an emergency event.[85] The term "affected utility" is defined as a retail public utility, exempt utility, or provider or conveyor of potable or raw water service that furnishes water service to more than one customer and is not in Fort Bend or Harris Counties. Utilities must identify the location and provide a written description of all water and sewer facilities that qualify for critical load status, emergency contact information for a primary and an alternate point of contact, and the utility's address. In addition to filing this information at the PUCT, the utility must provide a copy to each TDU that provides electric service to the affected utility, each REP that sells power to the utility, the office of emergency management of each county where the utility has water and sewer facilities that qualify for critical load status, and the Texas Division of Emergency Management (TDEM) of the Governor. November 1, 2021 was the initial deadline for affected utilities to provide the required information. As of September 2022, the PUCT has received more than 1,500 critical water filings in the project created as a repository for the filings. Since 2021, PUCT staff has conducted extensive SB3-related outreach activities. DUO has given 13 presentations regarding the critical facilities requirement at conferences and trade associations, created a new Utili-Facts document, and conducted educational campaigns, including both mass email and regular mail, to inform the affected utilities about the requirement.

[85] Tex. Water Code Ann. § 13.1394

Rulemakings

Alternative Ratemaking

Project No. 50322, Alternative Ratemaking Mechanisms for Water and Sewer Utilities

In December 2021, the Commission repealed 16 TAC §24.75 and adopted new 16 TAC §24.75 relating to *Alternative Ratemaking Methodologies*. The rule implemented specific provisions of TWC §13.183(c) enacted by SB 700 (86th Legislature, Regular Session) by establishing alternative ratemaking methodologies for determining water and sewer utility rates.

New 16 TAC §24.76, relating to *System Improvement Charge* implements a method for a utility to ensure the timely recovery of infrastructure investment between comprehensive rate cases.

Customer Protection

Project No. 52405, Review of Certain Water Customer Protection Rules

SB 3 (87th Legislature, Regular Session) provides for customer protection during extreme weather events. The law applies to retail public utilities that must possess a CCN, districts, and affected counties that furnish retail water or sewer utility service. In October 2022, the Commission adopted new rules 16 TAC §24.173, relating to *Late Fees and Disconnections During an Extreme Weather Emergency for Nonpayment* and 16 TAC §24.364, relating to *Civil Penalties for Late Fees and Disconnections During an Extreme Weather Emergency for Nonpayment*, to implement the statute. The rules prohibit a utility from charging a customer late fee or disconnecting the customer for nonpayment during a defined extreme weather emergency. Utilities must offer payment plans for bills due during an extreme weather emergency and adopt a civil penalty classification system to be used by the OAG and the courts for violations of the requirements.

Class D Water and Sewer Utility Rate Adjustments

Project No. 54062, Class D Water and Sewer Utility Rate Adjustments

In November 2022, the Commission adopted amendments to 16 TAC §24.49, relating to *Application for a Rate Adjustment by a Class D Utility Under Texas Water Code §13.1872*. The amendments simplify the application process for a Class D water utility rate adjustment and provides the utility with PUCT resources to aid with regulatory compliance. The Commission also adopted amendments to the corresponding Class D utility rate adjustment application form.

Enforcement

The PUCT's enforcement efforts focus on violations of statutes, such as PURA, TWC, and PUCT rules. Wholesale electric market and grid reliability investigations also involve the ERCOT protocols, operating guides, and other documents. Ensuring compliance protects customers, the electric markets, and the reliability of the grid. Compliance ensures quality of service to all Texans who rely on regulated electric, water, sewer or telecommunications services.

Other PUCT divisions handle the informal and formal complaints of individual customers. DICE was created in August 2021. DICE focuses on larger, systemic violations of law and rules and on those violations which have the most significant impact on the public interest. Enforcement matters were handled by the Legal Division from September 1, 2020, through July 31, 2021.

The PUCT's compliance and enforcement program goals are accomplished through investigations, audits, and enforcement actions. Throughout the process, DICE's enforcement analysts and lawyers collaborate with subject matter experts across the agency. The Customer Protection, Infrastructure, Legal, and Market Analysis divisions work closely with DICE. Experts from ERCOT, the IMM, and the ERCOT Reliability Monitor also provide critical expertise to inform and support DICE investigations. Analysts provide technical and factual expertise while attorneys provide legal analysis and litigation management. Experts advise DICE attorneys on fact-based issues to help develop effective legal enforcement strategies.

Investigations

The PUCT has statutory authority to investigate regulated electric, water, and telecommunications entities. DICE monitors customer complaints filed with CPD and will open an investigation if the issue appears to have systemic or broad implications for a group of customers. Additionally, DICE launches investigations in response to self-reporting by entities, press reports, and legislative inquiries. For the wholesale electric market, ERCOT, the ERCOT Reliability Monitor, and IMM can also inform DICE of potential violations for investigation. Most investigations are resolved through settlement rather than litigation of contested cases.

During the 2021-22 biennium, PUCT staff closed 104 investigations into the electric industry, five investigations into the telecommunications industry, 20 investigations into the retail water and sewer industries. Ten investigations related to apartment complex billing matters were investigated. An investigation can be closed by determining no violation occurred, issuing a warning letter, gaining approval of an order imposing monetary penalties, or revoking a license or certificate.

Penalties, Refunds, and Donations

During the same period, the Commission assessed $1,785,250 in penalties against regulated entities. These penalties are remitted to the state's general revenue fund. The distribution of the penalties based on the industry is shown in Figure 1. In addition, DICE has started tracking refunds to customers and donations to customer assistance agencies that resulted from enforcement proceedings. In FY 2022, the PUCT secured $385,973.10 in refunds to customers and donations to customer assistance agencies.

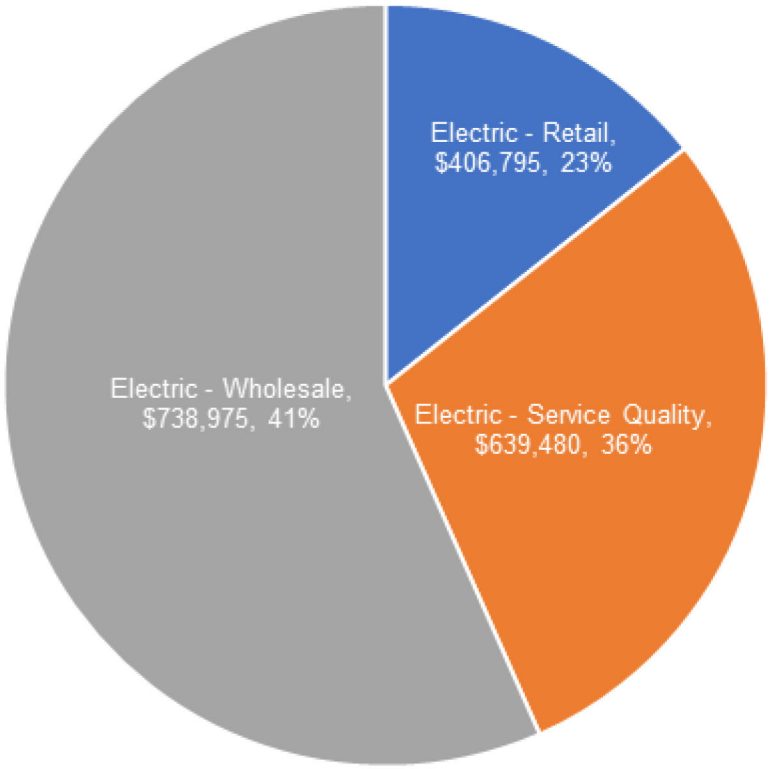

Figure 1. Penalty distribution

Winter Weather Preparation Reporting

Following SB 3 (87th Legislature, Regular Session), the Commission adopted a new rule governing the winter preparedness of generation resources and transmission voltage substations and switchyards.[86] SB 3 also increased the PUCT's administrative penalty authority to $1 million per violation, per day for violations related to weather preparation regulations.[87] DICE was tasked with ensuring compliance with these new, first-in-the-country regulations. PUCT and ERCOT subject matter experts worked together to develop a compliance and enforcement regime. Detailed technical filings were received from more than 800 entities and reviewed by PUCT and ERCOT staff. More than 90% of power generation entities and 95% of transmission companies complied with the new regulations. DICE launched compliance investigations or enforcement proceedings against the remaining entities. Enforcement cases were filed against eight entities specifically for failing to follow the detailed regulations. These cases are pending.

SB 3 also added new provisions to the TWC enhancing the PUCT's ability to safeguard retail water or sewer customers from disconnection for nonpayment during winter weather emergencies. Among other provisions, TWC § 13.414 enables the PUCT to refer violating utilities to the Office of the Attorney General for the collection of enhanced administrative penalties. The Commission has adopted rules codifying this enhanced enforcement ability.

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[86] TAC § 25.55, Weather Emergency Preparedness.
[87] PURA § 15.023(b-1).

Loss of Certificates

In addition to financial penalties, the PUCT has other enforcement tools, such as revoking a company's certificate to operate. Some companies may be required to relinquish a certificate as part of a settlement after enforcement action has concluded. Notably, DICE revoked seven REP certificates and settled on an agreed relinquishment for an additional REP certificate following the financial fallout from Winter Storm Uri. Two REP certificate revocation proceedings have been filed and are pending action by the Commission.

Warning Letters

DICE issues warning letters to companies for minor infractions or where no administrative penalty is necessary. DICE may issue a warning letter when an entity proactively works to resolve violations early in an investigation. The warning letters remain on file and can be referenced by DICE to demonstrate patterns of violation over time. During the 2021-2022 biennium, DICE issued 55 warning letters to entities found not in compliance with PUCT rules.

Power Line Inspection and Safety

HB 4180 (86th Legislature, Regular Session) established the Power Line Inspection and Safety program. All overhead distribution and transmission voltage equipment that crosses one of the 178 lakes identified in PURA § 38.004 must comply with vertical clearance standards in effect at the time the equipment was built. Noncompliance must be remedied, or the equipment rebuilt to meet today's standards.

Electric utilities with overhead distribution or transmission voltage facilities must file reports documenting adherence to vertical line clearance standards. PURA § 38.102 requires utilities to file an annual report, a five-year report, and a one-time training report. DICE monitors these reports for compliance with filing deadlines and for required compliance disclosures.

Following an investigation in March 2022, DICE determined that 13 utilities were not in compliance with vertical clearance standards. As of the date of this report, eight utilities remain out of compliance. DICE has required each of these entities to file monthly progress reports detailing the activities each are taking to bring the affected facilities into compliance.

Reliability Monitor Function

The PUCT is required to adopt and enforce rules related to the reliability of the ERCOT transmission network.[88] PURA allows the PUCT to delegate some or all this responsibility to an independent organization. ERCOT, Inc., under complete authority and oversight by the PUCT, is charged with adopting rules related to the reliable operation of the transmission system in the ERCOT power region.

[88] PURA § 39.151(d).

From 2010 to 2020, the PUCT contracted with the Texas Reliability Entity to provide monitoring services related to ERCOT's reliability rules and to assist the PUCT with its obligation to enforce those rules. Since 2020, PUCT staff has worked closely with ERCOT staff to continue monitoring industry adherence to these reliability rules. In November 2022, the PUCT directed ERCOT, Inc. to formally assume the duties of the reliability monitor for the ERCOT power region. This action will enable the PUCT to put safeguards in place to prevent conflicts of interest and ensure the independence of the ERCOT personnel working on reliability monitoring activities.[89]

[89] Project No. 54248.

Resources for Texans

The PUCT's Customer Protection Division assists electric, water and telephone utility customers with complaints against utilities and answering general questions about customer issues.

The PUCT's CPD Intake Center answers various questions from customers received via phone, mail, email, and the PUCT website. CPD investigators analyze and respond to complaints.

Licensing and Compliance oversees the registration of various market participants.

Customer Assistance

The Intake Center is most customers' only interaction with PUCT staff. Common inquiries include how to read one's bill, what to do if service is disconnected, information on outages, and how to file a complaint. For the competitive electric market, the Intake Center answers questions about the PUCT's Power to Choose website and provides customers with information to help them select a REP. Additionally, the Intake Center responds to inquiries and takes complaints regarding the Texas No Call list. During the 2021 to 2022 biennium, PUCT's CPD answered over 63,500 calls.

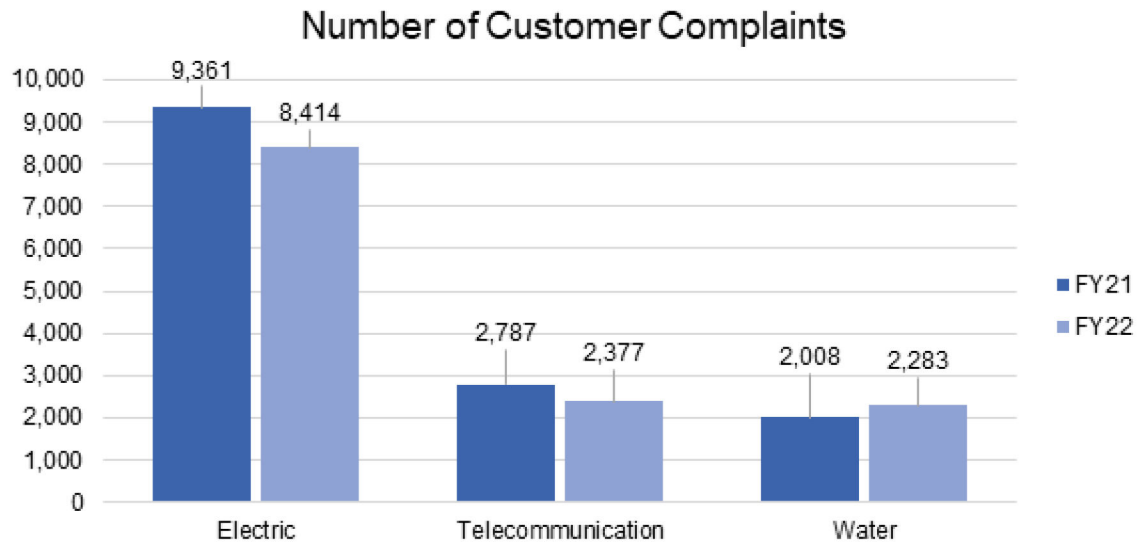

Figure 2. The number of customer complaints for Electric, Telecommunication, and Water utility services received in FY 2021 and FY 2022.

A Texan who has a dispute with a provider of electric, telecommunications, or water and wastewater services can make an informal complaint to CPD. Once an informal complaint is filed, the utility is asked to show compliance with PURA or TWC and with PUCT rules. Water and sewer providers must respond within 15 days. Electric and telecommunications providers must

respond within 21 days. A CPD investigator then reviews all information received from both the customer and the provider to determine whether the provider's actions are consistent with applicable regulations. The investigator's conclusion regarding the complaint is sent to both the customer and the provider. The investigator identifies any potential compliance issues and may recommend corrective action. A customer dissatisfied with the investigation's results may file a formal, docketed complaint with the PUCT.

Social media accounts

The PUCT engages directly with Texans every day through multiple social media accounts. We regularly inform the public about the agency's activities, responsibilities, rules, and regulations, consumer tips and emergency information, when necessary. The agency's active social media accounts include:

- Public Utility Commission of Texas–Facebook
- PUC of Texas–Twitter
- Public Utility Commission of Texas–LinkedIn
- PUCTX– Instagram
- Power to Choose–Facebook
- powertochoosetx–Twitter

Social media engagement by the public can vary widely from month to month, based on several factors, including weather, electricity demand, fluctuations in the cost of electricity and others. For example, the number of social media impressions, or times content was seen by users in June 2022, was 34,000 times. In August 2022, during periods of record heat and demand, it was 138,000 times. We continue to experience steady growth in engagement since adding an FTE dedicated to social media engagement in May 2022 and expect that trend to continue.

Websites

puc.texas.gov

Our external website serves as the "virtual front door" of the agency and provides several tools to assist Texas utility customers, utility providers, and industry leaders with matters and information relating to the PUCT. The PUCT's website averages more than 255,000 page views per month. Data show beyond the home page, the most-visited pages include Paying Your Bill, Industry Filings, Rules pages and Know Your Rights. Additional resources and tools include:

- Online informal complaint filing for electric, telecommunications, water, and wastewater issues
-

- An outage resource section with contact information to report local electric utility outages to providers and links to local outage maps to monitor outages
- Access to information about electric, telecommunications, water, and wastewater providers
- Links to live internet broadcasts and calendar for open meetings
- News releases and updates from the PUCT

PUCT Interchange (interchange.puc.texas.gov)

The Interchange is a web-based application for submitting and accessing documents filed with the PUCT. The Interchange Filer system is used to file documents with the PUCT electronically. The public can use the PUCT Interchange to locate information officially filed with the PUCT in Central Records, including projects, dockets, and tariff applications. Documents can be searched for by Case Style (the Docket Description), Utility Type, Utility Name, Filing Party, Item Type, Filing Description, and date range. Central Records staff can be reached via email (centralrecords@puc.texas.gov) to answer any questions about filing documents or locating documents that have been filed with the PUC including hard copies of utility tariffs.

Power to Choose (powertochoose.org)

The PUCT's customer education website for the competitive retail electric market is known as Power to Choose. It's an educational tool for customers about the evolving marketplace. Power To Choose (and its Spanish language counterpart, Poder De Escoger) provides a portal for Texans who live in an area open to retail electric choice to browse electricity plans offered by REPs. Information on the shopping process, plan options, and questions to ask when shopping is also available. REPs are not required to post prices or rate plans on the site, but most choose to use it to reach consumers directly. The site is free for both consumers and REPs.

Power to Save (powertosavetexas.com)

The PUCT promotes smart energy use through the Power to Save Texas website (and its Spanish language counterpart, Poder de Ahorrar). The website educates Texans about conserving energy, especially during the summer peak times of 3 pm to 7 pm, when demand for electricity tends to be the highest. The site includes links to additional resources for Texas to learn how to manage their electric use.

Map Viewers

The PUCT's Water and Sewer CCN Viewer gives users access to retail public water and sewer CCNs.[90] Users can search by address to find a water or sewer service provider. Utilities can prepare map filings for applications to obtain a CCN and amend or transfer a CCN. By giving the public direct access to this information, it reduces the call volume at the PUCT.

The PUCT's website links to electric utility outage maps.[91] This feature is highlighted on the PUCT's Storm Resources page and is used by the PUCT's Emergency Management Response Team to prepare for, respond to and recover from disasters and emergency management activities. It's also used by the public to report and monitor local outages.

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[90] *Public Utility Commission Water and Sewer CCN Viewer*, PUBLIC UTILITY COMMISSION OF TEXAS, https://www.puc.texas.gov/industry/water/utilities/map.aspx

[91] *Outage Maps*, PUBLIC UTILITY COMMISSION OF TEXAS, https://www.puc.texas.gov/storm/contact.html.

LEGISLATIVE RECOMMENDATIONS

APPENDICES

List of Acronyms

Texas Electricity Supply Chain Security and Mapping Report – January 2022

Load Shed Protocols for the Electric Reliability Council of Texas (ERCOT) Region – August 31, 2022

Weather Emergency Preparedness Report – September 30, 2022

Texas Universal Service Fund Report – August 31, 2022

Texas No-Call List Report – October 2022

Commission Approved ERCOT Revision Requests